REGIONAL RESOURCE STEWARDSHIP COUNCIL MEETING

APRIL 24TH & 25TH, 2013

VOLUME I OF II

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GUNTERSVILLE, ALABAMA 35976

REPORTED BY:

KIMBERLY J. NIXON, RPR
NATIONAL REPORTING AGENCY
1255 MARKET STREET
CHATTANOOGA, TENNESSEE 37402
WWW.NATIONALREPORTING.COM
423.267.8059 (OFFICE)
423.266.4447 (FAX)

MEMBERS OF THE REGIONAL RESOURCE STEWARDSHIP COUNCIL

*MR. WILSON TAYLOR (FACILITATOR)

*MS. RUSSELL TOWNSEND (COUNCIL CHAIR)

*MR. JOE HOAGLAND (DFO)

MR. MIKE BALL

*MR. KARL W. DUDLEY

MS. JEAN KELLEMS ELMORE

*MR. BILL FORSYTH

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*MR. WILL NELSON, III

*MS. RHONDA RICE

*MR. JACK SIMMONS

*PRESENT FOR THE MEETING

TENNESSEE VALLEY AUTHORITY DESIGNATED FEDERAL OFFICER

MR. JOE HOAGLAND, DFO
TENNESSEE VALLEY AUTHORITY
400 WEST SUMMIT HILL DRIVE
KNOXVILLE, TENNESSEE 37902

P R O C E E D I N G S

CHAIR RUSSELL TOWNSEND: Council, come to order this morning and we will get started. Let's please come to order.

DFO JOE HOAGLAND: Okay. Can everybody hear me? I am trying to figure out how to use the microphone. All right. Good morning, everybody. We appreciate everybody coming to Guntersville. I think at dinner last night someone made the comment, "You have to really want to get here," I think that's a true statement, but on the other hand when you look outside it's well worth it.

If you haven't looked outside you might do that quickly because I believe the rain is going to be here shortly. And Beth is working, I guess is probably the right way, to make sure the rain is gone by this afternoon's tour. If she accomplishes that one, we will be really impressed. So we will see how that one goes, but there is an alternate plan B.

Anyway, I appreciate everybody. Welcome to our new folks. We will introduce them more formally in a few minutes. We have got a pretty cool agenda today, I think, to talk through and a great subject.

With that, I am just going to turn it over. Russ, do you have any comments?

CHAIR RUSSELL TOWNSEND: No, I don't. Actually, I am going to turn it over to Wilson until I need to make the introduction of the new members.

FACILITATOR WILSON TAYLOR: All right. Thank you. Thank you, Russ. Thank you, Joe. First off, welcome, as Joe says, and I will be serving as facilitator today for this meeting.

What I would like to do is just some housekeeping notes. For a safety moment, you know, Joe mentions it's going to be raining today. So just as a reminder to all of us as springtime gets here, we think about getting outdoors and enjoying the outdoors and having fun on the water.

So I would just like to do a quick reminder about lightning safety. I am sure many people already know this, but one key that I read is if you can see the lightning it could be an issue for you. I'm just saying, you know, if you can see it, it could be an issue at some point.

So when you think about when you see lightning the rule is, when you see the flash, how many minutes should you wait before you resume activity. Does anybody know? How many?

MR. KARL DUDLEY: 30.

FACILITATOR WILSON TAYLOR: The 30-minute rule. So if you have impatient folk with you or if you have kids with you and they don't see the lightning for 26 minutes they are ready to go back, but the rule is if you see one at 26 minutes, guess what, you have to wait another 30 minutes. So it's a matter of safety, probably not as convenient all the time.

Another thing I read is don't huddle up. So if you're out and there's lightening around you may attract more lightning if there's a big group of people together. So I don't know what that means. If you're with your kids you probably should try to stay with them, I guess, but the key is getting indoors or getting to somewhere that's safe, that's the key element.

So I wanted to pass along that safety message to all of us, particularly today if we're outside at some point, and then also for the rest of the time that you are outdoors enjoying the weather this spring. So that's our safety moment.

Now, for housekeeping, when you think about the agenda here, Joe said it's a really exciting agenda. One thing I want to remind the new

members of, if you would please check through your notebook and there's some expense reimbursement forms in there. So make sure that you get those to Beth and that way you can get your reimbursement.

Also, there's a photo release form. We have a photographer from TVA who will be here. So if each one of us will fill that out so we can use your likeness in an appropriate video, then I think that would be helpful.

And then looking at the agenda, we're going to just follow the agenda as it's laid out here. I will say that for the speakers, we have four speakers that will be talking. I will be timing the speakers and watching them and giving each one of the speakers 20 minutes.

So in that 20-minute time what we would like to have happen is the presenter presents their material and then have any clarifying questions, but I want to allow at least 20 minutes for each one of them.

If it doesn't take 20 minutes, then certainly we will have some Q&A at the very end. I don't want to have one presenter get up and then we take most of the time with Q&A and then the other presenters don't have enough time to get through

their material. So I will be watching the time on each presenter to make sure each one has at least 20 minutes.

Then when we get into a discussion or if you have a question, what I would like for you to do, if you don't care to, if you would put your card up in this manner, that means you have a comment or a statement to make, and then I will try to keep track of who's next or whatever.

If you have a burning question, certainly you can just jump in there anytime. At least once today you can do that. Typically I want to go in order of who had their card up first.

As far as the microphone, there are two buttons on the microphone. The blue button, you have to hold that button down if you're talking. So if you had a quick comment you can hold it down. The red button, you turn it on, but when you get done talking you have to turn it off or we can still hear what you're saying.

So with that I will turn it over to Russell.

CHAIR RUSSELL TOWNSEND: Thank you, Wilson, and thank you Council members for being here. This is the seventh term. We have some new members

and we have some big issues to talk about this time.

I think this Council has always been a very useful tool for TVA because they are able to bring in a lot of diversity to get a lot of viewpoints on certain issues before they even go to the stakeholders. It really helps them make some decisions.

Today we will be making some advisory comments and tomorrow we're going to really look at those questions and make some advisory comments for TVA so that they can look at addressing this larger overall issue.

For those of you who know me you know I have never been afraid to speak out and let people know what I'm thinking, but I have never ever been a chairman of anything. They say a man's the king of his castle. Well, my wife will tell you that that is not true.

So this is going to be a big new experience for me, and I am following in the footsteps of Deb and Tom and they have done excellent jobs as Chairmen and I hope that I do half as good a job. I hope you will bear with me and be patient as I get the hang of things for a little bit.

What I wanted to do is I wanted to

introduce the new members at this time. We have several. Adam Kinser is a partner in the law firm of Montgomery Kinser Law Offices based, excuse me y'all, in Jonesville, Virginia. He previously worked as a law clerk for the Honorable Glen M. Williams, U.S. Federal District Judge in Western Virginia. He is a member of the Lee County Bar Association, the Virginia State Bar, the Virginia Trial Lawyers Association, and the Virginia Indigent Defense Association. So welcome to Adam.

We have Will Nelson, III, president and CEO of Nelson Tractor Company, a farm equipment dealership headquartered in Blairsville, Georgia. Prior to joining the family firm, Nelson was consultant for Dematteo Moness Research, an investing firm, and was involved with several product development groups, including Deere, Kubota, and New Holland. Welcome, Will.

Gary Joiner, plant manager for CC Metals & Alloys based in Calvert City, Kentucky. Prior experience included working for Smith Coal, also known as Lode Star Energy, a surface and underground mining company, Martin Marietta Materials, and other positions in the Ferro Alloy industry. He serves on the board of Jackson Purchase

Energy.

We have Rhonda Rice, who I got to meet last night at dinner. I enjoyed visiting with her. She is the Executive Vice President of the Knoxville Chamber executing daily operations of that organization. She's serves on the Board of Directors of the Historic Tennessee Theater Foundation, Tech 2020, and is a member of the Executive Women's Association and a 2003 graduate of Leadership Knoxville.

Brad Kreps, across the way, Director of the Nature Conservancy's Clinch Valley Program focused on the preservation and protection of 2,200 square miles of mountains and valleys in Southwest Virginia and Northeast Tennessee. Prior to his current position he managed the Nature Conservancy's Warm Springs Mountain Preserve and conservation partnerships across western Virginia's Allegheny Highlands.

And finally, Gary Myers, Executive Director of the Tennessee Wildlife Resource Agency, but he is not here with us today, I understand. So we will look forward to meeting him at the next meeting.

Anything else that I need to do right

now?

FACILITATOR WILSON TAYLOR: No, sir. Thank you, Russell for that introduction. Again, welcome to the new members. It's good to see all the past members again. So we will go right into our next agenda item, which is a DFO briefing, which will be Joe, Joe Hoagland, Kelly Love, and Kendra Mansur.

Kelly.

MS. KELLY LOVE: Good morning, everyone. Is this on? My name is Kelly Love and I am an attorney in TVA's Office of the General Counsel. For the past few years I have been the primary legal advisor for the Regional Resource Stewardship Council and on this Council's governing statute, the Federal Advisory Committee Act.

I would also like to introduce my colleagues Kendra Mansur who is transitioning into this work and whom you will see a lot more of over the course of the seventh term and beyond.

This morning my task is to give you a little bit of background on the Federal Advisory Committee Act and the creation and operation of this Council. For those of you who have been on the Council before, I think a lot of this is going to be information that you're already familiar with, but

since this is the first meeting of the new term and we do have some new members on the Council we wanted to make certain that everyone had a base level amount of information and knowledge about the how's and why's of the Council's functions.

In its most basic form an advisory committee is simply a group of individuals who don't work for a particular federal agency and who provides that agency with outside expertise and advice.

