BEFORE THE FEDERAL ENERGY REGULATORY COMMISSION

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In the Matter of: :

DISPUTE RESOLUTION TECHNICAL : Project Number 2237-013

CONFERENCE FOR THE MORGAN FALLS :

PROJECT :

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Chattahoochee Nature Center

9135 Willeo Road

Roswell, Georgia

Wednesday, January 19, 2005

The above-entitled matter came on for hearing, pursuant to notice, at 9:20 a.m.

BEFORE: NICHOLAS J. JAYJACK

GERALD A. THORNTON

DOUGLAS NEIMAN

A P P E A R A N C E S

THE PANEL:

NICHOLAS J. JAYJACK
Fisheries Biologist
Office of Energy Projects
Federal Energy Regulatory Commission
888 First Avenue Street, Northeast
Washington, D.C. 20426

GERALD A. THORNTON
Staff Attorney
Office of the Field Solicitor
U.S. Department of the Interior
530 South Gay Street, Room 308
Knoxville, Tennessee 37902

DOUGLAS NEIMAN (appearing telephonically)
Senior Scientist
Norman Beau Associates
400 Old Redding Pike
Building A-101
Stowe, Pennsylvania 19464

I N D E X

E X H I B I T S

P R O C E E D I N G S

(9:20 a.m.)

MR. JAYJACK: Good morning, everyone. Welcome to our first Study Dispute Resolution Conference. It is a brand-new process so bear with us. We are trying to figure out how all this is going to work and we are trying to follow the Rule that the Commission has put forth and we are kind of a guinea pig in this process so it is kind of an exciting time, to say the least.

As we stated earlier, unfortunately, one of our panelists could not be here so we are trying to accommodate him as much as possible by providing the speaker phone here. So I think the way we will try to work this so that we can communicate effectively is we may have to pass this microphone out if Doug, Doug being the other panelist, is unable to hear what's going on, and so we will try to work as much as we can with Doug so that he can participate as fully as possible.

With me here today also is our other panelist, Jerry Thornton with the Department of Interior Solicitor's Office in Knoxville, Tennessee. So on behalf of the three of us I would just like to welcome you all here.

I guess a couple of administrative things, the attendant here mentioned to me about the restroom facilities. These facilities here in the corner

(indicating) are unheated so if you prefer a heated facility, then go down the hallway here (indicating) and off to the left by the staircase; there's two other facilities to be used.

We have a court reporter, two court reporters here today, one from FERC and the other from Georgia Power. Like I say, this is a new process so the purpose of the court reporters, at least for FERC's sake, is for us to be able to record everything that takes place here so that we can, of course, go back and read through the material. I imagine you are all probably aware there's a lot of material on the record and it sometimes can be difficult for us when we leave to try to sift through the printed materials so this, hopefully, will help us as well.

Jerry, anything you wanted to add?

MR. THORNTON: (Shaking head.)

MR. JAYJACK: Let's talk a little bit about the purpose of this meeting. This statement of purpose pretty much comes straight from FERC's final Rule, which outlines the purpose of holding this technical conference. We're here today to provide the opportunity for us, the panel, to receive clarifying information with reference to the study criteria, and that clarifying criteria is going to be used by us to form our determination of the disputed matters. That, kind of in a nutshell, is why we're here.

Based on that meeting purpose I have come up with a few ground rules, and the reason I have done this is the final Rule is pretty specific as to the matter that is to be discussed at this conference and, as much as possible, I want to stay wedded to what's there. It was a long drawn-out process to actually write this Rule. And a number of agencies, NGOs, and folks from the hydropower industry were instrumental in developing the final Rule, including the discussions that should be taking place at this technical conference today so, with respect to them, I have written a few of the ground rules that, hopefully, will meet with the meeting purpose, the reason why we are here.

What we want to do is we want to receive information that will be consistent with the matters that are in dispute. I know there are a number of other issues that are out there related to the Morgan Falls project, and we want to stay away from those other issues and simply focus on the matters that Interior has raised with regard to disputes that they have with that material.

Let me give you a few examples of what acceptable discussion topics would be. They would be such things as comments that clarify study goals and objectives, clarification of the nexus between project operations and effects. I want to get into a little bit of the technical and scientific rationale for why additional information is

needed and other such information or discussion topics that are pretty much referenced by the study criteria, criteria that have been spelled out in the final Rule. Any questions at this point on why we are here?

(No response.)

When you all signed up and signed in here, I had at this desk a technical profile, a typical conference agenda, so why don't we go through that a little bit to give you an idea how this is going to take place.

What I would first like to do is start out with technical questions that we, as panel members, have. A couple of us here have prepared some questions to ask of you to help clarify some of the matters, and then there will be some time later for any of the participants here to provide us with information that they think would help clarify the matters in this meeting and would be important for us to hear.

My hope is that much of the information that you want us to look at has already been filed with FERC and has come out through the records of the proceedings. If there is anything else that you think we need to listen to or feel that the material needs clarification that would be the appropriate time provide that information to us. Any questions?

(No response.)

Doug, can you hear us okay?

MR. NEIMAN: So far, so good.

MR. JAYJACK: We are trying to get the heating turned off so that you can better hear so bear with us a little bit.

One of the recent development that has taken place is last Friday, Fish & Wildlife Service filed a letter to us saying that they wanted to step back from a couple of the matters that they originally had disputed and so now the matters of dispute have been narrowed. Does Fish & Wildlife Service have a statement you want to make at this point to help explain that or is there somebody from the Department of Interior here?

MR. DUNCAN: I'm Jeff Duncan, Regional Hydropower Coordinator for National Park Service. We are actually waiting for our counsel to arrive that was flying in at 8:00 o'clock this morning. Basically we are no longer disputing under Section 4(e) of the Federal Power Act, though we continue to dispute, or the Department of Interior continues to dispute, under the Fish & Wildlife Service's Section 18 authority so that's basically the change that has been made.

MR. JAYJACK: Thank you, Jeff. Why don't we start with the sediment contaminant study dispute, and we have a list of questions; I know I do and I believe Doug has mentioned that he may have some questions as well. Let me

first go over what my understanding is of the goals and objective of the study proposal. In its May 20, 2004 filing, Fish & Wildlife Service had indicated that they wanted the information to better understand the presence or absence, levels and distribution, of potential contaminants in the surface sediments of the reservoir. They wanted to focus the analysis within the project boundary.

On December 16, 2004, Interior indicated that the information will help it to gain an understanding of whether or not there would the need for providing safe, timely, and effective fish passage at the project. So that is my understanding of what the study goals and objectives are.

Given that statement of the goals and objectives, one question I have for the Fish & Wildlife Service is the basis of the concern. The gist of the question is why is there a concern about reservoir sediments given that contaminants have been found upstream and downstream as well as the water column, and related to that, is the main concern bioaccumulation or direct contact with the sediments of the various aquatic species?

MS. LAWRENCE: Alice Lawrence with Fish & Wildlife Service. I'm out of our Athens ES Office and I have been working on this project for the duration. We have requested a sediment contaminant study starting from our initial filing all the way through until now, starting May

14th and in our following letters, the same study. In this particular situation there is a large amount of sediment that has located in the reservoir. In light of the fact that there is this large amount of sediment, the counties upstream that drain into the river that would catch--the dam being right there, catching all the sediment, the counties that are draining into this area, just within the 1990s, the last decade, the population grown had increased from 23 to 123 percent.

Also, as far as other sampling that has been done in the reservoir itself, in the impoundment, the last sediment analysis that was done was in the 1980s so that's about 24 years ago. Lab techniques have changed. Detectability has changed. And several things that the applicant has said here, they said, well, hey, we are conducting water quality sampling now currently. This is in the water column. When you look at the best available literature out there, the best scientific information, which is what we are charged to do, it says that you need to be looking at the sediment instead of the water quality levels to determine toxicity, bioaccumulation effects.

Also, the applicant has stated some other data that was collected in the 1990s--this was some USGS data that they referenced; it's Frick, et al., 1988. This was collected from 1992 to 1995 so a little bit more recent, but

none of these samples were conducted in the project impoundment itself and that's where we would like to look. We are trying to determine project effects here. Those other samples were in some of the tributaries draining into the impoundment, some areas upstream and downstream, but not within the project impoundment itself and that's what we are trying to determine here. The impoundment itself is where all this sediment is accumulating; that's where we need the sampling.

The applicant has also stated that they meet State water quality standards and that these standards protect aquatic life. Once again, we are going with the best scientific information available, saying that the sediment is where you need to be looking.

Also, the State of Georgia is conducting fish fillet sampling. That is done for human health reasons so when they sample and analyze these fillets, you aren't analyzing the high-fat areas of the fishes that need to be sampled, like the liver and other areas like that. Because these are the areas that would bioaccumulate, that would be going through the food chain. When you are just looking at the filet itself that's really not the area where these contaminants would be concentrated anyway.

The applicant also cites a report; it's an EPA report from 1994, "The Incidence and Severity of Sediment

Contamination in Surface Waters of the United States", and this is in their last filing, their January 10th filing. In this, applicant says that this area of the Chattahoochee is not identified as an area of potential concern. But this paper is drawn from the same data that we have already been looking at, the USGS study I listed before, and a database that EPA has, the STORET database. None of these has sampled within the project impoundment. In this paper EPA has a strength and limitations section where they say limitations of this data include incomplete sampling coverage, the age and quality of the data, and then they go on to say, because this analysis was based only on readily available electronically-formatted data, contamination problems may exist at some locations where data are lacking.

And then they continue and say, more than two-thirds of all stations evaluated are in Washington, Virginia, California, Illinois, Florida, Wisconsin, New York, Texas, Oregon, and South Carolina. Other states of similar or larger size, such as Georgia and Pennsylvania--so they do state those two states as examples--have far fewer sampling stations and data for evaluation.

So all we are saying here is that we need to look at project effect, and the impoundment has not been sampled since the 1980s, and in light of the large amount of sediment that has accumulated, the large amount of fine

sediment behind the dam, that we just need to see what's going on there.

MR. HASTY: May I add something to that?

MR. JAYJACK: Sure. Please state your name for the record.

MR. HASTY: My name is Keith Hasty. I am also with Fish & Wildlife Service. The question was whether we are concerned about--I'm a contaminant specialist whether it's direct toxicity or cumulative effects or biomagnification of the food chain--all of the above. We don't know and that's the problem is we don't know what is in the reservoir so at this point we can't really say specifically what we would find out, just that we would like to find out. Hopefully, there is no problem.

MR. THORNTON: I had a question that had to do with, I don't believe Fish & Wildlife Service has ever identified exactly what parameters they want tested. Have you submitted to the record a clear statement of what testing criteria for contaminants you are interested in?

MR. HASTY: In the original letter we did, in goals and objectives. It is not overly specific as far as methodology, analytical methods, and whatnot, but in general we would be looking at the normal parameters we look for in any contaminant study--chlorinate compounds, some of the metals, along with the physical parameters of the sediments,

total organic compounds, total organic content, grain size, and whatnot--so it is nothing exotic or unusual that we would be asking for.

MR. JAYJACK: Upon reviewing your filing I noted that there are many stated study objectives that are associated with those contaminant studies, and the one I am really focusing on here is the goal that the study results will help informed decisions with regards to fish passage. I'm not quite, at this point, sure the connection you are making between the two. In other words, what I would like clarification on is how knowing what the contamination level of the reservoir sediments is will help you to decide whether or not fish passage would be necessary to the project.

And related to that is, I would like to touch on a little bit about any concerns you have with sediments upstream, outside of the project boundary, because certainly any fish that might be passed by the dam will not restrict themselves to the reservoir but would very likely continue on upstream. So I just need a little clarification on how you separate those two and how it is all related.

MS. LAWRENCE: Your first question is about fish passage and relation to fish passage. This study is done not only for the purpose but also the threats to the current aquatic community. That being said, for fish passage right

now we are looking at a range of alternatives here. I can give a little bit of a rundown on that, if you like.

Historically, before the dams that are currently on the Chattahoochee River, which I think it's 14 now, before they were here we had historical spawning migrations of diadromous fishes, such as Gulf sturgeon, Alabama shad, American eel, striped bass. These are very limited now compared to what the migrations were before. That being said, we do have a lot of changes going on in the watershed right now. The lowermost three dams are locker dams so they do allow passage for some species. We have two dams that are proposed for removal downstream. We have a reservation of authority at three dams. There is also another dam coming up for re-licensing soon.

American eel are coming upstream or being able to come farther upstream than some of the other species. We have got the Gulf Coast strain of striped bass that's currently in West Point and is making spawning migrations to the base of Morgan Falls Dam currently. Also, there is a proposal to do some fish passage studies with some of these species at the locks of the four dams downstream.

So reservational authority is one thing we would be looking, at least changing the watershed where the license term is three to 50 years, changes in management objectives, talking about the striped bass coming up to the

dam currently. That's something that we would want to look at in the future.

Also, we have State imperiled species that are currently impacted by this dam. We have got shoal bass; there is an isolated population of shoal bass that is Big Creek, which is a tributary to the impoundment and it's severed from the downstream population. There is also a State listed fish, the high scale shiner, that has also been detected in Big Creek; I think five individuals were located there in 1995. So one thing is we are looking at a range of alternatives here and this would help us make that decision. Understanding the status and the quality of the habitat would help us, once again, make our decision.

Do you want to talk about the upstream? I guess really what we have to go on is that 1998 data from Frick, et al.?

MR. HASTY: Our concern is that the dam is acting as an accumulation zone for the fine particles where you would expect to find any contamination bound to the fine organics or some of the clay particles in the water column. They tend over time to work their way down that reach of river and presumably be settled out at the base of the dam. So upriver, while there may be--and again this is hypothetical--may be some contamination, we expect over time that it will be concentrated at the base of the dam. That's

why we are concerned with sampling in the reservoir itself and not necessarily up and down the river.

MS. TUCKER: Sandy Tucker, Fish & Wildlife Service. What maybe you are trying to get at, let me just make a link between the fish and that accumulated sediment. I think either the fish that are there now or fish that may pass into the future, if they were to get there, larvae and eggs that are upstream, even if they are way upstream, float back and if they are exposed to those sediments and if there are some sort of pollutants in it that could be either direct contact, sort of carcinogenic-depositing pollutants or bioaccumulating kinds of things, that would be the connection. So that's how you get the fish to the sediment. That's the part I didn't hear you guys say. The fish is what we are concerned about of course. That's the unknown, if those fish pass through there as well as, as Alice said, the health of the community that's in there. That's all I wanted to say.

DR. LAYMAN: My name is Steve Layman with Geo Syntec Consultants. I'm a fisheries biologist and I work with Georgia Power supporting development of the study plans and I would like to respond to a few of the comments made in clarification. First of all, Mr. Jayjack initially said that there was evidence of contamination in the water column sediments; I don't believe he intended that. And I just

wanted to clarify that there are no data suggesting contamination of the water column or the sediments in the project area.

Alice Lawrence mentioned the EPA has a date of 1994; that is in fact a 2004 data report. I would like to clarify that the water quality monitoring data in the project impoundment and existing sediment data for the Upper Chattahoochee River do not indicate any potential threat to aquatic communities. Project waters meet their designated uses. The sources of data proposed for use in the study, which include USGS data and EPA STORET data, have been collected as recently as the 1990s and in fact were used in the EPA's 2004 report as the basis for its screening level assessment. To imply that these data are outdated is not appropriate, does not properly reflect the comprehensive nature of studies that have been conducted in this basin involving water allocation over the past decade or more.