Advisory committees have been around since the time of George Washington who sought the advice of such a committee during the Whiskey Rebellion of 1794, but much of the growth of advisory committees occurred after World War II.

Eventually with that growth Congress became concerned about the operations of advisory committees. One concern was the sheer proliferation of committees. An investigation by a congressional committee in 1970 estimated that there were possibly as many as 3,200 interagency and advisory committees, and that number might have been even larger because many agencies were not even enable to say how many advisory bodies they were dealing with.

Another concern was that special interests had captured advisory committees and were

exerting undue influence on public programs in which those groups had vested interests.

For example, the house discovered that when the advisory council on federal reports considered a national industrial waste inventory questionnaire the Council met only with representatives of industry. No representatives of conservation, environment, consumer or other public interest groups were present.

This lack of balance of representation of different points of view was disconcerting. Another concern was the lack of transparency and accountability. In general, the meetings of these many advisory committees were not public and it was impossible to find accurate and complete records on all of the committees.

Finally, the waste of federal funds was, of course, of concern. The 1970 report estimated that the annual cost of maintaining all of these many bodies within the federal government was approximately $75 million.

So as a result of these concerns, in 1972 Congress passed the Federal Advisory Committee Act which gave advisory committees much more structure. Some of the key elements of that Act are,

first, public access. The meetings and records of advisory committees are by default open to the public and they can be closed only under one of the very limited and specific exemptions in the Government and Sunshine Act.

The agency is also required to give timely public notice of the time and place of meetings in order to ensure public access to the deliberations of the committees.

Second, balanced membership, this responds directly to the concern that advisory committees reflected only the views of those special interest groups, and it's thought balanced membership leads to even handedness of the committee's advice.

Third, structured management. And there are quite a few aspects of this, but I will highlight just a couple of them quickly.

First, agencies must file charters for advisory committee, and this means that there's a record of each committee's existence and purpose. Every charter expires two years from its creation and must be proactively renewed by the agency. So this hopefully prevents committees that have outlived their usefulness from continuing to languish, and obviously we find this Council to be very useful

since we have kept renewing it.

Third, the president must file reports to Congress every year on the advisory committees that were in existence during the previous year.

And finally, each meeting of an advisory committee must be attended by the Designated Federal Officer for that committee, which is a federal employee selected by the agency. This provides a bridge between the private sector attendees and the agency.

So pursuant to the Federal Advisory Committee Act TVA created the Regional Resource Stewardship Council to provide advise on TVA's stewardship activities and the priorities among competing objectives and values.

The first term of the Council began in February of 2000. TVA stewardship activities that are within the scope of the Council include the operation of TVA's dams and reservoirs, navigation and flood control, the management of lands in TVA custody, water quality, wildlife, and recreation.

The Council has provided advice to TVA over the years on a number of topics and issues related to these activities. For example, the Council provided valuable input into TVA's integrated

management of the Tennessee River system, including on TVA's reservoir operations policy.

The Council has also looked at TVA's environmental policy, our aquatic plant management policy, TVA's drought management strategy, our recreation strategy, water quality and watershed improvements activities, and TVA's land policy.

Most recently this group served as the stakeholder review group for TVA's Natural Resource Plan. That plan provides a strategy for TVA's management of its natural resources focusing on six different areas, biological resources, culture resources, recreation management, water resources, reservoir lands planning, and public engagement.

As the seventh term rolls on you will no doubt hear a lot more about TVA's continued implementation of the NRP, and this group remains an important component of that plan and input into that plan.

As I said earlier, each Council under the Federal Advisory Committee Act must have a charter. So on this slide I have highlighted just a few of the key points from this Council's charter. I believe that you have a copy of the full charter in your notebooks as well as the bylaws and operating

procedures.

So as required by the statute the Council provides advice only. TVA does remain the decision-maker with respect to our natural resource stewardship activities.

However, the advice of this Council is very valuable to TVA. It's taken into consideration by our management and it's regularly reported to the board committee with responsibilities for natural resource management.

The term of the Council is two years. And as I said, we have been renewing this Council for successive terms since its creation. We're now in the seventh term, and that lasts from February 2013 to February 2015.

This Council typically meets approximately twice per year. The charter requires balanced and diverse membership and specifies the various groups from which the members must come.

Of the 20 members of the Council the charter requires seven members who are appointed by each of the seven valley Governors, four representatives of distributors of TVA power, and one representative each of TVA's direct-serve customers, TVA's navigation program, our flood control program,

a recreation interest, and an environmental interest. Then TVA selects four additional at-large members to round out the membership to ensure a broad range of views on the Council.

The charter also provides that a maximum of 14 members who served on the immediately preceding term may serve on the next term of the Council, and the thought behind that is that it helps to ensure that fresh ideas are brought to the Council every couple of years.

Now, I want to talk a little bit about the mechanics of the Council's meetings. Joe Hoagland, TVA's senior vice president of policy and oversight, is the Designated Federal Officer for the Council.

For the seventh term of the Council TVA officially appointed an alternate DFO; and that is, John Myers, the Director of Environmental Policy and Regulatory Affairs.

The DFO or the alternate DFO is responsible for attending all meetings of the Council, ensuring public notice of the meetings, preparing the agenda, and submitting issues for your consideration, as well as a host of other activities and tasks related to the Council's operations.

The required quorum for the meetings is 11 voting members. The driving purpose behind each of our meetings is for TVA staff to provide the Council members with enough background information concerning the natural resource stewardship issues about which we're seeking your advice, and then, of course, the primary deliverable resulting from each meeting is the advice from the Council to TVA.

Any advice provided by the Council requires the affirmative vote of at least a majority of the members present at that meeting. And to that end, the Council's discussions typically do drive toward consensus on the advice to be given. However, there is a mechanism in the charter for minority and dissenting views to be reflected in the materials.

And as I stated earlier, one of the key elements of the Federal Advisory Committee Act is public meetings. So TVA does provide notice in the Federal Register of all Council meetings. Interested members of the public may attend the meetings and sometimes do. Members of the public can file statements with the Council, and if allowed by the Chair, they may speak at the meetings.

As far as the role that you will all be playing on the Council, at the risk of being

incredibly overly obvious, as you know, members of the Council are not employees of TVA, and therefore, Council members don't speak for TVA, but who you do speak for is for your constituent group.

Each of the Council's members is considered a representative of the group, organization or other entity identified by TVA in making your appointment to the Council. Of course, it's also important in Council deliberations for you to use your personal knowledge and experience because although you do represent a constituent group, you each come to the table with different individual knowledge and experiences, as Russ said eloquently earlier, and so I think we would all agree that the most valuable advice is provided when everyone speaks their mind and shares those diversity points.

Finally, and most importantly, we thank you for your public service on the Regional Resource Stewardship Council. The staff associated with this Council has watched how this process has worked over the last years. TVA management and the TVA Board truly do appreciate your advice and take it into account, it's important to us. So we appreciate your willingness to serve and to provide that advice on these very important TVA issues.

Any questions for me? Thank you.

FACILITATOR WILSON TAYLOR: Thanks, Kelly.

Joe.

DFO JOE HOAGLAND: So as I mentioned earlier, I do appreciate the -- all of you being here and taking the time out of your schedules to help TVA with our -- some of our challenges that we have around our stewardship activity.

Those of you that don't know Kelly, you should get to know her. I told somebody at dinner last night that she's the one that keeps us out of trouble. So she's always making sure that we're doing things the right way and making sure we follow the processes and procedures. So if you don't -- besides that she has good advice, too. So get to know her.

Oh, I have the slide changer, don't I? Okay. So this is the seventh term of

the Regional Resource Stewardship Council. When we brought the charter up to our board and said, you know, do we want to renew this for another term, of course, our recommendation was that, yes, we wanted to do that. We got a very resounding, yes, we needed to do that, that they felt like it was

very important that the input that this Council has given over the years on everything from our river management plans and land plans for the recent NRP has been very helpful.

For us it's incredibly interesting because when we are in our offices in Knoxville or Chattanooga or wherever we are and, you know, we think about what an issue is and we think about what, you know, we think people care about and what people worry about and we get that all built up in our head that, you know, this is the way it is and this is how it works and this is what's important and what's not important.

What I've found interesting is when we bring all of that back to this Council and we put that on the table and say that this is what we think is important and this is where we think we need to go and how we need to fix it, what do you-all think, we're surprised in a number of instances where you-all have said, oh, no, no, no, you need to worry about this, not this.

And so I think one of the key take-aways for us and the importance of this Council is the fact that the perception sometimes we build up in our office in Knoxville is not the reality of what

stakeholders care about in the Valley.

I have a physics issue. Okay. And so, hence, the -- renewing this

for this term, I think, is very important. Your input on how we deal with issues going forward, I think, is very important.

The Board, in fact, has, because of the success of this Council, at the board meeting we held last week has approved us to start a new advisory council called the Regional Energy Resource Council which will focus on TVA's energy resources of our portfolio for how we provide energy, how we do things like renewables, how energy efficiency and those kind of things play into it for the same kinds of reasons as I just described here, to make sure that we really are getting the views of what folks in the Valley feel are really important in the directions that we go in and how we get there.

I guess I have kind of covered the second point there. The board really does appreciate and use your input when we're thinking about decisions that we're making. And we, as management, appreciate that as well.

I believe it was the last Council meeting where we talked about fees associated with

some of our campgrounds and marinas, you know, to be openly honest we -- one of the conversations we had when we built our perception in the towers in Knoxville was that, you know, everybody would be really upset if we raised our fees and that it would not be a good thing.

Well, the advice we got from the Council was, no, that the ratepayers shouldn't carry that, that the folks involved in those kinds of activities ought to cover that. That was not a view that we thought would be well handled by our constituents.

It turned out it's been very well handled, it's been very well received as it's been implemented, and it helped us a lot as we were building the direction and policy that we wanted to establish for that. So we really appreciate that input.

For this year and as we get into this Council I am trying really hard to get us into some level of cadence so that you-all will have a little bit of an expectation as to what you're going to see in the springtime and what you will see in the fall.

Now, as I have learned over the years, one problem with cadence is generally stuff happens

in between and so you can't always make cadence work, but the goal we're going to try to shoot toward is in the spring meetings we're going to talk about reservoirs, we're going to talk about reservoir operations and how those operate. Today's conversation will focus on some of those issues.

In the fall from the input I think we received at the last Council meeting we want to, first of all, be sure you're up-to-date on the progress that we're making around the Natural Resource Plan and the direction it's heading and then also talk about issues that we are seeing come up.

One of the things that I'm seeing as we begin into this next term in the next few years and challenges for TVA is that some of the work that you-all have helped with over the years may begin to recycle itself, right?

This Council now has been in existence for, I think, 14 years, right?

And so some of the advice and the decisions TVA made and policies that were put in place a number of years ago are now beginning to kind of maybe need some refreshing and looking at because the world has changed so much. So I think you will see as we go through the next couple of years that

we're going to begin to relook at some of those things and how, you know, TVA implements that going forward.

One thing I will mention here too that I think is encouraging is our new CEO Bill Johnson, he's been here 120 days or something like that now, I think, and he's been going around the Valley and he's been learning all about us, all about the stakeholders, all about our customers, trying to understand what we value, what the stakeholders value, what our customers value, and how that needs to play.

One thing that he came back with on his own very quickly was TVA's core mission and that TVA's core mission is not just being a power company and it's not just providing low cost, reliable power to the Valley. For our customers sitting back here, don't get me wrong, that's still a No. 1 priority, but he also realizes that we're broader than that and that we have a bigger responsibility to the Valley.

Now, going back to that low-rate, affordable electricity, the fact that we don't get any appropriations, how we balance those other activities against those rates is in his mind the biggest challenge, but it's very important that we

continue to do those activities and do them well.

So I think you will see from us as we move forward a bigger focus or refocus on some of those activities and trying to be creative about how we fund those and make sure that they stay.

And, in fact, today's topic is going to be somewhat about that subject, how we continue to make sure that we have funds available to do important stewardship activities for the Valley.

So at the bottom I have two bullets. It says to engage, open, honest, and clear views. I have not seen anybody in here that's been shy about an opinion. So I don't know that those bullets are terribly important to remind everybody, but there are some new folks on the Council and it is very helpful for us to really understand your opinions and positions.

So I would ask that as we go through whatever discussion we're having, if you disagree, if you have a different view, please get it out on the table. I think it's often those different views that make us pause and think about what we're doing and how we're doing it, and in many cases over the years it's been a situation in which we have backed up or we have changed some of our thinking because of some

of those views. So it's very important to me and to all of us that we get that.

On the back table over here we have got a whole lot -- it kind of looks like a congressional staff room when I look back over here, but these are all folks that work in stewardship areas. The information and the input that they get is very helpful on how we begin to structure some of our things.

Also, up here on the front row I want to recognize -- we have got four individuals, we will introduce them officially in a moment, but from our colleagues at Fish & Wildlife, TWRA, Georgia, and TVA that are going to be talking to us about our topic today and giving you a perspective of how we have done trout management over the years. We appreciate them being here and their willingness to help support this meeting because I think this is a great opportunity.

I am going to stop there for a minute because -- before we go into the topic, but does anybody have questions?

No questions. Great. So we're like way ahead, Wilson?

FACILITATOR WILSON TAYLOR: Keep

moving.

DFO JOE HOAGLAND: Keep moving. All right. So let me introduce the topic for today that we want to get into.

Historically TVA Fish & Wildlife Service and the states in the Valley have worked to create a fish -- a healthy fish environment. And with that, we have also worked with a number of hatcheries to create fisheries within the Valley that folks can enjoy different kinds of fish.

We have done warm water and we have done cold water. Now, cold water is not typically something that you would think about being down here in the southeast, but the fact that we have put the dams in and created the impoundments, the water that comes out from underneath those dams during the summertime is much cooler than what you would see coming off of the surface.

The result is that the tailwaters of those dams, because of their cool nature, allows for cool water fish to grow, specifically trout. We have worked with the agencies over the years to provide an environment and to provide fish for folks to enjoy and to fish and take out of the stream, and the end result has been a fairly robust industry that has

built up across different locations in the Valley over the years.

Well, as time has gone on the ability to fund those activities has become more and more of a challenge. You-all are aware with, you know, TVA, as we have lost appropriations, we still work very hard every year. We will talk about today on how we work to make sure the environments are healthy above and below all of impoundment structures.

As Fish & Wildlife, which they will talk about today, their budgetary constraints are getting harder and harder every year. You know, for fear of stepping off into the politically incorrect world, you know, the things going on in Washington aren't making much sense in some ways. So trying to resolve how you deal with some of those funding issues is becoming more and more of a challenge.

The states have both worked very hard to create the environment and create the needed fish available, but they have their challenges as well. Where we found ourselves as the organizations working together, and at least from my perspective, is that trying every year to figure out, how are we going to find next year's funding, is becoming more and more difficult and more and more challenging.

And for the fish themselves, you know, the fish don't much care where the money comes from or what date the money gets assigned, they have to be grown and they have to be grown in a certain order, right?

And so for them to wait for Congress to decide, okay, we're going to pass a budget or we're going to -- you know, it doesn't work for the fish, they don't care.

So we -- us organizations have gotten together and started working with one another to try to figure out, how do we come up with a sustainable mechanism for providing this resource over the long-term that at least maybe to some degree lessens our need to worry about an impact on things going on in Washington that allows TVA to continue to do the activities that we need to do but, you know, keeping in mind that all of that gets passed through to the ratepayers. The same with the states, their budgetary may not be as insane as Washington, but they have still have their challenges.

So what we really want to do this morning is to let each agency talk about what they do, how they do it, how it creates the environment and the resource that's available for folks, and then

talk to you about the challenges that we're seeing going forward. Then we really want to seek your input and advice on the direction in which you think we ought to proceed to try to find a solution to this.

You know, solutions can be very wide ranging, right? They can go everything from -- you know, we all go back up to Washington and somehow force them to give us money, not a high probability, I don't think, but it's an option, all the way over to the other side of, well, okay, if you're the person doing the fishing, then you pay for the fish, right? That also is probably not, in itself, a practical solution, but it's kind of at another extreme.

We're trying to figure out what makes best sense for everybody. So we really would like your advice on how we do that. We have four specific questions that you can see here, they are in your book if you can't read those, that we would like advice on.

I think, Wilson, correct me if I am wrong, but we will actually address these specifically tomorrow.

FACILITATOR WILSON TAYLOR: That's

correct.

DFO JOE HOAGLAND: But to give you an idea of what we're looking for and asking for, this will give you a chance to think about that through the conversations today. I am going to stop there and see if there's questions or comments.

Okay. If not, how would you like to proceed?

FACILITATOR WILSON TAYLOR: What I would like to do now, Joe, if we could go ahead with our presenters. So we're a little bit ahead of time. So we'll just keep rolling on the agenda.

So do you want to introduce the speakers or do you want them to introduce themselves?

DFO JOE HOAGLAND: Are you first? Linda is first. Sorry. I don't have the agenda up here. There we go right there.

So, Linda, I will let her give her background. She's with the U.S. Fish & Wildlife Service. She's going to kick off the conversation and about what's being done.

I think we're taking a break, Wilson.

CHAIR RUSSELL TOWNSEND: Why don't we go ahead and hold for just a second while people refill their coffee cups and then we will get going

again. I don't think this is our official break, this is just to refill coffee, danishes, that type of thing.

If the Council would please come back to order, I think we're ready to begin again. I hope everybody has some coffee and some danishes, but we need to get going back with the schedule now.

Before we start with our speakers formally, one thing Beth provided for us that I think it's important to share with you-all is some of the topics that the Council has dealt with over the -- over its history.

During the first term the Council was very busy. They dealt with integrated management of the Tennessee river system, Reservoir Operation Study, management of public lands, aquatic plant management policy, water quality monitoring, watershed improvement process, reservoir releases improvement, transmission line rights-of-way maintenance, policies, and practices, navigation responsibilities, and the issues on the Tennessee River system, biodiversity in the Tennessee River system.

During the second term the Council dealt with issues consisting of management of public

reservoir lands, watershed wide partnership regarding water quality and quantity, recreation, including trends, strategy, and an overarching program, public involvement in integrated management of the Tennessee River system.

During the third term the Council dealt with public lands management, lands planning, maintain and gain, balance issues, a draft for recreation strategy, infrastructure stewardship and emergency preparedness and coordination efforts, and a TVA land policy.

The fourth term Council dealt with drought management policy and communications, environmental policy focused on land and water stewardship perspectives, stewardship compliance, recreation, recreation strategy and dispersed recreation.

The fifth term included recreation, natural resource and/or recreation management activities, commercial recreation, prioritization of stewardship activities, and a Natural Resource Plan, which included prioritization, criteria for success, flagship ideas, economic valuations, and guiding principles.

In the sixth term the Council dealt

with the Natural Resource Plan, including funding challenges, benefits, resolutions, and recommending the NRP to TVA's Board, floating structures and non-navigable houseboats, that was an interesting one, partnership for stewardship activities, including foundation ideas, and Section 26(a) permit application fees.

We're just starting the seventh term, and we're going to be talking today about sport fishing and trout hatcheries. And with that, I am going to turn it over to someone to introduce our speakers this morning.