As further justification for there not being any evidence of potential threats, the US Army Corps of Engineers prepared an Environmental Impact Statement in 1992 evaluating commercial sand and gravel dredging in the Chattahoochee River National Recreation Area and did not identify sediment quality as a significant issue. In fact dredging occurs today in the Chattahoochee River and it has occurred as recently as the last two years within the Morgan

Falls impoundment, and the National Park Service issued permits for these dredging activities without requiring sampling of sediment quality.

The Department of Interior has not explained the nexus between project operations and its effect on sediment quality. Georgia Power is not proposing any major new construction or sediment-disturbing activities at the project. The project does not cause or contribute to sediment contamination in the Chattahoochee River. Although the project can influence sediment deposition, sediment chemical loads related to the suburban land usage that surrounds the project, and therefore the NAQA data, the National Water Quality Assessment data collected by USGS, properly reflect the sources of sediment that enter the basin and that are deposited in the Morgan Falls impoundment.

DOI, the Department of Interior, has acknowledged that there are no applicable sediment arteria in Georgia and therefore gathering information on sediment quality without applicable standards, simply based on presence or absence would inform licensing decisions. Department of Interior has not adequately explained its relevant resource management goals or study objectives related to Section 18, which is required by the study criteria one and two at Section 18, CFR 5.1.

They have not mentioned fish passage in their original study request. They never mentioned fish passage in the study plan meetings and it was only after the Commission issued its final study plan determination that fish passage was brought up as an objective for the study.

I would like to also observe that in terms of diadromous fish species--diadromous species are those that migrate between fresh water and soft water environments to complete their life history--there is one species that is located downstream of the project and it is the striped bass, which was introduced into West Point Lake in the early 1990s. There is evidence of some reproduction of striped bass in the Chattahoochee River below Morgan Falls; however, studies done by Brent Hess and Cecil Jennings have looked at temperature and food habits of the striped bass. Temperature of the cold water releases from Buford Dam apparently limit the reproductive capacity of striped bass in this reach.

The striped bass also feed on trout; trout are the number one fish food item of striped bass that migrate into this reach. And these issues and this existing information has not been explained by the Department of Interior with regard to resource management goals and objectives for this reach of the river.

One final point regarding the impoundment and its

ability to retain sediment. Information provided in the pre-application document has shown, based on three estimates using best available information on sediment deposition in the impoundment that that sediment deposition has declined dramatically since 1976 and that sediment is moving through the project now more than it is depositing in the impoundment.

Finally, with respect to sediment quality and its ability to inform decisions regarding Section 18, as documented in the USGS NAQA study as well as the EPA Sediment Report in 2004, the areas of greatest concern regarding sediment quality are in the Chattahoochee River downstream of the City of Atlanta, which is outside of the watershed of the Middle Chattahoochee project. This is an area that fish migrating upstream from West Point Reservoir would have to pass through on their journey upstream to the Morgan Falls impoundment and there is no evidence to suggest that sediment quality of the impoundment has any greater bearing on potential passage of these fish than the sediment quality downstream of Atlanta.

Finally, the striped bass that would pass upstream, if fish passage were provided, would spawn in habitats in the free-flowing river upstream of the Morgan Falls impoundment and would not be spawning in substrates in the Morgan Falls impoundment. As young fish they would

drift in currents downstream of the impoundment and they would maintain a more or less pelagic lifestyle in the impoundment without strong interaction with the substrates. Finally, there is no present evidence of sediment contamination or adverse effects on aquatic communities in the impoundment.

MR. TANAKA: Ted Tanaka from the Department of Interior Solicitor's Office. I just want to respond to a couple of what I think were general points. There is a lot of detail just brought out by Georgia Power's fish biologist, but to me it seems that most of it is going to feasibility type issues, and in my opinion under the Rule, under the Commission's regulation, that argument is fine but that should come up later in this process. At this point in time the Department of Interior does not prescribe any provision for fish passage; it is still in the process of determining whether or not it is going to prescribe fish passage, how we are going to implement the Section 18 authority.

For us this study, this sediment contaminant study, is going to help the Secretary of Interior and the Fish & Wildlife Service implement that authority. At this point in time we have not decided on this specific provision. I think we are premature, quite frankly, in arguing the specifics of fish passage feasibility and

whatnot at this point. That is something you will have an opportunity when and if the Secretary does implement fish passage provisions at this dam. There is a mandatory petition for review process. There is an EPA process, legal process. There is plenty of time for that.

At this point in time, the way I read the regulations, the way the Department feels about this is that information is necessary for the Secretary to determine whether or not fish passage is going to be required or necessary, whether it is going to be appropriate there, and how should the Department best implement the authority. That is kind of a general--and I don't know what else to say about that. I think we're down into details on feasibility and, quite frankly, fine points of biological issues before we have even decided what we are doing, flat out. The data and the studies we are asking for will provide beneficial information, as Fish & Wildlife had already explained, to help the Department of Interior decide whether or not to prescribe, to reserve authority, or whatnot in the future. Thanks.

MR. JAYJACK: Let me clarify a little bit the point of the question I was asking. One of the things we, as a panel, have to do is try to assess a nexus between the study objectives and the information that is to be obtained. So what I have tried to do, and not given any previous

guidance on exactly how to do this, but it seemed logical to me to put myself in the place of a Fish & Wildlife Service biologist in making an assessment of whether fish passage would be needed.

And based on the information that Interior gave to me it seemed like that the line of thinking was that if the sediments in the reservoir would be found to be contaminated, that would give cause for consideration as to whether or not it's a good idea to pass fish upstream for fear that these fish may be harmed, that the sediment contamination could potentially be so severe that populations could not be established upstream. So I am speaking very generally; I am not speaking specifically to the project but just in general terms with regards to the line of thinking that the Fish & Wildlife has.

And I do that to try to figure out what the nexus is here. In my opening statement I mentioned that the issue of sediment contamination reaches across broad resource levels, but for purposes of this study dispute resolution I am simply focused on what Interior has stated are its goals and objectives with regard to this particular matter in dispute, if that makes sense.

MR. THORNTON: Georgia Power just reiterated a few minutes ago its allegation that there is no applicable sediment contamination criteria because the State of Georgia

doesn't have any, and I remember the Fish & Wildlife Service said in its submission that they would be glad to supply some. And I guess my question is, what criteria does Fish & Wildlife Service have in mind and have they been supplied through the record or will they be today?

MR. MOORE: If I may, I needed to respond to the previous argument regarding study criteria made by Mr. Tanaka.

MR. THORNTON: Okay, let's hold my question for a minute then and get your response.

MR. MOORE: I appreciate it. My name is David Moore and I'm an attorney with Troutman, Sanders. I am also a biologist and my experience includes some years of involvement with environmental groups and environmental protection agencies, specifically in the area of water quality standards as well as toxicology and toxic substances in the Superfund program.

I would like to address, just very briefly, the request of the panel for additional information regarding what possible nexus this study could possibly have to Section 18. I think we all can observe we heard some statements regarding possible impacts to fish and aquatic life from some toxic substances, which there is no evidence exist in this impoundment or upstream.

We also heard a discussion that some of the

aquatic species that Fish & Wildlife Service is interested in were shoal bass and other species that are not diadromous, and I would present that those are not considerations for the panel because those would not relate to Section 18 authority.

With the existing information, which was described very adequately by Dr. Steve Layman of Geo Syntec, and with an understanding of current operations in the system, and that involves the contributions of contaminants that if they do arrive in this river they would arrive from some of the things that Ms. Lawrence mentioned, the suburbanized area--nothing to do with the project itself--and the studies that were being proposed, there would be more than adequate information for Mr. Tanaka to make his determination regarding whether or not Section 18 needs to be addressed or not in a license.

We will point out that, again, Section 18 has never been raised not even in scoping; it was raised, in the first instance, after the Commission issued its study plan determination, which is procedurally questionable; however, it was raised in that document and there is not a lot of implication of the basis for a nexus.

Now, Mr. Tanaka asked us to take it under advisement that they haven't decided whether fish passage is necessary so they don't need to provide additional specific

information, but we stand here today without having any information as to how any of these species might be affected by contaminants or whether or not they would have any bearing on the question of fish passage. There has been no specific identification of species that might be affected, no specific identification of contaminants that might affect those species.

We would submit that if the issue was whether or not aquatic life would be affected somehow by contaminated sediment that the Georgia Water Quality Standards do specifically address those issues, and those issues have been addressed through the appropriate mechanism, which is through the rule-making process in the State of Georgia, administered by the Georgia Environmental Protection Division.

If you look through the original request of May 14th Fish & Wildlife Service, not in the context of Section 18 but in the context of general goals, did identify some general types of contaminants, not real specific contaminants except for PCBs and Mercury. The Georgia Water Quality Standards specifically address PCBs and Mercury, specifically for the protection of aquatic life in Georgia.

Regarding the other types of contaminants--poly aromatic hydrocarbons, organic chlorines--Georgia Water Quality Standards have over 100 different toxins for which

there is a specific criteria that has gone through rule-making and the State has determined that those criteria in ambient water quality are protective of aquatic life. And I will also note, those standards are reviewed and approved by the United States Environmental Protection Agency and also through consultation with the Department of Interior Fish & Wildlife Service through memoranda of agreement, those standards are also reviewed by Department of Interior.

So we would present that there is an issue regarding whether or not those criteria, and by the way, whenever samples are taken quarterly by Georgia Power in the impoundment those criteria are being met. In fact there's non-detects for the majority or all of the pollutants that are identified by Fish & Wildlife Service.

We would submit that, to the extent that there is an issue, that that needs to be handled through the Water Quality Standards Program directly by the Department of Interior through the existing process. It is not appropriate to have a licensee conduct sampling where there are not criteria; it is not appropriate for them to dispute the water quality standards through this re-licensing process; there are processes for that.

Finally, I would say regarding the existing information--and Dr. Layman provided a summary of the existing information--it's the United States Environmental

Protection Agency that's been authorized to make a determination with regard to water quality standards and effect on aquatic life, and they have done so in the most recent 2004 report. It seems and sounds as though Department of Interior is not happy with that but that is a decision for the EPA to make, not for the Department of Interior. If existing information is good enough for EPA it certainly sould be good enough for this re-licensing.

And secondly, again I will point out that the Park Service does not require that type of information. They specifically allow land-disturbing activities in the CRNRA. So if it's good enough for the Park Service, one of the branches of DOI, then certainly there would be no basis to require sediment sampling for re-licensing this project.

Finally, I will note that because DOI has raised the issue of Section 18 so late in this process, there is no information in the record regarding what is their establishment of nexus of sediment contamination to some fish passage goal and objective. In fact there is no identification of fish passage as a goal or objective until after the notice of study dispute.

There has been no discussion as to why existing information is not adequate to provide them with the information that's available. We hear some new things today, but as far as documents provided previously, the

record and statements all through study plan meetings and through scoping, which began early in 2004, there has never been an identification of this issue and we would submit that what has happened here is, for whatever reason, the Department of Interior has decided that it doesn't want to seek to have this analysis done for other reasons, possibly recreation area reasons, but instead has decided that perhaps that case was not a good case; perhaps they thought they weren't going to prevail on that but they shifted over to Section 18.

So they need to provide some basis and some nexus to Section 18, then to provide some identification of information that's necessary to implement Section 18. They should not be allowed to come before the panel today and say merely that these decisions have not been made and therefore we want to go ahead and get the information and make those decisions later. And that concludes my remarks.

MR. JAYJACK: This is Nick Jayjack with FERC. I think we are getting a little bit off the path here and let me explain. Let me explain a little bit about what the panel has been tasked to do here. We have not been asked to make any kind of legal calls as to when we would receive material, the legality of looking at certain material, that sort of thing.

The information came to FERC--the information I

refer to is the December 16, 2004 study dispute--that was looked at by staff at FERC that are associated with this project and then the material was passed on to us. Then, as a panel, we were told that these are the matters that are in dispute and this is what we need to look at.

We were specifically told to focus on the criteria that are specified in Section 5.9 of the Rule. You will note that it doesn't specifically go into whether or not a potential Section 4(e) recommendation is valid or a Section 18 authority is valid; it is very non-specific. So as a panel we are operating on the criteria that are specified in Section 5.9, so I don't want to get too far off that path. I hear your concerns. Those concerns really should be passed on to the Commission and the Commission staff that are associated with the project as opposed to the panel; this really isn't the forum for that sort of thing.

Again, we are here today to clarify the matters that are in dispute where it is related to the criteria, so we really want to focus on the information as opposed to the process.

MR. TANAKA: Just quickly. I think you touched on some of my concerns. I, too, felt that we were going down a road that we didn't need to, but just a couple of points. First off, when it comes to the Section 18 authority and how the Department interprets that, what we do

when we prescribe fish passage we do it consistent with the Federal Power Act and existing case law and departmental policy. So the argument that there's only one or two diadromous fish species there and that's all we are going to move or that may be the only thing we can move, we'll address that later at the appropriate time. As for pure legal argument that he has raised, whether or not--exactly what type species can be passed under Section 18 authority is something that I will address at the appropriate time.

Procedural matters, we think we have raised these appropriately. Dispute resolution is open to mandatory agencies with Section 18, 4(e) authority; it's the first time in the regulation it's mentioned is for this. Hence, we are now--the only reason we are here talking about 4(e) and 18 is because it was necessary to get into dispute resolution. I don't know what else to say except for I think the Department of Interior has complied with regulations in getting to this point.

MR. JAYJACK: Thank you, Kevin. I just want to reiterate that we are not, as a panel, going to make any procedural issues rulings; that is going to be left up to FERC. I know the lawyers want to get at it on those issues, but we are here to try to--assuming that these studies that are requested are on a table here, we want to look at the criteria of Section 5.9 and see if the proposed studies are

appropriate basically on their technical basis. And we will leave it to the lawyers to argue and the Commission to rule later about whether procedurally Interior got its request here timely or appropriately, or otherwise right or wrong.

Did you have a response to the particular things and then we'll get back to my questions.

MR. HASTY: A couple of quick comments on the study criteria. And I think we are confusing two different issues. While the State of Georgia does not have a regulatory criteria for sediment, what has been measured in the reservoir and in the River has been the water quality parameters and we are not contesting the water quality parameters or other statutory stuff as that; we are looking specifically at sediment. And what water quality doesn't catch are a lot of the fine particles that are going to settle out down to the bottom and affect the benthic organisms, the benthic-dwelling fish, and any other fish that feed on those animals.

There is no state criteria for sediment but the literature is replete with examples of criteria for sediment for the protection of aquatic organisms. There are some state policies from other states. There are some scientific studies related to individual organisms of the populations. So anybody that wants a reference list, we can certainly provide a reference list of applicable criteria for sediment

for protection of aquatic life. I just kind of want to make that clear that water quality and sediment are two different animals.

MR. JAYJACK: The gist of my question as to ask, if you have identified such criteria that you propose should be analyzed or that the analysis should compare to this criteria, that those references be placed in the record if they are not already.

This lady has been waiting; let's hear from her first.

MS. MALVERN: I have just one very brief point. I am Maureen Malvern from the Florida Department of Environmental Protection. I just wanted--Dr. Layman mentioned the comprehensive studies in the context of water allocation among the three states; that's something I know something about. I just wanted to point out, though I am sure there is some good information in those studies, they were done in a settlement context; they were not meant to be a definitive last word on the science. Because I have talked to some of the technical people that were involved in that and it was, to some extent, provisional, that is, if we try this allocation or formula, assuming this and this, for this purpose. So it was all done in the context of the Alabama litigation that began in 1990 so it shouldn't be taken as the last word for anything technical.

MR. THORNTON: We haven't heard from this fellow over here yet and he has been waiting patiently, so let's give him a chance.

MR. CHEEK: My name is Terry Cheek. I am with Geo Syntec Consultants and here in support of Georgia Power's re-licensing efforts for Morgan Falls. I just want to respond to some of the comments that were made regarding several of the issues. One, sediment criteria, there are no promulgated sediment criteria. There are guideline values of various sources that are available to screen sediments but there are no promulgated criteria.

Also, I want to indicate that just the mere presence of sediments alone in this reservoir does not indicate or dictate that there is contamination present. I mean it's a natural phenomenon that occurs but we do have some other indications as to what the quality of those sediments might be.

The overall goal that DOI would have in evaluating sediments would be to determine what impact they may have on the aquatic community--and my background, I am an aquatic biologist--we have indications of what that is. There is information there now that should feed any concern or opinion about the impact on the aquatic community.

Water quality standards not only deal with the water column concentrations but they also deal with the

ability of that water bottom to support aquatic communities. The aquatic communities are fully supported there. If they weren't it would be on the 303(d) list as an impaired water body, so it is supporting the aquatic community. So there is no indication--I mean the presence of sediments doesn't tell us that it is contaminated; the status of the aquatic community doesn't indicate that it is contaminated; the status of the water column water quality doesn't indicate that it is contaminated. So there's really no driver here to go and conduct additional samples.

EPA has looked at the available data, and it's some fairly recent data, and has indicated that the Morgan Falls area is not an area of probable concern. So there is a lot of information. These are the facts that are there that do not compel someone to go and sample additionally. Thank you.

MS. LAWRENCE: I just wanted to address some of the nexus issues. We are going to submit a filing next week so this will be on the record, like the 25th or 26th, I guess. For one thing the applicant states that there is no nexus between re-licensing at the Morgan Falls project and contamination of sediments; we disagree. Clearly, the concentration and the accumulation of any contaminants, if they were there, bound to the sediments is directly related to the presence of this dam.

The applicant further states that they are not proposing any new major construction or ground disturbing activities. For us, right now we are looking at project effects--direct, cumulative, indirect effects.

The applicant states that the project operation could influence sediment deposition but chemical loads are not directly related to hydro operation; we understand that. We know that chemical loads are not directly related to hydro operations. However, the accumulation and an increased concentration of contaminated sediments, if present, are definitely related to the project and the project operation.

Lastly, the applicant states that there are no operational alternatives that would affect sediment contamination and data from sediment sampling would not inform the development of license requirements. If data from a sediment-sampling study determined that sediment contamination in the project area was potentially affecting the aquatic community, and absolutely that no operational alternatives could be identified, there are other options to enhance or mitigate for this. So right now we are looking for project effects. Thank you.

MR. JAYJACK: I have a follow-up question related to what this gentleman had just mentioned. I am trying to understand what is happening in the watershed here. I think

I speak for myself here; I think I am truly separated staff when it comes to this, simply not having been involved with the project at all prior to this and not real familiar prior to this with the basin.

In looking through the record of information and having in the back of my mind the idea the question of what additional information might be necessary and why it is needed, with that thought in mind I have been reviewing through the various reports that have been done by the USGS. I believe there is a report by the EPA and various others that are related to water quality in the basin, are related to storm water runoff management, and that sort of thing.

And one of the things I noted is that studies done specifically at Morgan Falls are notably absent. The question that raises in my mind is why. Related to that also is, I am wondering if, aside from specific water quality parameters, has there been any observation of external signs of contamination on various fish species, and I am sure Georgia DNR does quite a bit of sampling of the river and I would think certainly within the project area.

So because Interior and/or Fish & Wildlife Service has raised the issue of contamination and the effects on fish populations, the question I have is how populations elsewhere in the basin, in light of all the work that has been done, how those populations are being affected

by any potential contamination that may be taking place. I hope that makes sense, and if anyone could respond to that and help me to better understand what is happening, that would be very helpful.

MR. TANAKA: Could you rephrase?

MR. JAYJACK: Let me ask it in the form of a question, sorry. My question is, I am getting to the root of why Morgan Falls, specifically the reservoir, is a concern given that, in light of all the studies that have been done, Morgan Falls was left out of the various sampling schemes. So I guess what I am hearing the Fish & Wildlife Service saying is that it is kind of a theoretical argument. There are sediments that are moving downstream as they always do in rivers, and allegedly they are accumulating within the reservoir. And because contaminants bind to sediments, then the thought is that there is a potential for contaminants to be accumulating within the reservoir; I understand that part. But to help me understand what is going on on a broader scale and to better understand the Fish & Wildlife's concerns, is there concern elsewhere in the basin or is it limited to Morgan Falls?

MS. LAWRENCE: We are just bringing this up for the Morgan Falls impoundment because that's what this re-licensing encompasses. So therefore we wouldn't go outside the project area for our concerns for this particular

proceeding.

MR. JAYJACK: Right. But if there is no data for the reservoir, then you have to look outside of the project area and see what is happening elsewhere to help formulate your thoughts as to what potential contamination issues may be present in the reservoir, and that's what I am getting at. What information have you looked at in order to formulate your issue?

MR. HASTY: It's the land use changes in the area. You look at a suburban landscape or an urbanized landscape and you get all kinds of different runoff issues from, say, forestry or agricultural areas, from metals out of car operations coming off the pavement, oils and petroleum products off automobiles, to lawn and garden pesticides and herbicides, which studies have shown that, as far as quantities used, suburban homeowners use by far more of these agricultural-type pesticides and herbicides than do farmers just because it's cheaper, and more is better. I guess the farmer is more knowledgeable in the use of that stuff.

So were are just concerned about the fact that this has changed in the last 20 years drastically and we don't know what is coming off the landscape and what might be accumulating in that reservoir. So that's kind of what we're looking at. It's a black hole; we don't know.

MR. JAYJACK: Well, my follow-up question related to what I said before. Given that land use has changed--and again, I am just trying to understand what is going on--have we seen effects on fish population outside of the project area since there are these reaches that are very near the project that are affected by the same change in land use patterns, and that's what I am getting at.

MR. HASTY: Well, I guess, again, with a free-flowing stream or river and again, we're not necessarily talking water quality but the ambient water; we're talking the sediments in the bottom. In a lot of these faster-moving creeks and streams and rivers there is not that great accumulations of the fine particles like there might behind this dam.

I personally don't know if anybody has looked at different fish populations or aquatic systems to see if there has been a change. I would assume off the top of my head that, certainly with the suburbanizing area that was before that forested or agriculture, you would see pretty significant changes in the aquatic ecosystem. But I personally don't know of any specific studies that have been done that have shown changes in these populations.

One of the other questions was external appearance, any indication by looking at the fish. Not that I am aware of, but I don't know that anybody has ever

sampled, specifically looking at external lesions or any other malformations of the fish that would indicate--at that point it would be a gross contamination problem. And I don't know that we are going to find a gross contamination problem or any contamination problem behind this dam, but we don't know until we look; that's what we are getting at.

MR. JAYJACK: Thank you.

MS. LAWRENCE: I think Jim is going to talk about your question in relation to fishes, but for mussels. The mussels have been wiped out for whatever reason; it could be a combination of different things but compared to historic populations. They just did a study--I don't know exactly when that was completed--but they found one species that's an exotic that is very tolerant for corbicula.

DR. LONG: Jim Long, Dr. Jim Long--we're throwing our doctorates around today--with the National Park Service. The Recreation Area contracted a study for mussels and all we found was corbicula, the exotic Asian clam, and they did note that there were some areas where even those were absent, indicating poor water quality.

Related to the basin, there have been fish kills in tributaries going into the Chattahoochee, I know Rockwood Creek for sure, but that's not in the area, and then in some other adjacent areas. So there have been issues.

MR. THORNTON: One thing that has been bouncing

around in my head is whether there is any reason to believe that as the sediments come into the reservoir--and Georgia Power is saying that the reservoir's accumulation rate is declining so that more and more sediment is, in effect, passing through--is there any reason to think that there is a differential deposition of contaminants as the sediment-laden water passes through the reservoir. Is there any reason to think that same amount, if you get to a steady state, that the amount of contaminants would still increase and the sediment is trapped in the reservoir as opposed to simply flowing through? Any of the technical people have any visions on that, as to whether that would be a parameter to justify or negate the need to further sample behind the dam?

(No response.)

Hearing none--

MR. COX: I may have one comment on that. I am Fred Cox. I am an engineer with the Power Company in the Hydro Services Group. We have said, based on measurements that we made, the only three measurements we know of for volume in the reservoir, we have looked at some stuff like the Brune curve that would indicate, for a small reservoir like this that a large portion of sediment moves through the reservoir, gets passed downstream. If you look at basic information on sediment transport, the heavier particles are

going to be the ones that are going to settle out. The smaller particles are the ones that are going move on. Now, I'm no expert on contamination but I have heard it said several times in here that the contamination concern would be binding to the fine sediments. I would expect more of them to pass through the dam and move downstream, and what sedimentation is occurring is going to be the heavier particles. That's the only comment I have.

MR. JAYJACK: Doug, can you hear me okay?

MR. NEIMAN: Yes, I have been following along quite fine. Thank you.

MR. JAYJACK: I want to ask you if you have any questions at this time? I can try to put the microphone down here and see if your questions come through. Just a second.

MR. NEIMAN: The ones that you have been asking are right along the kinds of things that--I don't have anything to add, I guess, at this point on this subject.

MR. JAYJACK: That makes it easy.

MR. NEIMAN: You guys are doing a good job.

MR. JAYJACK: Well, at this time then are there any other people who wanted to speak specifically on the contaminant study request?

MS. NICHOLAS: I'm Betsy Nicholas with Upper Chattahoochee Riverkeeper. We have been involved with this

process from the beginning and were at all the meetings and submitted comments at every point. I just wanted to address a few things. Specifically, the main thing that I keep hearing from Georgia Power about the contaminant study is that there is no evidence of problems, contaminants, that there's no data that shows that. But what I am hearing from that is that's because it hadn't been looked at.

There isn't evidence of sampling occurring in the basin or in the impoundment area since about 1980; that is an indication that we really need to look at this. It's not that we necessarily think there is a contamination problem but we need to know that because it really could have an impact on the decisions that are made going forward. So I think that the main point here is that there really is the black hole of information about what's going on in the impoundment and we need to find that out early at this point in order to make our decisions going forward.

MR. THORNTON: Fish & Wildlife Service indicated in its December 16th standpoint, and also in its, I think, back in May 14th proposal, that whole fish analysis as opposed to the fillet analysis that I understand had been done on fishes would be an acceptable alternative to sediment study. I don't recall hearing from Georgia Power why they wouldn't be happy with that. Would someone from Georgia Power like to address that?

DR. LAYMAN: Yes, this is Steve Layman. We have not addressed that because of the reason that we have set forth in the record in the revised study plan and in our recent filing of Georgia Power on January 10th, that there is no evidence of contamination problems with the aquatic community based on existing water quality data, fish tissue data. So the need for that additional information has not been established consistent with study criteria in 5.9(b(4).

I would just like to add in regard to this indication of some that there is an absence of data, there are a great deal of water quality data for the main stem Chattahoochee River and its tributaries, collected by water intakes, upstream and downstream of the project, collected by Georgia EPD and other entities on the river. There is a substantial amount of information on water quality in the Upper Chattahoochee River, and the sediment sampling data that was done by the USGS in the early 1990s related their finding to suburban land uses, which was well under way by that time in these watersheds.

MR. JAYJACK: Kind of a related question that I have had is, getting back to some of the existing information that's there, I recall a document that the Corps had produced back in 1981 and included in that document were data that showed sediment distribution in the reservoir. And as I recall they noted that predominant sediment type

was sand at the time, with small amounts of silts, clays, and other material; I think they mentioned gravels.

I have not seen the reservoir at this point; I have never visited the site. I plan to either later today or tomorrow, but my question is that since the concern has been raised regarding silts, in particular, is there widespread siltation or presence of silts in the reservoir? Can anybody touch on that or do we know?

MR. STOCKSLAGER: Define silts, what you call silts.

MR. JAYJACK: Oh, define silts--very small, very, very tiny particles, smaller than sands.

MR. STOCKSLAGER: Yes.

MR. JAYJACK: There are?

MR. STOCKSLAGER: There are. Jim Stockslager, President of Huntcliff Homes Association. We have a couple of miles along the river, across from here, and we are inundated with silt every time there is a flood. My understanding is that the sand people, who used to mine upstream, are no longer mining because they don't get enough sand out of the river, and the City of Roswell has bought that property and the sand people are using it as a distribution area now but they are not taking any sand out of the water is my understanding.

We are having a tremendous problem with silt,

well, more based on Buford Dam when they release excessively or we have a flood like the hurricanes. It's a very, very fine, slimy silt that gets in our pastures of our stables and makes the ground untenable for three or four weeks. Then we have to come and scrape it off or add sand to try to get some basis back other than pure silt, and I can show you tons of it. Thank you.

MR. THORNTON: I am kind of showing my ignorance about all of the stuff in the record right now but the Atlanta Sand and Gravel Company permit application data from 1996, is it in the record? I have not seen it. Has anybody purported to place that in the record? If you want it considered it needs to be in the record.

As I understand it there was a study in relationship to an application for another sand and gravel permit in 1996, which the sand and gravel company decided not to do after all; that's my recollection. But, supposedly, there are data from that application that were referenced in a couple of documents I have seen, but I haven't seen the data itself.

MR. JAYJACK: I'll tell you what, unless there is an objection, why don't we take short recess at this time. I think it would be a good idea to give the court reporter a break as well. I am showing 10:40, so why don't we reconvene in 15 minutes.

(Brief recess.)

MR. JAYJACK: While we were on break someone approached me and asked me about recessing for lunch. Given that it's 11:00 o'clock and it appears we have quite a bit more to discuss today, the answer is yes, and we will probably do that around 12:15 for an hour. We'll see how the conversations and discussions flow, but expect it around 12:15 or so.

Where we left off before the break there was a question by Jerry Thornton. And his question was whether or not the data in a 1996 gravel permit that has been referenced in a billing to FERC's project director, whether that data has actually been filed, and I think George Martin with Georgia Power has a response to that.

MR. MARTIN: I am George Martin. I am Georgia Power's Hydro Re-Licensing Project Manager and I am the administrative biologist in this process. Yes, the question was, is the question that is referenced in the permit for the Atlanta Sand Company on dredging in the river in the record, and as Nicholas mentioned, the permit and the data associated with it is in the record by reference. It was first mentioned in the pre-application document and also with the proposal to be evaluated during the studies phase of the process under geology of soils. That permit and the associated paperwork is available and we will provide it to

the panel at this point in time.

MR. JAYJACK: Thank you, Mr. Martin. At this point are there any other questions related to sediment contaminants or are there any responses to comments that have been previously made, because if there are not, we will move along to the flow studies.

(No response.)

Okay. I will take that as a no and will progress to the disputed flow studies. In its December 16, 2004 filing, Interior made some statements with regard to the end stream flow study that is being proposed by Georgia Power and that was approved by staff, Commission staff, in their study plan determination. As I understand it the main study goal that Interior had mentioned is that the acquisition of flow data will help Fish & Wildlife Service in its project operational effects with specific regards to flow on fishery resources, and that that understanding will aid the Fish & Wildlife Service in its formulation of any fish passage requirements that it may want to put forth to the Commission as part of a Section 18 fishway prescription.

I know Doug Neiman had some questions that he had with regard to the flow studies so, if it's all right with you, Doug, I would like to have you begin with asking questions on clarification of the matter.

MR. NEIMAN: All right. Can you hear me okay?

MR. JAYJACK: Yes.