FACILITATOR WILSON TAYLOR: Okay. I think Kelly Love helped pull this list together. So thank Kelly for this great list of what we have done in the past. So we will go right to our speakers.

MS. LINDA KELSEY: Good morning, everyone. I am Linda Kelsey, and I work with the U.S. Fish & Wildlife Service. I am the Assistant Regional Director over the fisheries program for the Southeast Region, and that includes ten states.

So I just want to kind of give you a brief overview of what's the role of our agency in regards to the topic that we're here to discuss the next two days. I just want to start with giving you

what is the overall mission of our agency; and that is, to work with others to conserve, protect, and enhance fish wildlife and plants and their habitats for the continuing benefit of the American people, which is what our agency is all about.

Then within our fisheries program we also have a specific mission; and that is, working with partners to restore and maintain fish and other aquatic resources at self-sustaining levels and to support federal mitigation programs for the benefit of the American public.

Some background on this particular issue is that we -- when these national fish hatcheries were constructed and money was appropriated to us by Congress, there was no specific statutory obligation or court action ordering the Fish & Wildlife Service to produce and stock trout.

It was implied when Congress actually appropriated the money to the agency to construct the facilities and then to operate the facilities. So we have been doing that since 1965. Since then we have stocked over 1,000,000 fish a year for 14 different TVA water development projects in the southeast region. When I say no statutory obligations, that is in regard to the TVA facilities or water projects.

In the southeast region we have six cold water hatcheries, one of which is a broodstock facility which actually produces the eggs that are shipped not only here in the southeast but shipped all over the country. It's part of the national broodstock program of the fisheries program.

We also have in the southeast region seven warm water hatcheries. As Joe told you, the difference between the warm water and the cold water is the nature of the fish that we produce and the habitat types that they live in.

We also have a regional fisheries center in Warm Springs, Georgia that includes an additional hatchery, a fish health center, and a fish technology center.

Then we currently have two other hatcheries that are off line right now and not operating, but they are still our property and our facilities.

Then in addition to the hatchery system, we have eight other field offices, Fish & Wildlife Conservation offices scattered around the ten states in the southeast region. All total I think we have roughly about 120 employees that cover all of this for us for the southeast region.

So I want to focus on the facilities that are involved in the TVA stocking if you're not aware of some of them already. One is Dale Hollow, that is in Celina, Tennessee. That was opened in 1966. Its original mission when it was constructed and the money obligation was to mitigate the impacts of federal water development projects in Tennessee and Kentucky.

At that facility 60 percent of its production is for the TVA related projects. Annually Dale Hollow produces 944,000 fish, roughly 180,700 pounds a year. It's one of our larger facilities.

Chattahoochee Forest National Fish Hatchery in Suches, Georgia was opened in 1939. Its original mission was to restore and enhance recreational fisheries within the Chattahoochee Forest National Forest.

They own -- 7 percent of their production is related to TVA facilities. The majority of the production work that they do is for Corps of Engineers' facilities in the southeast, but they do contribute to TVA facilities. Of that 7 percent that equates to about 77,560 fish yearly and over 8,000 pounds.

Then the other facility is Erwin

National Fish Hatchery in Tennessee. This one was opened in 1897. It's well over 100 years old. We have quite a few hatcheries in the system that are over 100 years old.

Its original mission was to produce trout and other fish species for Tennessee waters. It is, as I mentioned earlier, this is the broodstock facility that produces eggs. They don't produce fish for stocking. Annually they produce almost a million eggs a year related to TVA.

Then we have roughly a 1,000 fish, 100 pounds that are basically spent broodstock. We're done using them for spawning purposes and we usually stock those out. They tend to be the trophy fish that the states like to get because they are obviously really big fish.

Then as I mentioned earlier we have the Health Center in Warm Springs, Georgia. The services they provide is the disease diagnostic services for the TVA production fish even though they are not producing the fish themselves.

I know all of you are well aware of the benefits of trout stocking in the southeast as was discussed earlier. We had worked with our economists in the Washington office and they had done

a study in 2010, which is noted at the bottom, because we wanted them to do an updated evaluation of the economic benefit of the work that the Services Fisheries Program does and all that it does, whether it be trout production or doing fish passage or habitat work. So that's where these numbers come from.

I have copies of some materials that Beth is going to make available to you after we speak that gives -- it's not that actual document. It's sort of the public version of it. Anyway, you will see it. There's a web site link and all of that.

Anyway, from that study it was determined that the -- in the southeast region and the trout stocking portion of our program that it equates to 444,000 angler days a year from the fish that we produce at our facilities.

As you know, it's a major economic driver for state, local, and regional economies. The total economic output is $45 million, and we've determined it generates 504 jobs a year. Wage and salary income, 13 million a year. For each dollar, each of those federal dollars that we spend to produce trout, it is associated with almost $73 in economic output. So that's a 73-to-1 return on that

investment of that one federal dollar. Big business.

It's often been said if this -- if you had -- this would be better than a Fortune 500 company if you had that kind of return on the investment of your funds.

So to do the stocking we meet annually with the states in Tennessee and Georgia to develop our distribution schedules for the fish. We meet annually to agree upon, you know, how many fish, how big a fish, how big do they want them, the weights they are looking for, where the stocking locations are.

It's important to note here that the states have the management authority over the water. That is not the authority of the Fish & Wildlife Service. The states have the lead for all recreational fishing and use of the state waters.

And this is -- we stock in 14 different locations. These are the locations. Some of them you may be aware of. I will just run through them really quickly. We have at the Apalachia Tailwater in Tennessee; Blue Ridge in Georgia; Cherokee in Tennessee; Fort Patrick Henry tailwaters; Patrick Henry Reservoir; the Normandy tailwater in Tennessee; Norris tailwater here. Well, actually

we're in Alabama. Sorry about that. Parksville Reservoir in Tennessee; South Holston tailwater in Tennessee; Tellico Reservoir, Tellico State Fish Hatchery; Tims Ford Reservoir in Tennessee; Watauga Reservoir in Tennessee, and Wilbur Reservoir in Tennessee.

We also have an agreement with the State of Tennessee where they provide us with funds and we produce for them an additional 100,000 pounds of trout that are also stocked in the state waters.

In total the cold water species that we stock are predominantly rainbow trout, which is 76 percent, and that's followed by brown trout, brook trout, and lake trout.

As was mentioned earlier by Joe, you know, we are stocking these trout in these areas because the native warm water and cool water fish, like small mouth bass and large mouth bass, were eliminated by the cold water discharges from the reservoirs. If not for us stocking these cold water fish, there would not likely be any fish there to catch at all.

This is kind of the issue that kind of is bringing us all together. It basically comes down to the costs of operating these facilities. The

service has been directed for many years now by the Office of Management and Budget, which is part of the administration.

We have been given directives from Congress when they have appropriated our funds. We have been given advisement to that effect from our FACA group, which is the Sport Fishing and Boating Partnership Council. It's a FACA group to the Department of Interior that we work with.

All of these groups have instructed the Fish & Wildlife Service to seek the full cost reimbursement for the operation and maintenance of these facilities that support trout production for federal water projects.

We have also -- as Joe mentioned, there are budget shortfalls occurring in our agency as well. Our agency is also in the process of undergoing a new review of the entire national fish hatchery system, and that has not been released yet. That will be coming out sometime in May, and you certainly will be given a copy of that.

Within that review the agency itself is also looking at the future role of the fisheries program and what kinds of activities are we doing now and what kinds of activities should we be doing in

the future, and this topic is certainly rolled up in there.

So that's been the driver for why we have been -- starting next year that if we are not reimbursed -- well, actually starting this year, excuse me, fiscal year '13, that if we are not provided the funding to produce those fish and operate those hatcheries from those federal water development agencies we no longer will be doing that work. For here in the southeast, the Corps and TVA are the predominant folks that we work with on those types of issues.

We have made agreements with the Corps of Engineers as recently as 2010. So they have started repaying the agency, the Fish & Wildlife Service, for the work that we do.

We also out in the west, predominantly the Bureau of Reclamation and Bonneville Power Administration, already have agreements in place where they pay the Fish & Wildlife Service to produce fish to mitigate for the impacts of their federal water projects.

So we have been talking with TVA and they have graciously offered to provide funding for us for the next three years. In the meantime if --

during that three-year period we're going to work together with both TVA, TWRA, Georgia DNR, and folks like you around this table to try to find a permanent source of funding for this issue.

Again, our agency has been directed, and it's very clear from our director on down, that we will only continue this work if we're fully reimbursed. So it's really imperative that we're able to come to some agreement on this issue.

So with that, I would like to open it up for any questions folks might have. I am here all day today and then tomorrow. So I can -- anytime off-line if you want to speak with me, I am here for that as well.

FACILITATOR WILSON TAYLOR: Phil.

MR. PHIL HAZLE: How much is your Agency's budget?

MS. LINDA KELSEY: The fisheries program budget for the southeast region is roughly about $14,000.

MR. PHIL HAZLE: How much?

MS. LINDA KELSEY: I'm sorry. $14,000,000 for Fish & Wildlife Service for the fisheries program for the southeast region.

MR. PHIL HAZLE: And that's ten

states?

MS. LINDA KELSEY: Yes, $14,000,000.

MR. PHIL HAZLE: $14,000,000.

MS. LINDA KELSEY: It's varied from year-to-year when we get Congressional adds. That's sort of a ballpark.

FACILITATOR WILSON TAYLOR: So let's make sure we talk into the mics each time.

Brad.

MR. BRAD KREPS: Okay. The numbers you provided as far as the economic benefits, was that specific to trout or was that more broadly the economic benefits of fishery?

MS. LINDA KELSEY: No, that was for trout production in the southeast region.