MR. NEIMAN: My questions here will basically be looking at it from the standpoint that I am trying to become familiar with the project and its operation a little more than I have been able to so far, so some of them will be of a little more general nature to be able to get a good conceptual picture in my mind about how the project operates.

I understand that one of its functions is to help re-regulate the peaking flow from upstream at Buford Dam, so my first question is--and I'm going to have to arrange my phone here so I can look at my computer screen at the time while trying to speak--can somebody describe generally the typical operating pattern on an hourly basis for Morgan Falls on a typical Spring or summertime operating schedule, and that's basically looking at the range between the instantaneous minimum flow and the typical peak flow during operation and how long do the flow pulses that come out of Morgan Falls last for, or is that information available in a document that they could just point me to the appropriate reference and I could look it up for myself; I just haven't run across that yet.

MR. COX: This is Fred Cox with Georgia Power Company. In our submittal to the panel one of the things was a set of 77 slides and up near the front of that, page

17 would be the first one, have you got that available?

MR. NEIMAN: I don't have it pulled up on my computer but, yes, I did get a CD that has a lot of that stuff on it. If that's where it's at I can look that up for myself.

MR. JAYJACK: Is that in the pre-application document?

MR. COX: This is the information that we submitted to the panel. It's a set of 77 slides, and the area we are looking at are slides six through 23. But to give you an idea we plotted--using hourly data from the USGS, we took a dry week, an average week, and a wet week, and on this plot we show the Buford Dam releases, which are 36 miles upstream. We show the hourly inflows into the reservoir measured at the Roswell Gage immediately upstream of the Dam, plus we have added in Big Creek and some local flows. We show the hourly elevations at Morgan Falls and we show the hourly releases.

On page 17, the dry inflow week, during that week the Atlanta Regional Commission had requested a minimum flow of 956 cfs; that's to meet the 750 cfs flow target downstream, plus to meet the needs of the two large flow withdrawals in the river supplying the City of Atlanta and Cobb County. During that week you see the inflows on a daily basis, which is driven by the peaking operation of

Buford Dam. The inflows are varying from a maximum daily to a minimum daily of about, oh, it looks like about 1,600 cfs. During that entire week Morgan Falls was making a steady release right at about the 956 minimum flow requested and it totally smoothed out the Buford peaking operations, and to do that you will see that the reservoir fluctuated from about 864 and a half to 866 during that week to do that.

Two pages further on page 19 this is a similar plot for a week using hourly data; it's an average inflow week. The average flow in that week was 2,381 cfs; the average annual discharge at Morgan Falls was 2,317. The minimum request for that week was 948 cfs. The Buford-driven inflows fluctuate about 3,600 cfs from the minimum to the high every day during the weekdays. During that period you have flows at Morgan Falls; the variation in them is about 1,200 cfs. The reservoir fluctuated within about a four-foot range during that week. So that's kind of typical of an average week.

Then on page 21 we plotted up a wet week; the average flow was 6,411 cfs. The discharge capacity through the turbines at Morgan Falls was 5,500 cfs. The reservoir is very small, and pretty much the discharge through that week is following the inflow. When you get these high inflows there is not enough storage to provide any substantial re-regulation.

And when you look at these I would like to point out that the yellow line, which represents the hourly inflows into Morgan Falls, that would also represent the discharge if you operated that river as pure run of the river, in other words, inflow always equaled outflow. So when you look at it, particularly on the average week, you see substantial reduction in the daily fluctuations by the operations using the very limited amount of storage. Any questions?

MR. JAYJACK: Could you clarify the last statement, pure run of river, do you mean at Buford?

MR. COX: No, no. Okay. In some of this documentation we have described Morgan Falls as a modified run of the river project; we have described Buford as a peaking project. Buford has a lot of storage; they can take the water and let it go in any pattern they want. The way they do that, they generate a minimum of about 600 cfs, and the rest of the water they pass during peak power demand periods.

A pure run of the river project would be one that has essentially no storage at all. So at all times the hourly inflow and the hourly discharge would be equal. We are what we call a modified run of the river project. We've got a little bit of storage, not much, and we can re-regulate flows to a small extent. And what we're saying,

like on that page 19 you see a daily variation in the inflows between a minimum and maximum of about 3,600 cfs, where on discharges we are re-regulating it by fluctuating the reservoir and are only fluctuating about 1,200 cfs.

MR. JAYJACK: Thank you. Any other comments from the audience on that right now?

(No response.)

Well, let me go back to Doug and see if he has follow-up questions.

MR. NEIMAN: I understand that, and that is available in the operations summary. I'm not sure what format that would be in, is that included in the slide that has these lines that you referenced. If it is, then I have it and I can access it from there.

MR. MARTIN: This is George Martin again. As a result of the study plan meetings we had a request by several participants to have an opportunity to better understand how the project operates. Georgia put together an operational primer and we presented that at a meeting in August or September--September 1st--and that entire operational primer is in the docket; it's in the Morgan Falls docket and we can provide hard copies of that presentation upon request.

MR. JAYJACK: According to my records it was filed and the date is August 16, 2004, so we do have that.

MR. NEIMAN: One of the challenges that we have been facing here is just time to wade through the new information in a short period of time. We haven't had an opportunity to fully digest everything yet, so that was the impetus for that question. Are there any other comments on that one? Let me just run through my list here then.

I'm curious just a little bit as to how often, on a recurring basis the project fills, in other words, when you are getting too much water to handle what that might be like. Would you characterize it as being frequent or rather infrequent?

MR. COX: I don't have any statistics on that right now, but going back to those slides I was talking about earlier, the three weeks, we looked at a dry one and an average one and a wet one. The dry one we certainly weren't spilling at all. Looking at the average week, it looks like our maximum discharge was on Friday; that was 4,000 cfs. We can pass 5,500 through the turbines so we wouldn't spill during that week.

The wet week that we typified, it looks like for about two days the flows went above the turbine capacity. As a matter of fact it went up to 15,500 cfs so we were certainly spilling for a couple of days there. Is Wayne still here; have you got anything to add to that?

MR. HARDIE: Very infrequent.

MR. COX: We have got the plant manager for the plant here, Wayne Hardie, and I think he can address it a little bit more. He's there day to day, sees the operations.

MR. HARDIE: I am Wayne Hardie, the plant supervisor at Morgan Falls. The question was how frequent do we spill. We spill very infrequently--wet weather, when Buford gives us a lot of water. When it's wet weather we do spill some. We have records annually that tell how often the gates are open and how many gates are open, and we can provide that, if needed. Thank you.

MR. NEIMAN: Do you ever do anything operationally in anticipation of more water coming down into the system, say, lowering the water level, increase the output level on the reservoir for a little bit to try to capture some of that?

MR. COX: This is Fred Cox. Our typical operations, we get on a weekly basis requests from the Atlanta Regional Commission on a minimum flow and that's designed to meet the 750 cfs flow target at Peachtree Creek established by the EPD for water quality, and it's also to meet the water demands for two large intakes between the Dam and Buford.

Most of the water coming to us, 76 percent of the volume is controlled by Buford Dam releases. We never know

exactly what they are going to release on a given day. They put out a weekly schedule but then they start changing that schedule every day; they may change it several times during the day. So we don't know what's coming until they have actually released it.

It takes 12 hours for that water to flow from Buford Dam to get to Morgan Falls. The operators are watching what's going on at Buford; they're also monitoring the USGS Gage at Norcross, which is about halfway between Buford and Morgan Falls, and one at Roswell, which is immediately above Morgan Falls. So if they see an excess of water coming down they will pick up generation, an excess of water above what they need to pass the minimum flow. We will pick up generation and pull the reservoir down.

On those plots that we talked about earlier, what you will see plotted on there is the power and reservoir elevations, so you will see how it is fluctuated as they attempt to handle these high releases out of Buford Dam. Buford Dam can peak at about 10,000 cfs; their minimum flow is about 600. We're typically passing something like 950 or 1,000 minimum so, yes, we are fluctuating the reservoir to attempt, as much as we can, to attenuate those Buford releases.

MR. NEIMAN: There is a video that I got the other day. I was wondering, how far downstream below the

Dam would there be a first set of fairly large, deep pool or deep running type habitat in the river other than this pooling basin area?

DR. LAYMAN: This is Steve Layman. Based on information provided in the earlier end stream flow study, pool and run habitats would be prevalent habitats near Morgan Falls Dam. Most of the shoals are located at a greater distance downstream.

MR. JAYJACK: This is Nick Jayjack from FERC. I have a real quick question; at least I hope it will be quick. I am looking at the graph that you have given to us. Incidentally for those who didn't hear it, these graphs were filed with us on January 10th so that's what I have here, so it is on the FERC record. Anyway, what I am seeing on this graph appears to be a flow discharge between June 11, 2001, and June 18, 2001, which appears to be indicative of a dry end flow week. I am seeing that the project releases a fairly flat line of flow through that whole week and that discharge appears to be 950 cfs. In reading through the project record the question was raised, could the reservoir capacity be increased so that this 950 cfs flat line--and I hope I understand this correctly--could be raised or elevated so that there would be more of a minimum flow released downstream.

MR. COX: In answer to that question, no. If you

look at, also in this data, the storage at Buford Dam--and I would like to point out that Buford Dam is a Corps of Engineers Dam; we exercise no control over it--this has a million acre feet of usable storage; Morgan Falls right now has about 2,200 acre feet of usable storage. So Buford Dam--and 76 percent of the flows coming into Morgan Falls come out of Buford. We have 2,200 acre feet and the residence time, which is the volume divided by the average annual flow, is about 12 hours at Morgan Falls; at Buford Dam it's 259 days.

Buford Dam can save water from a wet season and use it in a dry season, or even use it the next year it's such a large reservoir. Morgan Falls, at most, can save water and use it a few hours or maybe a day later; there is just simply not enough storage. So if you're looking at that dry week where we were releasing 956 cfs all week, that's all the water we were getting out of Buford. If we tried to release more, the reservoir would have just dried till it kept going down, down, till it hit bottom. And if you ever get down to where you have no storage at all, then we're in--now you're in a pure run of the river mode. You can only release as much as is coming in and there's periods when what's coming in from Buford are far lower than what we need to release to meet the downstream water needs so the most we can do is re-regulation over a very short time

period.

If you want to increase the minimum flow, that has to be guaranteed out of Buford Dam; that's outside the scope of this project. And also I think that question probably goes a little bit further, is could you provide more flexibility for this re-regulation? And in the submittal we gave you, on page 14 we took a look at the volumes that existed in 1960, 1976, and 2001.

Now, 1960, this wasn't long after Buford Dam had been built. The City of Atlanta recognized that the peaking and minimum flow pattern provided by Buford was not going to meet the city's water supply needs and water quality needs. So the City of Atlanta reached an agreement with Georgia Power Company to provide additional storage so we could re-regulate the flows. They provided that storage by raising the dam six feet. When they raised it six feet that gave us 3,150 acre feet of usable storage.

In 1976 the Metropolitan Atlanta Water Resources Study--they were again looking at water supply needs for Atlanta and the Corps of Engineers was involved in preparing that report--they measured the volume of the reservoir; it was 2,498 feet. In 2001 the Corps once again, through aerial photographs and depth soundings from a boat, measured the volume and it was 2,260 acre feet. To convert that into residence time--I said a while ago we had about 12 hours of

residence time. In 1960, of the usable volume--that's the farthest spillway crest--at eight feet above the spillway crest the residence time was 16 and a half hours; now it's 11.8 hours. That's not much difference as far as our re-regulating capacity. Still, in a matter of hours you could not increase the minimum flow for any significant period of time without water coming out of Buford.

Also, I would like to point out that typically we don't fluctuate the reservoir the entire eight feet; 90 percent of the time it is fluctuated within the upper four feet. Storage for that upper four feet, the residence time has changed from 11 and a half hours in 1960 to 9.1 hours now--not much difference between 1960, and virtually no difference since 1976. So if you talk about increasing the volume by removing sediment and would it increase our ability to further attenuate Buford releases, as an operations engineer I would have to say no, it wouldn't provide any substantial ability to further attenuate those flows.

And if you start looking below that four feet that we fluctuate now up to the eight feet that we're calling usable storage, or even below that, you would have to fluctuate the reservoir a whole lot more to utilize anything below that. Does that answer your question?

MR. THORNTON: Just a quick follow-up. I

understand what you said there and I saw, I think, the same thing in your written submittal, that in theory you could re-regulate the river flow more by fluctuating the reservoir elevation more, beyond eight feet?

MR. COX: Well, right now below that 850 acres is 200 acre feet of storage; it's just very, very small. So you could fluctuate it the eight--if you fluctuated going from four feet now, you would have 9.1 hours residence time. If you fluctuated the full eight feet that would be 11.8 hours residence time; that's not substantial. One thing you need to bear in mind when we are trying to operate this and account for the Buford releases, they are generating a minimum of 600, and when they peak at 10,000 cfs we don't know how much water we are going to get out of them until they actually release it; that takes 12 hours to get to us. So when you are trying to plan ahead on operations you have about a 12-hour time horizon. And the storage we have got now allows for us to operate in a 12-hour time horizon, knowing what kind of water is coming down the river.

MR. JAYJACK: At this point does anyone here want to clarify anything that has been provided by Fred; if not, we'll move to a next question.

MS. NICHOLAS: Beth Nicholas from Upper Chattahoochee Riverkeeper, and just a very quick point. I am not commenting on the accuracy of the study or anything

else, but I just wanted to point out, and this is in the record, from the Atlanta Sand and Supply Company for a permit proposal, the one discussed before from 1996, or will be in the record, I guess, the approval was for removing 2,300 acre feet of sediment from the impoundment which, from the numbers we just got, would double the storage area. So there is some indication that there is the ability to provide greater storage.

MR. JAYJACK: Related to that question, I like to think of reservoirs as buckets; it just helps me to understand things a little better. But if what I hear you saying--and maybe you can just give me some clarification--what you're saying is that even if you increased the size of your bucket, what is constraining your release of flow downstream is not the existing size of your smaller bucket but it's the volume of water that is actually coming to the project; is that correct?

MR. COX: Some. I mean if I could provide a lot of extra storage at Morgan Falls, we could probably provide some additional smoothing of the Buford releases, but from a practical point of view, what is possible to provide in the reservoir--we talk a lot about going back to a 1960 volume. The reservoir was raised six feet specifically to provide storage, and even going back to that volume, what I'm saying is you wouldn't have any significant additional capacity to

attenuate the Buford releases.

And if you start talking about going back to even bigger volumes before 1960, you've got to remember when it was raised in 1960, if you just want dredge--the sediment has accumulated in that upper eight feet since 1960. So any additional you would provide by dredging, going to 1960 you get down to the original natural ground, and now you've got to start going below to get to 1960, below 858 to provide that additional storage.

And I think something that a lot of people forget, that to utilize it you've got to fluctuate the reservoir. There is always--people living downstream of the reservoir, they want to see you fluctuate the reservoir more; people living on the reservoir want to see you fluctuate it less. Also, you need to picture the reservoir as a cone. If you look at reservoir volumes now, something like three-quarters of the volume is in the upper four feet and one quarter of the volume is in the lower four feet. So the lower you draw the reservoir the faster it falls. We're just saying, from a practical point of view it's not possible to provide a significant amount of re-regulating capacity looking at the Buford releases.

DR. LONG: This is Jim Long of the Park Service. I just want to present the biologist's point of view; this is where the biologists and the engineers probably differ.

A substantial change in reservoir capacity or the ability to regulate flows downstream may be insignificant in terms of the amount of water and time it takes and so on, but that may be very significant related to biological effects. A small amount of change may make a large amount of change biologically and I think that's mainly where we are coming from.

MR. JAYJACK: Fred, when you speak about significant change in the smoothing of the inflow curve, exactly what does that mean; what does that translate to as far as flow downstream as compared to the present minimum flow that we saw in that graph of 750 cfs?

MR. COX: We are talking about two things--minimum flow and a reduction of the high peaks and low minimums from Buford. As far as minimum flow any amount of dredging that's within practicable limits, you're not going to be able to increase the minimum flow. The volume of water, that's got to come from Buford; Buford has to guarantee that there's a big enough volume to provide a continuous minimum flow. So we can't even talk about increasing the minimum flow of Morgan Falls; you can't provide enough storage to do that.

And that gets into, you can store water in a wet season at Buford and use it in a dry season or even use it the next year. You'll never have enough storage, never did

have enough storage at Morgan Falls to store water for use more than hours or days in the future. So when you talk about this very, very small reservoir, it's not increasing minimum flow; we're just changing the timing of the Buford flows.

For example, in that average or the dry flow week that we were looking at, the yellow line was the inflow into Morgan Falls, and I said that would also represent the discharge if Morgan Falls was pure run of the river. Every time that yellow line drops below the light blue line, which is the Morgan Falls discharge, you would not have been meeting the downstream water requirements. So we're just smoothing out things during the day. We're not adding--we don't have enough volume to, over more than a day or so, add to the minimum flow. We smooth out the loads and we cut down the highs at Buford. And on the average week you went from a minimum and maximum on the input that was a difference of about 3,600 cfs, I think, and we kept that down to about 1,200 cfs. But I'm saying even with a little bit more storage we couldn't cut that daily fluctuation from minimum to the maximum less than about that 1,200 cfs that we saw in the average week.

MR. JAYJACK: How does that required minimum flow for the water supply purposes compare to historic natural flows of the river in that reach above Atlanta, is it higher

than historic low flows?

MR. COX: I don't know. A little bit further downstream below Atlanta at the Whitesburg Gage--and I am just going from my memory and some looking I was doing at one time--I analyzed a period prior to Buford Dam going into existence and analyzed the record after Buford Dam was finished about 1956. And it seems to me that the (inaudible) just about doubled if you look at the period after Buford Dam compared to prior to Buford Dam. So I would say that you are seeing, through Atlanta, below Morgan Falls and below Buford, higher flows when you're looking at low-flow periods than you saw prior to the existence of Buford Dam, but that's driven by Buford Dam, not so much Morgan Falls; we are just smoothing out the Buford flows a little bit.

DR. LAYMAN: This is Steve Layman. In regard to comments made earlier about biological effects, I just wanted to emphasize Georgia Power is not proposing to dredge the impoundment to provide increased minimum flows. The multiple sources of existing data that have been cited throughout the proceedings in the pre-application document and the revised study plan, in combination with Georgia Power's proposed studies in the revised study plan, will provide adequate information to evaluate the feasibility of that as an alternative from the standpoint of biological

effects. We can talk about that in greater detail, if you like, but those sources are identified thoroughly in existing documentation, which include a comprehensive end stream flow study conducted by the Corps. It includes the comprehensive studies conducted for the ACF after allocation. It includes the flow preference study conducted by the National park Service in 2000. It includes an ongoing flow study apparently being conducted by the National Park Service. It includes fishery surveys in the Morgan Falls impoundment and at three locations downstream of the dam in the Chattahoochee River to characterize existing fish communities. It includes continuous temperature monitoring that has been approved as part of the revised study plan to look at the effects on downstream water temperature, and various other sources of existing information that have been developed over the past decade or more related to the intensive nature of uses of the Upper Chattahoochee River.

MR. NEIMAN: One question here, has anybody identified any potential institutional barriers to the data that USGS collected recently and hasn't analyzed yet, in terms of data ownership and that kind of thing?

DR. LONG: Jim Long from the Park Service again. As far as USGS data, I mean I was told in an e-mail about three weeks ago that we would have that report sometime in

mid-January so we're just waiting on it from GS, and as soon as we get it we're happy to share it.

But in response to Steve, I guess if we all agreed with what Steve said then we wouldn't be here today. I mean that's really where we are, is we fundamentally disagree with a lot of those statements, that the existing information is adequate and that we do need new studies because there has been a lot of development since then.

MR. JAYJACK: I'm sorry, I'm not quite sure I understand what you're saying.

DR. LONG: Well, Steve had just mentioned that Georgia Power's studies were adequate. There were multitudes of information that were going to be used, and I'm just saying if we all agreed with that we would not be here today on this subject.

MR. JAYJACK: So you're not disputing what Fred had stated as far as the project operations?

DR. LONG: No. The only thing that I would like to add to that, though, is we haven't looked at any sort of angle variability, and I think Doug did ask that question--what are the lows compared to historic over the annual regime; we haven't looked at that. I mean we have some graphs of daily and we have it in terms of if it was a wet year, dry year, average year, but we haven't looked at the overall annual variability.

MR. COX: I would like to address that. You know, as far as annual variability, I have pointed out a couple of times that Morgan Falls can effect changes in flow over a period of hours to maybe a day or a little more. Annual seasonal variability is totally by Buford Dam, 76 percent of the inflows at Morgan Falls. Morgan Falls cannot now, never could have, any effect over seasonal annual variability of the flows. We can only effect flows within a day, waiting a couple of days, and we're doing that as much as we can now. We are cutting these whatever, the weekly releases we are getting from Buford, we are attenuating them as much as is possible for us to do so but we can't have an effect--I couldn't even change the storage at Morgan Falls or any storage that we ever had in the next week. I could change the flow tomorrow a little bit, change it for the next couple of hours, but that's it.

MR. JAYJACK: Any other comments on the subject matter that has just been presented, the operations in particular?

DR. LAYMAN: I think this is probably where we are probably headed anyway on this issue and we have documented it clearly in the revised study plan and in Georgia Power's filing of January 10th, but Buford Dam operations have the most direct nexus with issues regarding flow and water temperature in this river. Morgan Falls

already re-regulates to the maximum extent practicable, and there are no changes that could be made to affect downstream habitat to the degree that I think the Department of Interior wishes.

The existing information that we provided in the January 10th filing shows that peak stream flows are the primary factor limiting trout habitat in the downstream reach. They are also the primary factor limiting certain types of recreational opportunities--wading and tube fishing--in the downstream reach. The current minimum releases for the project based on existing information show that they are pretty close to the optimal range for trout and they pretty much peak for brown trout, which is one of the more temperature-tolerant species that stock below the project. So we believe that on this basis and the basis of the multiple sources of existing information and the new studies that are being proposed to be conducted, that that will provide an adequate basis for evaluating downstream effects of continued project operation on aquatic resources.

MR. JAYJACK: Perhaps it might be wise at this point to get back to the study goals and objectives that Interior has put forth, and I am thinking particularly about nexus again. I need help in understanding the nexus between the study results from a flow study and how those results will be used to inform a decision on fishways.

MS. LAWRENCE: Alice Lawrence again from Fish & Wildlife Service. I think we all understand that Morgan Falls is limited--they have got limited flexibility--but they do operate in a modified run of river operation; there is some limited peaking there and they have been characterized as playing a very important role in making sure these flows downstream at Peachtree Creek are maintained at a certain cfs. So therefore they do have the capacity to influence downstream habitat for fishes.

Morgan Falls operates in a modified run of river mode releasing from 37 to 50 percent of mean annual inflow or end flow and, as a result, Georgia Power affects the habitat downstream of Morgan Falls Dam as a result of its operation and does so differently than Buford. It is important that an IFIM study be conducted to evaluate the impact of project operations on downstream habitats and the existing information is not adequate to properly characterize these effects and is discussed below in more detail. And I don't know if we want to get into the technical stuff.

So basically, once again, we are just trying to look at project effects here. How is this project affecting the downstream aquatic habitat and the downstream aquatic community, current and in the future.

MR. JAYJACK: Let me rephrase the question a

little bit and back up. When I have dealt with this issue in the past, the issue of fish passage and flow, I have seen situations where the Agency was concerned that there was too little flow in the river below a project in order for the fish to be able to swim up to the dam and hence to a fishway entrance and getting upstream. So when I talk about nexus that's kind of the situation or the explanation I'm looking for. I am trying to see how--one of the criteria specifies how the study results will be used to inform license conditions so that the condition I am envisioning here has something to do with fish passage, be it flows downstream of the project in order to allow the fish to pass through that region and get to a fishway or something similar to that. So could you shed a little bit of light on that and clarify, specifically with regard to the concern with the existing condition and how that might inform the decisions on license conditions.

MS. LAWRENCE: I think right now we are asking for the study because we see that this project--the flows coming out from the project are having some kind of effect; it's not natural flows down there. We realize upstream there are artificial conditions but this project would help us determine the effects of these flows on the habitat, on the fishes that are there. For the fishes moving upstream, if they were included into this model, which hopefully they

would be, we could see the effect on that habitat type and how those flows affect that. It seems like analyzing this and looking at how they differ from natural flows and how this could affect passage is important.

MR. THORNTON: I think that leads to something I wanted to ask that I originally got from Doug in a communication he had with me. And I guess for Fish & Wildlife Service the question is, what ecological hypothesis do you propose to be investigated through the requested additional IFIM study.

MS. LAWRENCE: For this we are just asking for a basic IFIM study. So what we would do, we would get out there, do an adequate number of transects, which is one of the problems we have now that in some of the existing data there's very few transect data available. So to be able to determine the current situation down there, how the flows are currently affecting the habitat, we would need to see that habitat mapped, the different habitat types, do an adequate number of transects to under the velocities, the depths, the cover substrate, and then for fish passage, well, the aquatic community. Currently you have a list of species, different gills that would be affected and then, hopefully, you could include some of these other species, and then habitat requirements and how these habitats would be affected. I don't know if someone else has more

information.

DR. LONG: I think where we are on this, at least in part, is if the operational flexibility can change or can increase, well then, what kind of flows could come out of it and what kind of flow regime. And if it can't, then what are the project operations, what are those negative impacts? We have talked about previous studies and, in part, we are here because a lot of those previous studies, none of those have been focused on the Morgan Falls impoundment; they have all been in reference to flows out of Buford Dam.

I think the study that is most being relied upon here is the Corps study by Nestler in 1986--they only measured three transects down below Morgan Falls to represent two different types of habitats--and the statement study of how Morgan Falls will operate, the results of that study do not necessarily translate because it was meant to be in response to Buford Dam operations, so it doesn't necessarily translate below Morgan Falls. So we see a real lack of information. We see that trout has been the dominant species that has been studied, but clearly there are other issues besides trout and species that use habitats other than shoals. We recognize that shoals probably haven't changed much, over geologic time, much. But most of the channel in the Chattahoochee is a shifting sand type of environment. And a lot of the transects that were used

probably are different than they are today.

When the Park Service submitted their study request we provided some data that came to us from USGS on channel morphology at at least one station; I mean that's all we have but it clearly showed a difference. And to us we say, well, that means that a lot of the old data is unusable. And in fact whenever we contract with USGS to contract the end stream flow studies, as soon as we saw those data, we decided that what we needed to do is collect more data on transects rather than try to use the old models from Nestler and rerun them on different species because we felt they weren't usable. So even for our own work we felt like that wasn't usable.

We do have some new data that are going to come out. It is going to be depth and flow; it's going to be some transect data, which might be usable to help look and see what the channel might have changed down below Morgan Falls, but we only had one transect below Morgan Falls that was actually done. I think we had six transects that they ran for us; five of those are above the impoundment so it's of limited use. And again, that's because the study that the Park Service wanted to do most recently was in relation to the tri-state agreement and we were looking at the Morgan Falls effect.

MR. COX: I would like to address nexus a little

bit. I am still seeing some confusion about what Morgan Falls--how it affects the flow in the river, and how we might be able to change that. As I pointed out we cannot provide a higher--two things, I'm an engineer so I talk to the people who are interested in fish when I'm studying one of these dams, and typically the things I hear is you want either a higher minimum flow--the minimum flow isn't good enough--or you want less daily variability in the flows. Well, as I pointed out earlier, we cannot provide a higher minimum flow without changes in the operation of Buford. We don't have enough storage to do that for more than a few hours at a time.

We are already fluctuating our reservoir and using our storage to the maximum extent capacity to reduce the daily variability of the flows. And even if you went back to 1960 volumes you wouldn't see any significant reduction in the daily variability of the flows. So the only direction you can go in changing the operation of Morgan Falls is to go towards more run of the river--we have already gone as far as we can in the other direction--is to go toward more run of river. And if you do that, then you are impacting the water supply for three million people. You are not going to meet the EPD-established 750 cfs water quality flow target at Peachtree Creek 100 percent of the time. So we just see the only direction we can change our

operations and change anything in the downstream stretch of river is going in the wrong direction for a lot of reasons, and that's one of the points that I think sometimes is getting missed here. I think Steve had something to add to this.

MR. JAYJACK: I want to make sure of something here. I hear your concern with shifting flows and the effects that might be felt downstream. I think where we're at today is we're trying to assess what information is available and what information gaps that there are. And where your statement has gone is you have moved ahead and talked about alternatives, which is fine. I believe the process is set up to deal with alternatives in a later stage but I don't think we're that far yet. So I definitely hear your concern and it sounds very logical to me. However, what we are truly trying to get at is the information that is available to do that. The public interest call will come at a later time and maybe that will be ultimately determined by the Commission. It would ultimately be determined by the Commission at the time that it reviews staff's recommendations in the NEPA (phonetic) document. But I just want to make sure that we are focused on the information as opposed to going too deeply into the alternatives.

DR. LAYMAN: This is Steve Layman. I think the reason why Fred went there is because of the direct

statements that Jim or Alice made about, you can change flows and the direction of that change in flow is negative and it leads to destabilization of aquatic habitat. It leads to placing at risk being able to meet the State-mandated 750 cfs flow target downstream, and that evaluation can be made on the basis of current information. A new end stream flow study, a third end stream flow study, is not required to make that type of assessment.

Furthermore, it has not been established that the present flow study information that is available by Nestler, it has not been demonstrated that the trends observed in flow characteristics of the river or the habitat discharge relationships of fish or recreational or other uses evaluated have changed so substantially to alter those trends of channel morphology; that has not been demonstrated. In the filing of January 10th, Georgia Power noted that the two transects provided, one of those transects was recorded in August of 2001, which was at the end of the longest drought period, three-year running drought period, in Atlanta since the late 1800s. To compare those two transects is not representative of the channel profile at that location. We provided in the filing an assessment of 152 stage-discharge measurements over the period 1984 to 2004, which demonstrates there has not been any substantial change at that channel profile location at

the City of Atlanta Gage, which is located in a run area, not in a ripple.

The ripple or shoal habitats, I should clarify, downstream of the project, have been identified as the most critical aquatic habitats for these trout, for food production, for wading and tube fishing, and other aspects of important uses of the river. We have also provided some additional analysis of the cross-sectional plots provided by USGS, I mean provided by Department of Interior and National Park Service in their filings, and have some additional information to present here today.

MR. JAYJACK: I'll tell you what. I am seeing a lot of people getting kind of antsy and standing up--okay, real quick.

MR. NICHOLS: I'm Mike Nichols. I work for Georgia Power where I manage their Environmental Lab and we have seriously considered the information provided by the Park Service in their initial submittal and then again in the filing of December 26th where we were presented with these cross sections.