MR. BRAD KREPS: Do you have any feel for the economic benefits of warm water fisheries versus the cold water fisheries?

MS. LINDA KELSEY: We do. They are in that report. I don't have that report with me. So I don't want to quote a number, but it's significantly less because those facilities aren't producing to the same degree a production program.

Those programs are more involved in restoration and recovery work of imperiled species.

So they are not producing on the same number for an, you know, economic return, but they certainly have an economic return. The two economists had equated that or valued that for us. So I can get you copies to that report that speak to the actual numbers.

CHAIR RUSSELL TOWNSEND: Ma'am, you offered an interesting point, that if it wasn't for these trout that are released in these cold waters the natural fish, the non and invasive fish like the large and small mouth bass, would be absent.

Can you speak to the impacts to the environment of these rivers rather than the economic benefit associated with fishing if the trout were to be absent from these rivers?

MS. LINDA KELSEY: That would be hard to say. It would almost be the opposite of the economic benefit that's provided because they're there. I'm not sure I understand your question.

If we were not producing those trout, those economic benefits would not be accrued.

CHAIR RUSSELL TOWNSEND: I'm sorry. I misled you. I am not at all interested in economics.

MS. LINDA KELSEY: Oh, okay. I'm sorry.

CHAIR RUSSELL TOWNSEND: I'm not

remotely interested in economics.

MS. LINDA KELSEY: So you're --

CHAIR RUSSELL TOWNSEND: I am interested -- I can't even balance my checkbook. I am interested in the environmental impacts. If rainbow trout, which is an invasive species in these waters, if they were absent from the upper regions of the Clinch River, for instance, what would be the overarching negative impacts to the environment, not the economies?

MS. LINDA KELSEY: There would basically be very little, if any, aquatic wildlife in those cold waters because they are not native to this part of the southeast. We have no species that are conducive to those cold waters.

FACILITATOR WILSON TAYLOR: Mark Iverson.

MR. MARK IVERSON: Thanks for your presentation. That was very good. The economic study shows that $73 for every dollar invested. I am assuming that report identifies the parties that gain benefit from that?

MS. LINDA KELSEY: Yes. It's pretty much -- it's angler days and then they also looked at services, and that could be anything from bait and

tackle shops, the local hotels, gas stations, the restaurants where these activities are taking place.

I must say, this was a peer reviewed journal. It has a lot of respect and approval from other economists that also try to get a dollar value on natural resources, which it's not as easy a topic as some other kinds of economic valuation. It's peer reviewed and it's pretty rigorous of an analysis.

MR. MARK IVERSON: And outside of their, I guess, income tax they pay and sales tax, they don't have any contribution stream that they particularly fund this type of program?

The little bait and tackle shops, for example, do they -- they don't have the means by which they can support these programs?

MS. LINDA KELSEY: Not directly, no. No. It's an indirect.

MR. MARK IVERSON: Thank you.

FACILITATOR WILSON TAYLOR: Tom.

MR. TOM LITTLEPAGE: Yeah. Thank you for that presentation. I guess I do have a passing interest in the economics and I am trying to understand. I guess my perception on this talk is that you're in a transition period where the funding sources are -- somebody is going to have to come up

with some dollars. You indicated your expenditures are around 14,000,000 but you're getting some dollars.

MS. LINDA KELSEY: Actually, the 14,000,000 was for the entire fishing program. The hatchery piece is a component of that.

MR. TOM LITTLEPAGE: So I guess I am just trying to get a scope of what is the amount that you're looking to try to figure out how to generate either through some state contributions or other party --

MS. LINDA KELSEY: The dollar amount to operate the facilities associated with the TVA production in the southeast region is close to $1 million a year.

MR. TOM LITTLEPAGE: A million a year?

MS. LINDA KELSEY: Right. We have determined for this year the current value is $906,101 annual operating costs for the TVA related production.

MR. TOM LITTLEPAGE: And at this point are you getting anything from the states?

MS. LINDA KELSEY: No. We have been provided the funding from Congress, and next year there will be no -- there is no funding in the

services budget to do that work any longer. We have funding for this year. We are operating for the rest of this fiscal year, but come October 1 we will not be producing any more TVA trout.

MR. TOM LITTLEPAGE: Thanks.

FACILITATOR WILSON TAYLOR: Phil.

MR. PHIL HAZLE: Do we currently have a federal trout stamp?

MS. LINDA KELSEY: Yes. I believe there is a federal -- isn't there? No. It's just the states. I'm sorry. Each state has them. No, there is no federal trout.

MR. PHIL HAZLE: Okay.

FACILITATOR WILSON TAYLOR: Avis.

MS. AVIS KENNEDY: Phil got part of my question there. So trout stamp money all goes to the states. Okay. Wallop-Breaux Act funds, which I believe are from a tax on fishing equipment.

MS. LINDA KELSEY: License, tackle, yes.

MS. AVIS KENNEDY: Does any of that go to support of Fish & Wildlife's fishery programs?

MS. LINDA KELSEY: No. That money is through formulas provided back to the states for their work with Fish & Wildlife.

MS. AVIS KENNEDY: Okay.

MS. LINDA KELSEY: Wallop-Breaux, that's the fish restoration portion.

MS. AVIS KENNEDY: Thank you.

FACILITATOR WILSON TAYLOR: Jack.

MR. JACK SIMMONS: Good morning. Several of my questions have already been answered, but I did have a couple of others.

You mentioned the roughly million dollars a year for the costs for providing the stocking support for the TVA-related facilities and then you also talked about TVA providing the funding for the next three fiscal years.

Is that a partial funding or a total funding of that?

MS. LINDA KELSEY: Total funding.

MR. JACK SIMMONS: Okay. And so there is an expiration on that time period?

MS. LINDA KELSEY: Yes.

MR. JACK SIMMONS: Which leads me back to one of the other questions that was addressed earlier about the reduction in federal support of some of these programs. I'm assuming that, for instance, that 900,000 was actually funded through federal dollars or some mechanism or combination of

federal dollars previous to this, correct?

MS. LINDA KELSEY: It was. When congress put that -- the money was actually taken out of our base operations, if you will, when our President's budget was produced last year. Congress was very unhappy about that. So they put money back in to cover the costs of doing this type of work. Our budget for next year, the President's budget that was just released a couple of weeks ago, yet again, the money to produce this work is not in our budget.

MR. JACK SIMMONS: What's the history of -- and I think you mentioned how long you have been doing these programs, but has there been total or full federal support previous to this up to this point?

MS. LINDA KELSEY: Yes. Up until 2010 the agency fully funded these operations.

MR. JACK SIMMONS: And when did that start?

MS. LINDA KELSEY: When did it start?

MR. JACK SIMMONS: Yeah. When did you begin getting the federal funding for the projects?

MS. LINDA KELSEY: As late as 1965, yeah, depending on which facility.

MR. JACK SIMMONS: So it's been a

long-standing federally funded program?

MS. LINDA KELSEY: Yes, absolutely.

MR. JACK SIMMONS: Just during the recent discussions with fiscal budget issues in Washington this -- you've kind of been a casualty of that?

MS. LINDA KELSEY: Well, that's a small portion of it. I mean, we have been directed to move in this way for -- since 2010. So, I mean, that's when we were actually directed, when the money was taken out of our budget.

Prior to that we were given directives from O&B and Congress and others that said, Fish & Wildlife Service, you need to get out of this business. You need to seek reimbursement for this work and not cover it with your own funds and use your funds to focus on other high priority fishery issues.

MR. JACK SIMMONS: Okay. And being a federal entity, this is not just a Tennessee Valley issue, it's really a nationwide issue, correct?

MS. LINDA KELSEY: Yes. As I mentioned earlier, Bonneville Power and Corps of Engineers and Bureau of Reclamations are the other agencies that we're working with on this issue.

MR. JACK SIMMONS: Is there a difference on those because I know there they have got the migratory issues on fish versus here where ours is not necessarily migratory issues as much as just the tailwater impacts.

MS. LINDA KELSEY: Right. And the reason for that is the dams that were built here in the southeast are really old often times. As I told you, Erwin is over 100 years old.

A lot of the dams in the west were built much later. When they were constructed there was statutory language associated with the construction of those dams that said that you will produce fish and you will provide X amount of dollars to the agency every year.

Here in the southeast we didn't have that kind of, you know, absolute statutory language that was implied when Congress provided us the funding to construct the dam and produce the fish.

MR. JACK SIMMONS: But is there a difference on how the migratory issue is considered or mitigated versus here where it's just stocking of the tailwater?

MS. LINDA KELSEY: I'm not sure I understand your question. We were stocking there as

well.

MR. JACK SIMMONS: It seems to me there's a -- the migratory issue is a different issue in my mind?

MS. LINDA KELSEY: Oh, migratory. I thought you said mandatory.

MR. JACK SIMMONS: Migratory. The dams in the northwest, for instance, you have got the migratory pattern that's been interrupted here.

MS. LINDA KELSEY: Yes.

MR. JACK SIMMONS: I'm not sure that's -- maybe I am wrong, I don't know, but I am not sure that's as big of an issue here in the southeast.

MS. LINDA KELSEY: No, it's not. That's a totally different issue because they are migratory. Now many of those runs of salmon have since been listed as endangered, you know, federally endangered. So, yeah, they have to do all kinds of other additional management plans associated with producing those trout because of that very nature.

Ours we stock annually because the fish don't live. I mean, we might get a couple of volunteers or survivors that might, but they are not a self-sustaining population here in the southeast which is why we stock every year.

The ones that are stocked in the west, I mean, a lot of those or some of those, I don't know the numbers, I am not a salmon person, you know, but they do get returns on some of those fish. So it's an entirely different issue basically.

MR. JACK SIMMONS: Yeah. And I think that's an important point here, that this is a put-and-take type of fishery.

MS. LINDA KELSEY: Yes, it is.

MR. JACK SIMMONS: So it's not a sustainable thing to where you're putting this population in and they are continuing to grow?

MS. LINDA KELSEY: Correct.

MR. JACK SIMMONS: Thank you.

FACILITATOR WILSON TAYLOR: Phil.

MR. PHIL HAZLE: Has your agency been working with Trout Unlimited any?

MS. LINDA KELSEY: We work with Trout Unlimited as one of our major partners. We have done work -- actually we're doing work with restoring Appalachian brook trout in the southeast and we have worked with them as a partner. But as far as any kind of direct funding from them for this issue, no, no. We have worked with them jointly on other types of restoration projects for trout habitat.

MR. PHIL HAZLE: Thank you.

FACILITATOR WILSON TAYLOR: Well, other questions for Linda?

Thanks, Linda.

MS. LINDA KELSEY: Sure. Thank you.

MR. FRANK FISS: My name is Frank Fiss. I am with the Tennessee Wildlife Resources Agency. For those of you that may not know our agency, we are a -- we are supported by our hunters and fishermen. They pay a license fee and they also pay taxes when they purchase fishing and hunting supplies, and that comes back to us in Wallop-Breaux federal dollars. We are supported by our fishermen.

Among our missions is to manage fisheries in these tailwaters. So we have a very keen interest in this topic.

This is Norris Dam. It's typical impoundment that its primary use is for flood control and for hydropower, and that's when the dam was built and that's still the primary use today. The fishing activity that's going on below these dams are secondary uses in comparison.

When this dam, for example, was built there was a warm water fish community down there that provided some fisheries for local anglers and

probably across the region. It might have been small mouth bass, walleye, species like that that would produce naturally every year. They would require very little management on the part of our agency to maintain those fisheries.

With the cold water releases that come in the summertime, tailwaters like this one cannot support trout or can only support cold water species. That is why early on a decision was made to stock trout in these waters, and that's why it continues today because the dam's still is in place and it's still primarily being used for flood control and power and we're trying to replace the fishery that is there.

Why stock trout? There's thousands of species of fish out there we maybe could stock if we had the technology. Trout has hundreds of years of animal husbandry behind them. We know how to raise trout to big sizes to stock them in an economical fashion, and that's why trout is the species of choice here. They also have some native connection in that there are native brook trout in Tennessee. These fish are raised very easily at hatcheries and they survive in these tailwaters.

Just to give you an idea of the

localities that are affected by this decision or the problem that we're talking about, it ranges from down in Franklin County on the Elk River all the way up to the tip and say South Holston Dam. So there's a lot of localities affected by this decision.

You see up on the very top where it says Clay County, that's where Dale Hollow National Fish hatchery is. It serves all of those waters. I guess we couldn't have put it in a worse spot. Those guys drive 14 hours a day to sometimes service these places, but that hatchery is built at the base of Dale Hollow Dam where they get their cold water supply. We have got five reservoirs that are stocked with trout and nine tailwaters throughout the state.

Just a quick overview of the kind of -- I want to give you a feel for the magnitude of the program and what kinds of things we're doing. We stock rainbow, brown trout, and brook trout.

Rainbow trout in the tailwaters are by far our bread and butter species. We're stocking hundreds of thousands of those. This represents stocking by Dale Hollow, the U.S. Fish & Wildlife Hatchery, and our Tennessee Wildlife Resources hatcheries.

There's a rainbow trout. Again, they

-- these are stocked throughout the year. We don't just drop all of the fish in at one time. We put them out over the months. Rainbow trout are stocked in small sizes and in large sizes.

Brown trout are typically stocked only once a year or maybe twice a year depending on the management strategy for that river. The brown trout are neat because they can get really big. The rainbow trout might only get to about 16 inches. These fish are getting up to 26 or 30 inches in some places. So they are the real trophy. We add them in to add that extra element to drive up the economic value of these rivers.

Likewise, brook trout are stocked in a few TVA locations because there's local interest in brook trout. We don't do a lot of that though.

Just to give you a view of what these tailwaters look like. They are -- by Tennessee standards, they are larger rivers. They are places where you really have to -- you can wade around and fish in them if the water is off. We really appreciate, whoever it is here at TVA that we need to thank for the app that tells us when the water is coming on and off, that has been a great service, I mean, just from safety and for trip planning. I

mean, you can actually plan your day and your weak sometimes with that device.

So, anyway, these guys are out there. They are making trips. The access on the rivers are typically looking at about 10 miles of river below these dams on average in Tennessee that have trout fishing. There might be a half dozen access points.

So another way to fish it is by boat when the water is on or by putting a canoe in while the water is off. Here's the Elk River tailwater on a weekday. It's not too crowded today.

Here's the Hiwassee River. It's commonly floated in drift boats and gets lots of attention from those kind of fishermen.

Our reservoir fisheries are pretty unique to be able to catch lake trout and trout this far south. We attract people from North Carolina, and of course, Tennesseans that like to go out down-rigging on a summer day and catch big trout.

The rainbow trout that we put in these reservoirs, we will stock them at like 9 inches and they will grow almost an inch a month for a few months. It's faster than we can grow them in our hatcheries to produce pretty big fish pretty quickly.

The rainbow trout typically top out

around 20 inches or so. Then the lake trout on the right there, those fish can get really big. That's probably one of the bigger ones that I have seen. They are supposed to be getting bigger. That's our chief of fisheries, Bobby Wilson, who finally caught a fish.

Anyway, that's our stocking schedule for all of the reservoirs that are in the state. You see we stock a lot of lake trout, but those are -- by cost they are probably cheaper because we stock them in a lot smaller size. It's a little more detail than we probably need.

So where do all of these trout come from?

A majority of these fish are coming from Dale Hollow National Fish Hatchery, which was established to produce these trout for federal water development projects.

In the late '80s about the time when that Wallop-Breaux funding became available to the states, Dale Hollow National Fish Hatchery was expanded using TWRA's money and basically added about 50 -- there was two series of raceways. This project added a third series of raceways. So it expanded by about 50 percent.

That agreement to operate those raceways is still in effect and will be until, I think, 2025 or something. We pay the Fish & Wildlife Service $100,000 a year to produce 100,000 pounds of fish out of those -- out of that series of raceways.

As it turns out, a lot of those fish have been going -- we could stock them anywhere, but we have been stocking a lot of them in TVA and Corps of Engineers projects because that's where we have our biggest demand from fishermen to go out and catch fish.

In a typical year when we're talking about TVA waters only, it's something like 75 to 80 percent of the fish are coming from Fish & Wildlife Service hatcheries. Tennessee Wildlife is stocking the other fish at a cost of about 140,000 a year.

Like I said, in addition to some portion of that 100,000 pounds that we pay for at Dale Hollow is also distributed to TVA waters. The accounting on those fish is -- I didn't want to figure out what they were spending on it. So just know there's some more costs that we put into that contract that is in addition to that 140,000 a year. So sportsmen already are paying for this problem.

Another point I want to make is that

we talk about -- I heard somebody ask about the ecological functions of these rivers, you know, the work that TVA has done through this reservoir release improvement and lake improvement plan, that's a little before my time, but I came on as a trout biologist right when the benefits from this plan were coming to fruition. This plan addressed minimum flows and oxygen, which are -- which were totally limiting these systems, and we saw the same thing in the Corps of Engineers systems.

Great work. I mean, this has been really helpful for us. We don't have to stock as many fish as we would have to otherwise because the water quality is so good. So we really appreciate that.

You know, a lot of money and a lot of capital investment went into making these fixes, I'm sure, at TVA and would hate to see the bottom fall out of it because we can't put the fish in.

There have been other keys to success. You know, we have got water quality, TVA has handled that. Access, Tennessee Wildlife has bought some access areas. TVA manages good access areas.

Tennessee Wildlife has paid for research to figure out how many people are using

these rivers. We did one economic evaluation of our own. These rivers are some of the best and can be worth up to $2 million a year annually. Some of the less traveled ones in the hundreds of thousands.

We have provided those data on use to Dr. Jim Caudle at the Fish & Wildlife Service so he could build the total economic output for these rivers. Of course, our agency does the management, but I think this program has been a great success, one of our favorites within the agency.

It's been popular among anglers. This is a group of fishermen no doubt coming in from out of town. They have hired two guides to float the Watauga River. There's no telling how much money they spent on this trip. I mean, that's the high end of a fishing trip.

So it's not a surprise to me that we get the economic output out of the dollars spent on trout that we see. We get tens to 20,000 trips a year at these tailwaters. We can't bank all of those. This only happens if we keep up what we have been doing.

So part of this presentation was to talk about TWRA's perspective on this issue of what if the Fish & Wildlife Service can only get funding

from someone else to provide fish for the federal government the way we see it.

Our perspective is that the stocking of these federally owned and managed water development projects should rely with the primary user; and that is, the people that are operating the water development project.

What will we be able to do if that funding is cut? So it's not total elimination of stocking. I wanted to tell you what we are able to react and provide for fishermen. Certainly stocking will be reduced. Let's talk about that.

Well, why can't we just get the fish somewhere else? This histogram here shows Dale Hollow Fish Hatchery on the far left and our four state trout hatcheries in blue. You can see that Dale Hollow makes up like 50 percent of everything we do in trout in Tennessee. We are inextricably tied to Dale Hollow and the Fish & Wildlife Service as a state agency.

If you gave us more money or anybody gave us more money to make more fish at maybe any of these locations, we couldn't do it. We're limited by the amount of water we have at these sites. So they are already maxed out.