What I would like to do is give the dispute panel the information we are going to share and just quickly walk through what has been provided to us and our interpretation of them. What we were given is a graph. In April 1980 we have a cross-section. At this time the stage of the river

is about 8.6 feet. The flow is about 9,000 cfs and is plotted and compared to a later cross section, which was collected April of 2001. The river stage is about 3.4 feet. The flow is about 1,360 cfs. So to plot this information, the August 2001 data has to be shifted, in other words 5.2 feet is added so you can compare there. And looking at the data that was used to generate this graph, when you shift this down the points on either side are left out so it visually does not give you a good picture of the cross section.

Looking at it a little bit more closely, at August of 2001 the channel width is about 239, 240 feet. In April of 1980 it's 250 feet. So when you calculate these areas on this transposed cross section you get a slight underestimate of the cross section when you are trying to do this comparison.

So we see three things, the information that was provided in the graph as it's presented is incomplete. We have gone back and looked at the USGS data for the period 1974 through 1984 when the first IFIM study was done, and we have looked at the stage area measurements. And when you compare that to the period 1985 to 2001, we see no difference in the channel morphology. And that's presented on this graph, which is in the material that you have. So we paid attention to the issue. Our interpretation of the

information that's available is the Chattahoochee has been stable from the first IFIM study to the current data. I think that's about it. We would be glad to discuss this further if there are further questions.

DR. LONG: There is not a USGS representative here so I can't answer some of those because they provided the data. My impression is that they did adjust the original graph and these are adjusted depths for flow so you don't need to adjust again another five feet.

MR. NICHOLS: This is their data; this is the data that was provided to us.

DR. LONG: Right. But then you went and adjusted it down another five feet.

MR. NICHOLS: No, we did not.

DR. LONG: Maybe I misunderstood you, but you were saying that the flows were different so that they had to be adjusted five feet down this graph; is that not right?

MR. NICHOLS: May I answer your question?

DR. LONG: Yes.

MR. NICHOLS: This is Mike Nichols. If you plot the original cross section collected in August of 2001, what you will see is the flow is at a stage of 3.4 feet. Plotted uncorrected, this transect would be much higher. In the data that was given to us they have added 5.2 feet to correct for this stage. The river level is--this is the

surface (indicating); this is a stage of 8.6. They have added the 5.2 feet to move this transect for the August 2001 data. We did not manipulate the data; that is what was presented by the Park Service.

MS. LAWRENCE: USGS.

MR. NICHOLS: It was provided to us by the Park Service.

DR. LONG: Yes, it was provided by the Park Service but it was collected by USGS for us.

MR. NICHOLS: I would be glad to talk about it further, if you like.

DR. LONG: Well, that's where I would be glad to have the USGS people here because my understanding was that the adjustment was made to take into account the difference in stage. So you have to adjust that elevation to a common elevation, and that's what effectively this is, is bed elevation and that's why the five feet was added or subtracted.

MR. JAYJACK: I think it is going to be prudent to let some of this digest a little bit. I'm hungry right now and there is a lot of information that has been presented.

MR. TANAKA: (Inaudible.)

MR. JAYJACK: What Kevin had asked me is he wants to address my question regarding the nexus between IFIM

studies and fish passage. Can it wait till after lunch that could be the first thing that we begin with? Let's break for lunch and we'll go right to that; we'll start with Kevin. We'll return here, let's say at 1:15.

(Luncheon recess.)

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

(1:30 p.m.)

MR. JAYJACK: Let's get started for the afternoon part of the conference. I'd like to welcome everyone back. If you recall, before we adjourned for lunch I had promised Kevin Tanaka I would let him come up first and talk a little bit about my question earlier regarding the nexus between end stream flow study and the fish passage.

MS. CIELINSKI: We decided I would respond. I am Sue Cielinski and I am with Fish & Wildlife Service. I'm the Regional FERC Coordinator in our Atlanta Office and I work with Alice on hydro issues.

One thing that Nick had asked a little bit ago was in regard to the nexus of this end stream flow study and our fishway authority. And we primarily need information to determine the need and feasibility of fishways for fish resources in the system and also to determine the conditions that would be necessary to provide safe, timely, and effective fish passage.

Also, the study would help determine what some of the operational influences are on flow conditions downstream of the project. So in order to evaluate those types of effects we need this end stream flow study. Also, in looking at passage through the life stages of fish; that would range from the adult stage to juvenile or larva fish,

those life stages of the fish species and also we are looking at the ability of a fish to move within its habitat, within, say, the shoals habitat or the other habitats that exist below the dam, and the ability of a fish to reach the dam in order to pass above the dam itself. So I don't know if you have any more questions on that.

DR. LAYMAN: This is Steve Layman. With regard to the Section 18 authority and the study request made by Fish & Wildlife Service, the original study request made never mentioned Section 18 authority or fish passage as a study objective or as a resource management goal objection as required by the study criteria 5.9(b)(1) and (b)(2).

In terms of the relationship of an IFIM study to upstream passage, the only diadromous fish species presently known in tail water sections of the Morgan Falls impoundment is striped bass, which was introduced to West Point reservoir and now migrates upstream below Morgan Falls in the summertime. The striped bass already has access to the Morgan Falls tail race. There are no known critical reaches in that segment that preclude passage of striped bass to the base of Morgan Fall Dam based on any kind of releases for Morgan Falls.

In terms of the IFIM study, the purpose of it is to relate no habitat preferences of the given life stage of fish to changes in flow as it affects velocity and depth.

And in terms of an upstream migrant striped bass, it could be viewed as a habitat generalist in its upstream passage over multiple habitat types to get upstream to spawning areas. The fact that the fish already makes it to the base of Morgan Falls Dam indicates there isn't a passage issue that an IFIM study would appropriately address.

In addition, cold water temperature from Buford Dam have been identified as being more likely to affect striped bass habitat in the reach than any evidence provided on physical habitat with regard to striped bass, shoal bass, or any other species that has been mentioned in this record.

Studies done on striped bass in the tail race section of the reach between Morgan Falls and West Point have indicated that cold water temperatures likely limit successful spawning, and that is related to the artificially cold water releases from Buford Dam, not due to releases from the Morgan Falls project. I think that's all I have on that.

MR. TANAKA: Kevin Tanaka from the Solicitor's Office, Department of Interior. Once again, we seem to be treading down the same old place where people want to argue about finites of a prescription that has not yet been drafted. Once again, they have brought up what species may or may not be studied under Section 18 authority and, once again, I state the Department's position once again. We

prescribe consistent with Federal Power Act, with court precedent and with departmental policy. At this pointing time I do not interpret anything in that authority consistent with their biologist.

Also, once again, we are talking about whether or not fish need to be passed here and at this point in time I don't think that is the issue; the issue is whether or not the flow study will provide additional information, how will the flow study basically help Fish & Wildlife Service and help the Service determine whether or not we need appropriate or necessary prescribed fish passage.

So I can't say it enough. I question whether we're pursing the statement, the purpose of the statement, and whether some of the statements are appropriate for this. I think they have gone beyond the scope of this. I think they're treading with what's legal and what's not, FPA interpretations, and I think that's completely outside the scope of this technical conference we are having here. Thank you.

MS. LAWRENCE: In regard to the fish passage, what Steve was speaking about the current species that are there, another important point that I brought up before regarding the sediment contaminant study, as far as specific species we are looking at not just current species and current passage but also species that were here

historically, that could be here in the future. So that would be expanded from just striped bass but the other species I have mentioned before American eel, Gulf sturgeon, Alabama shad, and then I mentioned these other species that are downstream currently, shoal bass and the high shale shiner. So I would just like to reiterate that point, that it's not just the current species that are there now, but we also look at a range of alternatives for fish passage which would also include reservation.

MR. MOORE: David Moore, Troutman, Sanders. Mr. Tanaka recited interpretations with regard to Section 18. I think the question I would have is, with respect to the panel when we first began, the applicability of the 5.9(b) study criteria, it sounds to me as though the position that the DOI is taking is that the 5.9(b) criteria are not relevant to the panel's determinations. The information we are attempting to provide, very simply, bears upon these criteria, such as information necessary to make an informed license decision, nexus to project operations, existing information. And maybe I have misinterpreted Mr. Tanaka's position, but it appeared to me as though he was saying that the 5.9 criteria are not required to be met for the purpose of DOI's study request and I would like to get clarification on that.

MR. TANAKA: Kevin Tanaka, Solicitor's Office,

Department of Interior. I never mentioned 5.9, 5.9(b) or those criteria. What I am talking about is what is necessary here. To sit there and just--what the question was, how does IFIM relate to fish passage, we have answered that. If you guys want to get into what species fall under Section 18 authority and whatnot, that is not one of the criteria; I'm sorry, I don't see it. That's an issue to be had down the road; that's a pure legal issue. I don't know how else to say that. I completely disagree with your interpretation; I don't know how else to put it. So I have not mentioned 5.9(b); that's what we're here to talk about. What I am saying is I think you're getting off of 5.9(b) and I think you're entering the realm of legal arguments and positions that aren't necessary to resolve 5.9(b) issues.

MR. JAYJACK: I think we have heard your statements--heard everyone's statements regarding Section 18 authority. I think we should move on from here and refocus our efforts back on the information. These statements will be on the Commission record for all to see. So your statements have been heard; we have heard them. So let's move on. Jerry, did you have something?

MR. THORNTON: I think the question I was going to ask has already been answered. I was going to ask specifically about the shoal bass as a potential target of passage but that question has been answered.

MR. JAYJACK: Doug, do you have any other questions?

MR. NEIMAN: Not at this moment.

MR. JAYJACK: I don't have any other questions either related to end stream flow. We have the record information that we have acquired here today as well what we have been acquiring all along, so I think we ought to move to the next part of our meeting, which will be an open mike sort of thing.

DR. LAYMAN: May I make an additional comment regarding the study criteria?

MR. JAYJACK: Sure.

DR. LAYMAN: Steve Layman. Getting back to the study request criteria, Criterion 5.9(b((5). Department of Interior, we believe, has not adequately considered the level of effort and cost of another end stream flow study as required by this criteria well on the basis that the project cannot further re-regulate flows from Buford Dam, that the project already released 37 to 50 percent of mean annual flow as its minimum flow, which provides benefits to downstream resources including water supply, fish, recreation, water quality. I might add that drinking water supply, recreation, and fishing are the designated uses of this reach of river.

Costs have not considered the potential to

involve a diverse range of interstate interests by opening up an end stream flow study that cannot affect flow releases from this project. As most people in this room realize, what this watershed and the states have been through in recent years, conducting an end stream flow study is going to open up a much broader group of stakeholders and interstate interests than envisioned by the National Park Service in making this request. As evidence we have here today the Florida Department of Environmental Protection participating in this meeting.

In addition, the costs did not consider the original research on temperature criteria that have been requested regarding shoal bass which, by the way, current releases from Buford Dam in the springtime during the spawning season for shoal bass are colder than preferred by that species. So it is again water temperature that may be a more limiting factor in regard to shoal bass and the flow.

Finally, the difficulties encountered by the Park Service in conducting their own flow study, which has delayed it but has not been considered adequately in their estimate of cost for this study.

DR. LONG: This is Jim Long from the Park Service again. Trying to come up with the level of detail, or the level of cost and the idea that there are other issues at stake, well, the other issues at stake, they came about

whenever the license was reopened. It's like arguing to FERC, you shouldn't open our license because then other interest come in. That shouldn't be part of it. I mean what we are here to do is to say, well, we need information so that we can make some sound decisions. And we believe that current information that is currently being proposed to use is inadequate to make those decisions. The Corps study is dated. We believe that the channel morphology has changed, probably not in the shoals, but shoals are not the only habitat and there are certainly other species that rely on non-shoal habitat for most of their life history.

None of the studies so far has looked at the operation at Morgan Falls Dam. The studies that have been completed have stated that these studies don't apply to Morgan Falls Dam, or if they do apply it will depend on how Morgan Falls Dam operates. So there are a lot of issues here and, to the best of our ability, the best information that we have been able to gather, we have determined that the channel has changed and therefore a new IFIM study is needed.

Whether or not the flows downstream are beneficial is yet to be seen and that's why we want the study. We want to know, well, what flows are you using, how often are those flows there, what species are they affecting positively, what negatively, where are those habitats.

Those are things that we do not know, and that is why we have requested the study before, and that's of course why we are here again, to dispute the studies that have been put forward by Georgia Power.

MS. MALVERN: Since the name of the Florida EPD was taken in vain, what brought us in has nothing to do with whether there is an end stream flow study or not. It is the agreement that Georgia Power has with ARC for water supply. That's an issue that is not before this panel so our involvement has nothing to do with what's before this panel or the species involved.

MR. JAYJACK: I think we have already moved into sort of an open mike period so let's continue where we're at. If anybody would like to come up now, I would especially encourage those who haven't had a chance to speak yet to come up first, if you so choose to do so. Maybe I should put it as a question, does anybody have anything they would like to say?

MR. CANTRELL: My name is Mark Cantrell. I'm with US Fish & Wildlife Service out of the Ashville, North Carolina field office. I wanted to address some information that was brought forward a minute ago. I remember seeing some graphs from the back of the room, and want to make sure that I understood, or the panel could understood, what you were trying to relate with that information. In particular,

I think you brought forward some information on the stage-discharge relationship downstream at the Atlanta Gage USGS 02336000, and in particular I heard or thought I understood you to relate that information to describe that the geo-morphology of the stream bed for that particular area was in fact stable, was that the thesis of that presentation? That's more of a rhetorical question.

In fact with regard to the information that you presented, that you apparently tried to relate the measurements of stage-discharge back to stream bed morphology and stability, it appears, however, that stage-discharge relationship as USGS reduced to generally a rating curve, that did not remain static as it would seen to indicate but rather it has been quite dynamic.

What I did was look at that Gage and look at the individual stream flow surface water measurements that had been taken over the past period of operations since 1985. And just looking back for the past 20 years, that I think you portrayed at one part, I was able to count 78 individual adjustments; these are general monthly measurements of discharge at that particular Gage that are taken by wading. And there were 78 individual adjustments to the rating curve that your claim appeared to be that it was stable.

So I just wanted to make sure that folks understood, and especially the panel understood, that that

rating curve has not remained static, that it's been rather dynamic over at least the past 20, and certainly that has been both in the form of aggradations and degradations, some of those in the range of up to one foot per month in both directions.

Now, I haven't addressed what the net change has been for that particular point, but in terms of dynamism in the stream bed at what typically is selected as a rather stable reach of stream for gauging purposes, there is on a normal basis a monthly change in the stream bed features as it relates to that stage-discharge relationship. So I just wanted to make that point, that yours are pointing toward the static nature of that side is one that is belied by any of the data that USGS has gathered here in these field measurements.

MR. JAYJACK: I am not quite sure I understood the explanation without seeing the data, so getting back to the purpose of this meeting, unless we can actually see what you're discussing it is not going to be very helpful for us even if we go back and look at the record, so if you could file that with us, that would be great.

MR. CANTRELL: Sure. I filed it electronically as well.

(Exhibit No. 1 marked for identification.)

MR. JAYJACK: One word on getting information to

us at this point. It's pretty late into the process now. The panel has to deliberate over the next week and a half, and we have to make our findings and recommendations to the Director by February 4th. So just doing the math it's January 18th now and we don't have much time left. So if you want us to be able to sufficiently address additional information that you are bringing into the record now, I highly recommend you do it quickly, in the next day or next Fed Ex, that sort of thing. It's highly preferable to file the information with the Commission so that it gets on the record. So please keep that in consideration.

MR. COX: I've got some information I don't think we discussed in a great deal of detail earlier that directly addresses what we were talking about. This data was submitted to the panel. We took 152 USGS stage-discharge measurements; we broke them into two periods, one 1974 to 1984, the other one 1985 to 2001. And we've got lines for this data, essentially stage-discharge periods, which is indicated. The dark blue line is the 1974 1984 data; the yellow line is the 1985-2001 data. And this is our basis for saying there's no substantial shift in the stage-discharge relationship at this site. And, Steve, what was that Leopold reference, do you want to address that; do you have that statement?