We have -- in the last few years on our hatcheries we have gotten that last little bit of production out of it by adding oxygen systems and improving the water connections. So we're already limited.

This red bar on the far right is 150,000 pounds of fish that our staff identified we needed in the state to provide the best fisheries, and we did this analysis, I don't know, like eight years ago. It was a long time ago and we already recognized the need for more fish. So it's not like we have extra fish that we can just stock in TVA waters.

Here's how -- this pie chart is all public waters in the state that are stocked. It's about 550,000 pounds. You will see TVA is a pretty good chunk of that.

Next comes going clockwise USACE's Corps of Engineers, we can't take their fish and put them in TVA waters. They are already paying for their fish.

Brookfield, Great Smoky Mountain Hydro, is the private company that we work with in the state. They pay us for us to stock Calderwood and Chilhowee Reservoirs for mitigation purposes, and

that was worked out in their FERC relicensing. So we can't use those fish.

The rest of the pie chart is our smaller stocking trips that we do to these little creeks all across the state. We only stock a few hundred to maybe a few thousand fish in these locations. If we were to start taking fish from those areas to cover the tailwaters and the reservoirs that require so many fish, we would have to cancel lots of locations.

So we can't -- we don't want to have that much damage across the state. We want to keep the damage in the bigger waters where the problem is. So that's been our management as we go forward here.

What we can do, as I mentioned, we already have maxed our capacity at our hatcheries. So we are trying to do the best we can with what we have. We want to fill this gap as much as possible because we recognize the value of these waters, and that has added like 20,000 pounds of capacity to the system.

The other thing we have done is we have looked at the 100,000 pound contract that we have. We have some discretion on where those fish are stocked and what species they are. We recognize

the value of lake trout and brown trout, and brook trout to some degree, at Dale Hollow because they are the only -- that's the only hatchery in the state that can even raise lake trout and brown trout for a variety of husbandry reasons. So we're relying on them and we're going to ask them to continue producing all of those fish.

Then the -- some of the other -- so whatever is left over in that 100,000 you're also moving towards fingerlings for particularly probably the Clinch River and some of the other tailwaters that get fingerling trout.

So in a sense the only change that will happen under the current scenario where the funding is cut for TVA waters, we would be cutting only the 9-inch rainbow trout that's stocked, but we would be cutting it by 45 percent.

So the people that are interested in those recently stocked fish, which are often people that are more novice anglers who are kind of following the hatchery truck and that kind of thing, the people that want to know when the fish are stocked, they are going to notice it because their catch rates are going to probably be cut in half. That is where the impact will occur.

What is this going to mean? We're going to have reduced fishing success. Some anglers are going to be unsatisfied. Going back to the fishing success, I do want to point out that because of water quality improvements in some of the tailwaters that the impact is not going to be widely -- the same across the board.

We're going to have a much bigger impact on the Elk River than we will at the South Holston where for whatever reason the water quality is just right on the South Holston where we have natural reproducing brown trout. So that's a great thing up there. The people that want to see the rainbow trout coming are still going to be a little upset, but that reduced fishing success will vary across the Valley.

Whether or not fishing catch rates change, people will still be upset just by perception. We are familiar with that experience. We had anticipated a reduced number of trips which could reduce license sales for the agency, which is our only funding source. And as a result, we're going to have reduced spending and tax revenue across the Valley.

So what solutions would TWRA like to

see happen?

You know, again, we see this as a federal responsibility. How that comes to be, maybe the working group can figure that out, but that's the starting point we would like to start at. We feel like the sportsmen have already paid plenty at this point, and we want to have something for the future on these rivers.

So that concludes my presentation.

FACILITATOR WILSON TAYLOR: Phil.

MR. PHIL HAZLE: Thank you for your presentation. I have got a couple of questions.

FACILITATOR WILSON TAYLOR: Make sure you use the microphones, please.

MR. PHIL HAZLE: How many trout stamps do y'all sell in Tennessee?

MR. FRANK FISS: We -- you know, we have a comprehensive license now that is a sportsman license where you buy all of your licenses at one time, including the trout stamp, and I don't know how many of those we have. So that hurts me here.

We generally sell in the 65,000 range of the one-time trout stamp, but that doesn't count people that come in and buy non-resident one-, two-, three- or one-, three- or ten-day licenses that would

also include trout.

So it's really hard. As a trout coordinator I used to get that question all the time from our commissioners and I pulled my hair out trying to figure it out. It's a really crude way of figuring out how many people are fishing for trout.

We do have other surveys that say there's about 150,000 resident anglers over 16 in Tennessee that are fishing for trout.

MR. PHIL HAZLE: How much does a trout stamp cost in Tennessee?

MR. FRANK FISS: $12, maybe 12 to 18. I'm sorry. I bought one. I can pull my wallet out and find out, but it's in that ballpark.

MR. PHIL HAZLE: Around $12?

MR. FRANK FISS: Yes, it's around $12.

MR. PHIL HAZLE: How long does the rainbow trout live in the tailwater when you put them in?

MR. FRANK FISS: It depends on the tailwaters. We have our best success -- I will give you the success stories. The Clinch River where we can stock a fingerling rainbow trout, a short fish at high numbers, cheap to raise at the hatchery, they come out by the hundreds of thousands, a lot of them

die, that's okay because they are cheap, they went in small and there's lots of them, but we have learned that those fish will grow and they are a majority of the, quote, adult fish in that river and are from that short fish stocking. So those fish have lived at least a year or two.

We have fish that are quality fish that will by luck or by survival, however you want to call it, that will live two or three years. That's in good habitat like we have at a lot of your TVA waters.

We have other rivers that -- I would say to pick on -- well, even a 9-inch rainbow trout that is stocked in marginally good habitat, say, on the Elk River, we're measuring their survival in days. Most of those fish are out of the system in three months. A few of them hang on. We do see some carryover fish, but it takes a lot of fish in and some luck to get some of those bigger fish in some of our waters.

MR. PHIL HAZLE: If it weren't for the TVA dams, how many streams would sustain the fish?

MR. FRANK FISS: Well, I think all of them would sustain fish. I mean, there would be warm water fisheries for -- I mean, you can go to other

parts of the country where there's fabulous fisheries for small mouth bass where there's guides and all kinds of economic boom, you know, associated with it, but they are naturally reproducing. So I think you could see that on these rivers today if there weren't dams on them.

MR. PHIL HAZLE: Okay. Rainbow trout.

MR. FRANK FISS: Well, if you want rainbow trout, they are a western species. They would not be native to Tennessee. They were stocked in the mountains. They would only be at those elevations above what, like 2,500 over in the mountains.

MR. PHIL HAZLE: I guess what my question is: Would a rainbow trout live in the Tennessee rivers if it weren't for the dams producing the cold water?

MR. FRANK FISS: Not in the places that we're talking about today, no. They would just be in the mountains.

MR. PHIL HAZLE: Okay.

FACILITATOR WILSON TAYLOR: Mitch.

MR. MITCH JONES: Your 65,000 count, can you remind me what that represents again?

MR. FRANK FISS: 65?

MR. MITCH JONES: 65,000. There was a point that you made, that's trout stamps?

MR. FRANK FISS: Yeah. Again, that's -- that is people that bought one of four or five license types that would let them fish for trout. So don't think of that as a holistic count of trout fishermen, that's all I am cautioning you on.

MR. MITCH JONES: Okay.

MR. FRANK FISS: That's a minimum number.

MR. MITCH JONES: That's a minimum number. In essence, the trout stamp that you have is $18?

MR. FRANK FISS: It was 18. Okay. Thank you.

MR. MITCH JONES: At 65,000 stamps, that's a conservative number.

MR. FRANK FISS: That's a low number. It's a low number if you're trying to -- I don't know what our goal here is. To count trout anglers, then it's a low number, yes.

MR. MITCH JONES: That's 1,170,000 in revenue just off that stamp annually. Would that be safe?

MR. FRANK FISS: Yeah.

MR. MITCH JONES: Do you want me to ask the question differently?

MR. FRANK FISS: I don't hear a question.

MR. MITCH JONES: Would it be safe to say that you have 65,000 trout stamps in the State of Tennessee?

MR. FRANK FISS: Yes.

MR. MITCH JONES: At an average cost of $18 a stamp for $1,170,000 on my handy-dandy calculator, is that accurate?

MR. FRANK FISS: I guess so.

MR. MITCH JONES: Thank you.

FACILITATOR WILSON TAYLOR: Will.

MR. WILL NELSON: Could you give a brief overview of your trout season, the length of it? Do you have size limits and quantity limits? I am familiar with Georgia, but Tennessee I am not familiar with.

MR. FRANK FISS: We're lucky that we can allow people to fish year-around for trout in Tennessee. There are no closed seasons, per se. We do have times of years when we stock trout and times when we don't, and a lot of people like to coincide their fishing to when we're stocking.

Obviously, trout fishing kind of picks up in March, it actually peaks in July on some of these tailwaters because people want to get out to those cool areas. Then it winds down again in the fall, but you could still go out and fish just any day you wanted.

And the regulations, we require seven fish creek limit is the most liberal creel we have. We have other areas that have tighter regulations.

In order to manage these fisheries for a very diverse set of fishermen, it's -- we have got people who want to catch just trophy fish. We have got people that just want to fly fish. We have regulations to try to accommodate a lot of that by having slot limits and minimum size limits and such.

MR. WILL NELSON: Thank you. You mentioned earlier that some fish may not last three months, is that due to them being caught or mortality?

MR. FRANK FISS: A lot of that is what we would call natural mortality or not fishing mortality, yeah. They are not well equipped for the system when they come out of the hatchery being in the hatchery 12 to 16 months, and that's why it would be a lot cheaper if we could let a bunch go at one

time. That natural mortality is working every day. So we know that. So we keep them alive in the hatchery and we put them out every week to two to three weeks depending on the location, and that way we don't get hit that much of that natural mortality because they are not out in nature.