Also in the data we submitted, I think it's both

in the slides and in our technical write-up we cited, referenced, Leopold, Geomorphological Processes in Fluvial Channels, and it makes the statement that one way of looking at changes in the geomorphology of the river is to look for changes in the stage-discharge relationship. We're saying this data shows no substantial change.

DR. LAYMAN: And to clarify--this is Steve Layman--we're not saying that it's a static channel. A channel can shift laterally over time but the change that you would see, there would provide the same representation of cross-sectional area; it may be distributed differently because the channel can migrate over time. And as was indicated there has been a substantial change in the distribution of shoals, runs, and pools in this reach of the Chattahoochee River.

The shoals are bedrock shoals; they are in the same location. They are well-protected by a 2,000-foot corridor on each side of the river. The operations of Buford Dam have been relatively consistent over this period in providing peaking flows that scour the river channel. So we have not seen any evidence that would suggest substantial change to the point that it alters the general trends that have been observed by the Nestler study in relation principally to shoals habitat, which were identified as the most critical habitats for trout, and these are secondary

trout waters. The regulatory driver is for the management of this reach of stream as secondary trout waters.

MS. LAWRENCE: Just to, once again, summarize why we feel the existing data is inadequate. Looking at the Nestler study and the National Park Service study, just even excluding if the river channel has changed or not, both of those studies only total four transects below Morgan Falls Dam for 12 miles of river, and in IFIM studies that's not adequate.

Also, the applicant states that the Morgan Falls minimum flow release optimizes habitat for trout. Once again, we are interested in the whole aquatic community and we would look at more species other than trout. Another clarification, Nestler, et al., in this 1986 states that these findings may not be applicable below Morgan Falls Dam, and there's a paragraph on that within the Nestler study on page 59 of that study.

On another topic the applicant states that Morgan Falls meets the minimum flow objective of Georgia EPD's interim end stream flow policy. This flow policy is irrelevant to this project because it deals with surface water withdrawals and water supply reservoirs and not for hydro projects. Moreover, this guidance specifically excludes withdrawals from highly-regulated rivers including the Chattahoochee River.

In this, Georgia Power said that it meets the option of 30 percent mean annual flow or end flow, but the closest thing that it could be related to in this guidance would be a water supply reservoir, I would guess, and, in that, documents that requirements for reservoir operations are a seasonal type thing--30, 60, 40--the lesser of 30 percent of the mean annual flow or end flow during the months of July through November, 50 percent of the mean annual flow during the months of January through April, and 40 percent of the mean annual flow during the months of May, June, and December, but just excluding that, it's completely irrelevant. It's for surface water withdrawals and water supply reservoirs and not on regulated systems such as the Chattahoochee so it really just should not even be mentioned.

And we are going to file these comments. As I mentioned, for the sediment contaminant study we have more detailed comments that will be filed as soon as possible.

MR. THORNTON: I am not remembering clearly from the Nestler study and the one that's planned ongoing by the USGS and the Park Service, are all of the transects in shoal areas or are some in pool and run areas below Morgan Falls in the 12-mile stretch?

MS. LAWRENCE: The three transects that were done below Morgan Falls were a shoal, a run, and a pool, but the

pool was chosen not because it's a representative pool but because of recreational reasons. There's a boat ramp right there and they were looking at access to the boat ramp. And I'm not sure if the Park Service would have one additional transect below Morgan Falls; I'm not sure. Are you aware of that?

DR. LONG: As far as new study we did the transect that we got below Morgan Falls was at the confluence of Sope Creek, and that's a shoal.

DR. LAYMAN: Steve Layman. In reference to page 59 of the Nestler study, the paragraph that Alice references describes Morgan Falls as a run of river project and it states that if it were changed to a pond and generate project for peaking mode, then the effects of modification would be considerably different. So in fact Morgan Falls is a pond and generate, but it's because of the re-regulation operation. So strictly speaking, as Fred described earlier--Fred Cox--if it went to run of river with instantaneous inflow equals outflow, it would produce greater daily fluctuations downstream of the project and lower minimum flow releases. So that phrase in Nestler is not really relevant to the way we describe project operations on this project.

I wanted to also address that the current minimum flow releases from the project are crucial to meeting the

750 cfs flow target downstream near Peachtree Creek. These releases benefit drinking water supply in coordination with ARC's water management system, water quality fish habitat, and recreational uses. Because these current operations moderate peaking releases from Buford Dam they moderate those releases to the maximum extent practicable. Any other technically feasible alternative operation is going to increase fluctuations downstream, which is going to result in lower minimum flows, destabilize the downstream flows to be short to meet the 750 cfs flow target, and also reduce the ability of flow for fish and recreational uses.

Morgan Falls maintains a minimum flow ranging from 37 and 50 percent of mean annual flow. True, this project does not require a surface water withdrawal permit, but in terms of Georgia EPD's guidance on protecting end stream flows, this project exceeds the general recommendation on the mean annual flow option.

With regard to the single aspects of the 60 percent discharge, that cannot be determined without Buford Dam providing those flows. Buford Dam constrains the ability of the project since the project is not a water supply reservoir and has small storage. The current minimum flow release is higher than 30 percent mean annual flow, widely accepted by the Tenent method used widely, and actually provided the general framework for looking at

minimum flows in Georgia in the Evans and England report. Morgan Falls is not a peaking facility and, as I stated, it regulates flow to the maximum extent practicable.

Department of Interior in the summary has not adequately explained how the results of another end stream flow study would inform the development of license requirements as required by study criteria in 5.9(b)(5). Buford Dam has the most direct nexus with flow and water quality in the downstream reach. DOI has not adequately explained why the abundant existing information and new field studies proposed in the review study plan as approved by the Commission would not address the need for information on downstream aquatic habitat or upstream fish passage as required by 5.9(b)(4).

DOI has not demonstrated that channel morphology has changed enough to alter the general trends in river flow characteristics in habitat discharge relationships observed by the Corps flow study. DOI has not adequately described the end stream flow study presently being conducted for the Park Service in justifying the need for another end stream flow study. DOI has not adequately considered the level of effort and cost as described earlier and has not adequately explained in the study objectives and the resource management goals the linkage with Section 18 fish passage.

DR. LONG: Jim Long with the Park Service. I was

going to be done but--and this is something that is going to be filed, all these arguments that Georgia Power has raised; we feel like they have largely taken a lot of things out of context. Of course they are trying to build an argument for their side but the other side is that there is another way of looking at things. Like the Georgia EPD interim end stream flow policy, it's irrelevant. We might as well talk about how Morgan Falls Dam improves duck hunting; it doesn't matter. That policy is for something totally different.

That the minimum flow that Morgan Falls releases is higher than flows widely accepted, has maintained good habitat per the Tenent method, the Tenant method has long been criticized as not adequately providing habitat because biologists have discovered that it's not just the minimum flow that is always important, so there are other things out there. The Evans and England study generally prescribed the Tenent method for unregulated systems; this is a highly regulated system.

They kept wanting to use the Nestler study that says it's still relevant; we say that it is not relevant. Nestler says that if Morgan Falls operates as a run of river, then it might be relevant but they acknowledge it's a modified run of river; therefore, the study is irrelevant. It doesn't matter if they state that the project operation, if they were to change it would be bad; it means the study

is irrelevant.

That they reveled overall trends in habitat--that the Nestler study revealed overall trends in habitat, well, it revealed overall trends in shoals for trout; it did not look at the other habitats and it likely collected too little there. The minimum flow release optimizes habitat for trout. Again, this is for trout and this is for an instantaneous minimum flow; we don't know how often those minimum flows are. We don't have a sense of that whole thing.

Again, with the channel morphology they have tried to build a case that the channel morphology has not changed and they have used various methods to say that it hasn't. The best available science that we have says that it has changed. They argue about the cross-section profiles. Again, we believe that there are some of the best available science that shows that they are changed.

Let's see, the proposed fishery studies will provide adequate characterization of the downstream moving habitat. It will help, but it's not going to look at--it will look at the fish but it will not look at fish habitat. Something I wanted to point out also was that there was an argument that an increase in flow from 1,000 to 7,500 cfs only changes the width, the depth ratio in the channel by ten percent, very small. But if you look at that same

argument and if you do happen to use some of those curves that Nestler developed, well, that's 76 percent change in fish habitat. So changes in how water floods fish habitat, small changes in water can drastically affect fish habitat and that's the side that we are coming from. And again, these are the comments that were developed and they will be filed.

MR. CHEEK: Terry Cheek. I think that the term used a minute ago was that perhaps the shoal habitat hasn't changed since geologic time so if we have a concern for shoal bass and what those habitats are, then perhaps we can say that the earlier data from 1986 are adequate to describe that because those profiles have not changed.

The second point I would make is that if the profiles are changing on a monthly basis, as the other gentleman indicated that they were, then I contend an IFIM study is meaningless because as soon as you conduct it, then the habitats have changed.

Thirdly, I would say that IFIM is not a panacea. It describes habitats that are available and tries to quantify those habitats under different flow regimes, but changing the flow regime and increasing the habitat is not directly a one to one to an increase in productivity in the biological community. That's the point of research. Thank you.

MR. FOWLER: My name is Roy Fowler. I am with the Cobb County-Marietta Water Authority and, unlike everybody else you have heard today, I am neither an employee or consultant with Georgia Power or the Federal government. I'm not a biologist; I'm not a Ph.D. I have been accused of being an engineer but the one thing I would accept is being a business manager, and that particular business happens to be water.

So I am speaking here on behalf of my constituency. We are the largest wholesaler of water in Georgia. We operate both the ACC and ACF, only have 14 customers but in turn those 14 customers provide water service for 750,000 people. I do consider myself an environmentalist. I embrace endangered species as long as we involve the human species in that list.

Now, for the sake of qualifying my qualifications let me add I am not an accomplished speaker and will take the fact of a Ph.D., an engineer, and an attorney that I be allowed to read from notes. I am speaking on behalf of an organization, a political subdivision of the State of Georgia, and this is our organization's comments based on the disputes filed against the study plan determination rendered.

Cobb County-Marietta Water Authority thinks Department of Interior has not adequately explained how

study results of a new IFIM study are necessary for the Fish & Wildlife Service and the National Park Service to meet their resource management goals and objectives. Peak stream flows are the primary factor in limiting the suitability of aquatic habitat and these flows are driven by Buford Dam, not Morgan Falls. Morgan Falls re-regulates Buford Dam peak flows to the maximum extent practicable and cannot in itself effect changes in daily river flow. Morgan Falls provides minimum flow releases protective of downstream habitat, water supply, and water quality.

Technically feasible alternatives to the current operations would produce greater daily flow fluctuations in the river downstream of the project and place the 750 cfs flow target near Peachtree Creek at risk. A new end stream flow study is unwarranted for the purpose of evaluating dredging because existing data adequately described trends in flow characteristics and habitat discharge relationships. The range of operational alternatives available for consideration extends to the current policy of maximum re-regulation to no regulation and, due to the small amount of storage involved, is simply not sufficient to enable a reliable determination of economic and environmental issues. Additionally, any measurable impacts would likely be due to a change in Lanier operations, calling into question any suggested nexus, which I have learned the meaning of today,

to Morgan Falls' operations.

DOI has requested new field sampling of sediments in Morgan Fall impoundment; they have not justified the need for new sampling of said sediments. Existing water quality and fish tissue information does not indicate potential threats to aquatic communities in the Morgan Falls impoundment. Georgia Water Quality Standards as approved by United States Environmental Protection Agency protect aquatic life, and EPA has recently concluded that sediment quality was not an issue in the area of the river including Morgan Falls.

In summary, Cobb County-Marietta Water Authority strongly supports the continued operation of Morgan Falls Dam for maximum re-regulation of Lanier peaking power releases. Re-regulation essentially maintains the Atlanta 750 cfs minimum stream flow requirement imposed by the State of Georgia and is necessary--necessary--to support the Chattahoochee River municipal water withdrawals. Additional storage created by dredging only marginally increases the capacity for re-regulation of Lanier's releases. Consequently, reductions or eliminations of Morgan Falls re-regulation is neither a reasonable or responsible option. The Authority supports the fact that an understanding of the operations of Buford Dam and Morgan Falls' existing relevant information and studies, ordered in the Commission's study

plan determination as submitted, will provide the necessary data to the disputing agencies to achieve their respective resource management goals and objectives.

The technical information and additional comments for the panel's pleasure are being in written form; I have included ten copies. I appreciate the panel's indulgence. I am taking notes about how to control my grandchildren next Thanksgiving the way you have handled this concerned crowd. Thank you.

(Exhibit No. 3 was marked for identification.)

MS. STEVENS: I would like to address the panel, not the crowd. My name is Pat Stevens. I am on the staff of the Atlanta Regional Commission and that's the metropolitan planning agency for greater Atlanta.

Morgan Falls provides support to water supply and water quality needs on the Chattahoochee River and so we are very concerned about anything that would detract from that particular objective. Given the overall importance of maintaining water supply and water quality flows in the river for metropolitan Atlanta, and the very limited storage capacity available to maintain that flow, it is essential that the Morgan Falls project continue to operate in the same manner in which it has been operating.

We have heard a lot about maintaining flow in the project today from Georgia Power and we agree with what

they say. Georgia Power currently runs the Morgan Fall Dam primarily for the purposes of power generation, domestic water supply, and waste water simulation for metropolitan Atlanta. This river reservoir system that includes Lake Lanier, there is over three million people that depend on that system for water supply and waste water assimilation. Waste water assimilation is a function of the river reservoir system too and Georgia EPD, our state environmental protection agency, has established the minimum river flow downstream of Morgan Falls that has to be met. Since 1960 Georgia Power has been operating Morgan Falls for these purposes to re-regulate these flows from Buford Dam to the maximum extent practicable given their limited storage. The operation provides critical support to water supply and water quality in the Chattahoochee River.

In 1975 my agency, the State of Georgia, the Corps of Engineers, through a study that was authorized by Congress, confirmed this, that Morgan Falls should continue to operate in that capacity and the Corps final report recommended this continuation. It is important that Morgan Falls provides this re-regulation capacity. The water withdrawal permit on the river is conditioned on the operation of this project like that. The waste water treatment plants that provide waste water capacity for millions of people are conditioned upon this.

The demands that these permits have been written on are included in a regional water supply plan that was produced by the Metropolitan North Georgia Water Planning District. That plan has been approved by the State of Georgia and has been accepted by FERC as a comprehensive water supply plan. And so looking over the Department of Interior's study requests we understand that the Department of Interior is required to explain what their relevant public interest is in regard to their proposed studies. And so in regards to the end stream flow study, it appears to me that inherent in their request is that there is some expectation for this flow regime to be changed. And I think, given the limited capacity of this project, it doesn't appear from the information provided already that this is a valid request.

Morgan Falls is already re-regulating Buford Dam peaking releases to the maximum extent practicable. I think the information that Georgia Power has given you shows that. We would be very concerned and object greatly for an operation that would provide less re-regulation downstream because it would be detrimental to water quality and water supply to the Metro Atlanta area.

Regarding the request for a sediment quality study, in reading the December 16th letter from the Department of Interior, it's very confusing to me exactly

what they wanted that study for, and listening to some of the comments here today from the Fish & wildlife Service, one of the comments that I heard was that they wanted to understand that concentration of sediment is related to the presence of the dam and they want to understand the effects of the presence of the dam, even though there might not be any project operation alternatives available.

So I become concerned about what alternative--there's no operational alternatives--what alternative is there to the presence of the dam. I think early on Fish & Wildlife Service recommended that we study the removal of a dam. That to me is an unacceptable alternative if that is where this is eventually heading.

There was also some comments about we need to understand what's in the sediments because there might be opportunity to dredge the project. The issue of dredging is a very complex issue that would have to involve many, many stakeholders that FERC has no authorization over. And I understand that Georgia Power is providing some study about some feasibility of dredging, identifying what the issues are and things like that that would be suitable for some information. But beyond that I don't think that the FERC forum is the forum to resolve that issue.

I think one of the biggest issues regarding dredging, Georgia Power has absolutely no control over it at

all, and if you're going to dredge Morgan Falls you have got to provide a fairly large site for a land-based operation for the dredge. Georgia Power doesn't own any sizable pieces of property around Morgan Falls. The National Park Service owns property. There are a fair amount of private property owners. Fulton County owns property and so does Roswell. And we at ARC have had a number of talks with both the Fulton County Chairman and the Mayor of the City of Roswell; they have been unwilling to offer their property for a dredge operation.

I have not heard the Park Service offer their property for a dredge operation and I think, if the property is going to be dredged, the Park Service or some organization like that who owns property along the river is going to have to be willing to provide the land-based site for a dredge operation. And I don't think that FERC can compel Georgia Power to make any of those people provide the land-based operations for a dredge. So I think a lot of these issues are beyond this forum.

ARC has offered to bring those people to the table but no one has really asked us to do that. I think people are more interested in compelling Georgia Power to do something that I don't think they can do. Anyhow, unless somebody is willing to provide that land-based operation I don't see how you can compel Georgia Power to do this.

In terms of the sediment quality, if someone was going to dredge, was willing to go to all the effort to provide the land-based operation as part of the 4011 water quality certification for a dredge operation, sediment studies and water quality issues would have to be addressed at that time. So if it's about dredging there would be another forum to address that later.

In closing I think that we are very interested in Georgia Power continuing to operate Morgan Falls according to current operations. There are millions of people that depend on it, and we would just recommend that you consider that.

MR. JAYJACK: Thank you.

MS. MILLS: Sally Mills, City of Atlanta, and I follow Pat Stevens and thought I wanted to address the panel myself. I appreciate hearing from everybody else but we would like to supply you with a plan and profile purely for background information, and to underscore the point this is a plan and profile prepared in 1917, which shows some slews for Morgan Falls Dam and the entire river system from Columbus up to Buford.

We would like to underscore the importance, to the City of Atlanta and the more than a million customers we serve for water supply and for waste water treatment, the importance of the continued operation of the dam in the

manner in which it is currently operated at Morgan Falls. We endorse and follow the comments made by Cobb-Marietta Water Authority, Roy Fowler, and ARC, Pat Stevens, with respect to the technical comments. I think you would have to say, in boiling it down, that Buford Dam governs the flows and Morgan Falls has an opportunity to control timing and the smoothing of the peaks. It is extremely important to the intake for the City of Atlanta's water supply and similar to the capacity of the river and to meet the 7750 cfs target downstream, that that not be changed.

For that reason I would like to say that since it is critical--and this is, by the way, in our May 11th submission from 2004, the details of it, and I think it was mentioned also by Fred Cox--the city has contracted with Georgia Power since 1960, only a couple of years after the construction of Buford Dam, for the--we helped pay for--co-funded the raising of the dam by half a dozen feet. This functionality is part of our planning for our water intakes and our water treatment facilities for distribution of the water supply.

Not that that's not in the record already, but to highlight it and to say it is very important to the City of Atlanta and its ability to protect public health and supply water, which is critical to the region, that this be--our water supply issue be raised as you think about what other

studies are necessary. Because if you can't really make a change in the operations of the dam as Morgan Falls is currently operated, then it would seem to us that the study as presently scoped and revised and approved is adequate in providing enough data.

At the end of the day this is about agency discretion and we appreciate FERC holding the forum for dispute resolution and considering these issues, but we want to point out that there is an issue of whether it is practicable and necessary to add more studies on what it is currently before the agency in order for the agency, FERC, to make its determination. We think the basis for the studies that are requested really does contemplate a change in the flow regime that would be detrimental to the water supply/water quality issues. Thank you very much.

(Exhibit No. 2 marked for identification.)

MR. KERR: I come up somewhat reluctantly since I don't have any notes and I don't have a prepared speech and I don't represent anyone but me anymore. I'm retired as of last March from the Department of Natural Resources and as the chief negotiator in the water dispute with Alabama and Florida on behalf of Georgia. My name is Bob Kerr.

I have some history on this river out here and it goes back to somewhere around 1978 when I became the chief executive officer of the Georgia Conservancy, a conservation

organization that advocated for protection of natural resources. We were somewhat involved with the creation of CRNRA, mostly before my time. But in 1984 I led a group that made the recommendations to the Congress on the amendments to the Chattahoochee River National Recreation Area, which included the 2,000 foot area of national significance that was not in the original legislation; it was in the amendments. The purpose of that was to assist the Park Service to assist local government and others in acquiring technical information and so forth.

I think at this point I have to tell you I'm not here to speak on behalf of or against the studies; I just want to share some thoughts with you. One, of course, is what F. Scott Fitzgerald once said, and that is the test of a first-rate intelligence is the ability to hold two competing concepts in mind at the same time and still function; that's your job so I admire you for that and we do have some competing concepts here.

As the chief negotiating party for the State of Georgia I demanded a great deal of data. We had the comprehensive study, and it's been argued in some instances that perhaps that wasn't sufficient but it was sufficient enough that we operated off of it in trying to move forward to develop and agreement. What was mostly lacking in that study was putting the cover on it and called it finished,

but we spent pretty much all the money and did all the work.

We in the Department of natural Resources probably ran two or three thousand model runs of the flows in the Chattahoochee River, Flint River, Apalachicola, Coosa Basin and so forth, trying to determine what was possible relative to water supply. At the same time we were cognizant of our water quality requirements.

Only in one instance do I recall where we felt that the operation of Morgan Falls was sufficiently important to actually incorporate it into the models. We had looked at it early on and determined that, because of the shallow depth, because of the flows out of Buford, because of the fact that most of the time it was run of the river and, on occasion in low flow periods, it could serve a moderating effect on flows downstream, that in the grand scheme of things as we looked forward it didn't matter that much. So we did not try to make that an integral part of the model that we did.

To back up a little bit, while I was with the Georgia Conservancy I got involved in several attempts to dredge Morgan Falls for commercial purposes. Individuals would go to the Department of Natural Resource, Environmental Protection Division, to try to get permits to do that. There were many, many obstacles. One, some Corps sampling showed that there were some PCBS and some other

contaminants in the sediment. To that extent those exist I don't think was ever satisfactorily determined, but they clearly exist.

Secondly, because of some of the limitations that we talked about on the shoreline most of the work would have had to have been done offshore on boats, barges, dewatering at that point, and then moving the materials to the shore. Also it was determined that a lot of that material fines too small to be satisfactorily used in sand applications. So you had the problem of moving some of that, separating it in the way that you could take the commercial grade material on shore, and do something with it.

At one time when Morgan Falls landfill was under construction it was thought that they could use some of this material to be a cap for that landfill. There is a golf course there now which pretty much eliminates that possibility. The other issue was sedimentation and dredging here in addition to the release of all the chemicals downstream, and potential contamination. That way the lack of commercial value, lack of a place to put it because this is one of the finest wetlands in the State of Georgia right out here, and one of the thoughts we had at that point was that you would have to do something like a three to one or more slope in order to prevent sloughing that would affect the wetlands.

Secondly, it would open up the use of the lake to high-speed boats, which then would create wakes that would have an effect on the shorelines, plus nesting birds, et cetera, et cetera. So it does not appear unless you are willing to go through that, that dredging is a viable option.

Now, having said that and going back to my competing concept thing, I can conceive that sometime, out 20 or 30 years from now, we will revisit the dredging operation if we think that it will help water supply because we are bound to hit a crisis point sometime in this area on water supply.

Until then I'm not sure that my criteria for studies would be met. One, what is the objective? Two, what are the benefits? If the benefits are determined to be there, can you effect a change that would cause those benefits to be met and, four, what is the cost?

So ad you begin to balance all this I think that there is a question about how that formula, if you will, might work here in that I don't think there is a whole lot of change at this point in time that can be effected out here on this lake without some really negative impacts.

So I think I would summarize by saying there is never too much good data, but you have to really stop and think, what is the cost of that data and what use can it be

put to. Thank you.

MR. JAYJACK: Is there anyone else who wants to make a statement for the record?

MR. MARTIN: I would like to make one last statement, please. This is George Martin and I will make a statement to the attendees at this meeting.

First of all, I would like to thank the panel, both here in the room and on the telephone, for coming to the project and holding the first technical conference for the purpose of clarifying the matters in dispute with reference to the study criteria. I would like to make three quick points.

First of all, Georgia Power does not believe that the Department of Interior has met the intent of the study criteria at 18 CFR 5.9(b) as detailed by our discussion today. Secondly, I would like to thank the panel for their patience as we try to drift over into the depth and breadth of Section 18 and 4(e) of the Federal Power Act. We do understand that this conference was held to clarify the matters at hand for the panel.

Lastly, Georgia Power strongly believes that if the Department Interior gains a thorough understanding of the operation of Buford Dam and Morgan Falls Dam, appreciates and realizes the wealth of available information coupled with the proposed information gathering that Georgia

Power has put forward, that they will have the resources and the tools necessary to meet their resource management goals and objectives. Thank you.

MS. NICHOLAS: Betsy Nicholas from Upper Chattahoochee Riverkeeper again. As I mentioned previously we have been involved with this process from the beginning. As the first ILP a lot of attention has attached to this nationally even though it's a fairly small dam. I can say quite honestly that I am not surprised, from how things have gone all along, that we are in now formal dispute for the first time.

The most notable things, it seems to me, from this proceeding, from the beginning through now, is a lack of information and a lack of collaboration. And despite efforts by agencies, non-profits organizations like ours, municipalities, recreational groups, to try to get together and be involved with the development of the study plans, feedback on the study plans, sharing of information, all of those attempts have been rebuffed by Georgia Power.

I am very concerned about the confusion that apparently we all have about the restrictions on the operations because we have tried to discuss this and we still haven't seen evidence of the claims that Georgia Power is making. I think that there is really a lack of information in every study plan in the entire process, and

particularly coupled with the lack of collaboration, I fear that we may not get the information that we need to create the proper license for this project.

I would hope that we could do something to fix that and I hope that the panel is able to look at all those issues and consider that when evaluating Interior's request here and trying to meet all of those goals all at once. Thank you for being the guinea pigs and taking on this first process.

MR. THORNTON: Doug, do you have any comments or further questions?

MR. NEIMAN: I would just like to thank all of the presenters and again express my regret at not being able to be there because of a health problem, but I was able to hear practically every word and I thought it was a very profitable event.

MR. THORNTON: Thank you. This is Jerry Thornton again. Responding to last two comments a little bit, I know there is some tension in the room because of the differences of opinions here. The panel here is going to have to make its recommendations under a very tight time frame under the regulations. I would simply suggest that it may not be too late for the requesting agency and Georgia Power to put their heads together and see if there is any room for compromise in there, and if you should reach some compromise

about studies and you want to inform the panel quickly, I am sure we would like to hear it but that's entirely up to you folks.

MR. JAYJACK: I want to talk a little bit about the next steps and make sure that everybody's expectations are in line with the final Rule and what our job as a panel will be from this point forward.

Like I had mentioned before, we have until February 4th to not only deliberate but to come to an agreement as to what we are going to recommend to the Division Director of the Office of Energy Projects at FERC, and that is consistent with what is specified in the final Rule. I can't discuss enough that we are on a short time frame so if you have any additional information to put forth, please send that to us. The Rules doesn't kind of specify too much past this point other than that we will be making our findings. We will be deliberating, having a couple of meetings and discussions on what we heard here today.

As far as expectations go, as I mentioned at the beginning of the meeting, the panel has a limited responsible and that is given to us by the regulations. So please keep in mind that we are really going to be focusing on the disputed matter and how it relates to Section 5.9 of the regs. So I am hoping nobody is expecting us to speak to

public interest matters relating to specific alternatives and that sort of thing. That responsibility and that function has not been given to us. I think if you read Section 5.14 of the regs, that pretty much lays out what our responsibilities are, and I am hoping your expectations are in line with that.

With that I guess this would be a good time to conclude. I would just like to thank everybody for taking the time out to be here today and to bear with us in some of the struggles that we have had in being able to set this meeting up as far as some of the technical issues.

MR. MARTIN: Could I say something about the next steps?

MR. JAYJACK: Sure.

MR. MARTIN: Again, this is Georgia Martin. In regard to the next steps, as a result of the filing that Interior made by spuriously redirecting their study dispute and alluding to some other filing by the 25th of this month and the request that has been made by the panel to receive any additional information in a timely fashion and the short time frame that you are working under, is there a way that we can establish a deadline to submit things to you? I don't want us all to think we can submit at 4:59 on the 4th. Would that be helpful to the process?

MR. JAYJACK: Let me couch my response this way,

first off, the record is open; it's an open proceeding so one could file comments related to the project at anytime, so there's no restriction. The problem George has mentioned is there is only so much time we have to deliberate. So practically speaking we would need to see something as a panel--I speak for the panel, not for the Commission itself--but we would need to see something by the middle of next week, I think, in order for us to realistically be able to digest the material and come to some kind of decision in the manner set forth by the regulations.

MR. MOORE: David Moore, Troutman, Sanders, counsel for Georgia Power. I just want to make clear that we do reserve our right to make objections to supplemental filings for the record. The Rule does appear to provide for specific instances regarding that filing. We would like to reserve that right and raise those issues in the future.

MR. JAYJACK: If nobody has anything else they would like to say

MR. CANTRELL: When will transcripts be available?

MR. JAYJACK: Thanks. FERC has a contract with ACE Reporting Services--I believe that's the name of the company--and unless the contract has changed I believe they will be publicly available within five days. If you need transcripts before then you will have to contact Ace Federal

Reporters directly and there is a charge for the expedited purchase of those.

MR. CANTRELL: Will Georgia Power's transcripts be available as well?

MR. JAYJACK: That is up to Georgia Power; it has nothing to do with FERC or the panel.

MS. MALVERN: Will they be posted on the website, the FERC transcript?

MR. JAYJACK: The FERC transcript will be posted on our website, yes. Whether Georgia Power's will be there or not is up to them, whether or not they decide to file it.

Has everybody signed in, by the way, so we know who was here? If you haven't, just stop by at the very end and fill it out; that would be great. Thank you. If there is nothing else, thank you and have a good day.

(Exhibit No. 4 marked for identification.)

(Whereupon, the proceedings in the above-entitled matter was concluded at approximately 2:45 p.m.)

C E R T I F I C A T E

STATE OF GEORGIA)
COUNTY OF FULTON)

I, Darlene F. Akins, Certified Court Reporter and Notary Public in and for Fulton County, Georgia, do hereby certify that the foregoing testimony was taken down by me, as stated in the caption; that the foregoing questions and answers were reduced to print by me via voice writing; that the foregoing pages 4 through 128 represent a true, correct and complete transcript of the evidence given by the witness, who was first duly sworn by me; that I am not a relative, employee, attorney or counsel of any of the parties; that I am not a relative or employee of attorney or counsel for any of said parties; nor am I financially interested in the outcome of the action.

This the 25th day of January, 2005

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DARLENE F. AKINS, CCR-B-2334
Certified Court Reporter