CHAIR RUSSELL TOWNSEND: If there are no other questions, I think what we want to do is to step outside on the balcony before it rains and get a picture of the Council, and then I would like us to take a ten-minute break following that. So let's take 20, but the first thing we want to do is get that picture.

(Brief recess.)

CHAIR RUSSELL TOWNSEND: By all means, when you're speaking get that microphone close to you so our court reporter can take down all of your genius. Thank you.

MR. JOHN BIAGI: I would like to thank the Council and TVA for inviting me to speak on this important issue. You have got a great background from the Fish & Wildlife Service on the scope of their program and the impacts that they're facing with the lack of funding from Congress and the President's budget and the need to get the

responsible agencies I think might be a term that they have used to help fund the mitigation trout stocking programs that they have been conducting for years.

Then you heard from Frank and how big a scale it is to the State of Tennessee. Georgia is a much smaller scale for us. There's only three TVA reservoirs in Georgia, and only one of them has this kind of altered flow regime below the dam.

Really, I think it's important to say that the native fish don't exist in the river below these dams when they are that cold. So if there's not something put in there, there's not something there. So it's basically a degraded habitat that doesn't support native aquatic wildlife.

And over the years, as Frank really described well, trout has been selected because it's easily produced. You can grow it to a size that an angler can catch and keep and take home and feed it to their family and generate a recreational activity that would be there with other species if the dam wasn't designed the way it was and operated how it was.

So, again, in this case in Georgia the only project we have relative to this issue is Lake

Blue Ridge, and Lake Blue Ridge Dam was constructed I think in the '30s on the Toccoa River and the tailwater or the water coming out of the dam flows about 15 miles until it hits the Tennessee line where apparently Tennessee doesn't like the word Toccoa and then they call it the Ocoee River. So a little change there for folks out of state.

To TVA's credit, they have had a conscientious resource stewardship approach and in the '90s made improvements at the dam, and those included oxygen injection in the forebay which resulted in improved oxygen downstream of the project and put in a minimum flow generator that keeps continuous flow out of the dam.

Before they turn the generators on water comes up, and then when they stop producing power they'd turn it off and there would be no water coming out of the dam except for leakage. That's really hard on aquatic resources. So in '95 they put in that minimum flow generator. So there's always water coming out of the dam, and that's had huge effects on the fishery below.

In this case it's really allowed the trout fishery to develop into a renowned trophy trout fishery that's generated interest from across the

southeast really. We maintain this fishery just the same way Frank described. We stock regularly or the Fish & Wildlife Service I should say stocks regularly in this tailwater a few fish at a time, you know, a 1,000, 2,000 every two weeks.

Some of the same issues that we discussed before occur or are in play here. The trout that are stocked in this tailwater last in the order of months, you know, three months, four months before natural things happen, which typically is something furry like an otter or something with feathers like a great blue heron but something eats these fish and they are not in the system long-term. So to maintain the recreational fishery we have to stock on a regular basis to keep those fish going.

Obviously from the pictures I showed you, some of these fish wise up, get acclimated, find someplace to live, and find something to eat and grow to much larger sizes.

We have got a five-year stocking history up on the screen here. Just to give you an idea of the scale we're talking about, you know, this coming season we're requested from the Fish & Wildlife Service that 26,000 catchable trout be stocked.

We also request fingerling stockings go in this river also. I don't have those numbers, but when I say fingerling that's about a 3- to 4-inch trout. When I say catchable it's the same as Tennessee's, it's 9-inch trout. Most anglers feel satisfied with catching a fish that large.

You also note, and I have got some asterisks up there, in 2010 and 2011 the numbers are higher. Well, leading up to that the Tennessee Valley Authority was doing dam rehabilitation work. So they had to draw the reservoir way down and do much needed repair work, which was certainly understandable, and in doing so during the summertime warm water was released out of the dam which, you know, obviously is what's supposed to be there in this river system, but because it had been changed to a cold water fishery and it was supporting the trout fishery it really knocked back that trout population.

One thing I have learned in my career as a fishery biologist and a fish chief is that when things are bad and when fishing is bad you hear from anglers, and the anglers went crazy complaining about the loss of that trout fishery.

So we worked with the Fish & Wildlife Service to scrounge up any and all trout we could to

try to supplementary stock that tailwater to build that trout population back up. We got a bump in it in the fall. We stocked during the off season when we normally don't stock to try to recover it.

Anglers got quiet for a little bit, but the numbers still didn't fully recover. So the next year we stocked extra fish again, and now they have been quiet again. So we feel pretty good that we have helped recover that population back to its former status prior to the rehabilitation work.

Now, I believe the dam is coming up or the lake is coming up and we should not have to worry about any more of those warm water events causing the problems.

Just a little background on Georgia's trout program, we operate three trout hatcheries in the state. Two of these facilities raised -- primarily raise our 9-inch trout. The third facility primarily raises the fingerlings that we utilize in addition to the fingerlings we receive from the national fish hatchery system.

The important thing to note is that the cost for raising or operating a hatchery is pretty -- much of it is fixed cost. So if you want to raise one trout at Buford Trout Hatchery, it's

going to cost you 3 to $400,000. If you want to raise 450,000 trout, it's not going to cost much more than that.

So by definition we are already operating our facilities at maximum efficiency and maximum capacity to lower our overall operating costs and cost per fish.

Chattahoochee National Fish Hatchery in Georgia, we -- TVA is only one of the tailwaters we deal with to mitigate. The other two tailwaters is Lake Lanier's tailwater in Atlanta, which is a Corps of Engineers' project, and Lake Hartwell, which is also a Corps of Engineers' project.

As Linda already said, the Corps of Engineers has been paying for the production of those fish. So those fish -- those tailwater fisheries continue to be stocked.

I don't -- you have been hearing economic. I don't have any direct economics on the Toccoa River Tailwater Fishery, but we did recently complete a research project on the trout fishery and part of that included information on the anglers that fish the river. So I thought I would mention some of that.

This is really -- because it's become

a renowned trophy fishery is more of an out-of-towner-type fishery, bringing in people from other parts of the area. We used a 30-mile radius, which I live in Atlanta and that's a drive to the grocery store. In the mountains that's a one-hour drive. So it's a long way to get 30 miles in the mountains. So nearly 60 percent of the anglers are coming from outside a 30-mile range and 25 percent of those anglers are from Metro Atlanta coming up to the mountains into the TVA area.

And interestingly, I thought, was while Tennessee and North Carolina are big in out-of-state anglers on the river, Florida is the second most common non-resident fishing for Toccoa River. So folks are driving a long way to come and fish this resource.

Then finally I just wanted to talk about, you know, the basis for federal responsibility. As Linda said, the Fish & Wildlife Service has assumed that federal responsibility and has done such since 1976 on this river. Although, they did start stocking in the early '60s, they didn't continuously stock it until 1976 and have done so ever since.

They formalized that federal

responsibility in agreements with the State of Georgia and have been a great partnership to maintain this fishery. The states are now kind of stuck in a catch-22, they are being told by their partner that they can't afford to pay for it anymore and they wanted the power companies that operate the facilities that change the water quality to step up.

It's my understanding that all of the other power companies have agreed to pay the cost for these stockings in the tailwaters across Georgia and across the southeast and the U.S., and I am very gratified that TVA has agreed to pay at least for three years while we try to work out an applicable solution to this long-term funding issue.

With that, I will be happy to take any questions.

FACILITATOR WILSON TAYLOR: Phil.

MR. PHIL HAZLE: How much do y'all's trout stamp cost?

MR. JOHN BIAGI: $5.

MR. PHIL HAZLE: How many do you sell?

MR. JOHN BIAGI: Just straight trout stamps, about 90,000.

MR. PHIL HAZLE: Is your agency funded by the sportsmen as Kentucky and Tennessee are?

MR. JOHN BIAGI: We sell fishing license that help cover the costs of our operations, in addition to receiving federal funds like Tennessee and Kentucky and the other states.

I think the important thing to note is that at least in this issue, you know, the user, the Tennessee Valley Authority, is taking or utilizing a public trust resource, which is the water in the State of Georgia, and altering it in a way that does not necessarily continue to support aquatic life.

And while you may not fall under the Clean Water Act responsibilities TVA, as I have already mentioned, has actually led the country in dealing with these water quality issues and Clean Water Act-type things.

The sportsmen and women that fund our agency pay us to make fishing available for them in future generations but to -- I know you're not asking the question should they subsidize the ratepayers by improving the fishery resources below a dam that's degrading that resource, but it sounds like that's where you may be going, at least as one solution. While, yes, they do pay fees and pay our agency to operate and manage those fishery resources, I'm not sure we believe that they are responsible in this

case for that resource.

MR. PHIL HAZLE: Does your state legislature appropriate money for your agency?

MR. JOHN BIAGI: Yes.

MR. PHIL HAZLE: And how many sites do you have that you supply fish for TVA projects?

MR. JOHN BIAGI: One. Oh, that our state agency?

MR. PHIL HAZLE: Yes.

MR. JOHN BIAGI: Zero.

MR. PHIL HAZLE: Thank you.

FACILITATOR WILSON TAYLOR: Mitch.

MR. MITCH JONES: The $5 per tag that you receive, does it go -- where does that go?

MR. JOHN BIAGI: Into the fishery section budget to produce trout.

MR. MITCH JONES: So it's appropriated specifically?

MR. JOHN BIAGI: No. It just comes to our budget.

MR. MITCH JONES: Help me follow the math for just a second. I come and buy a tag for $5, $18 in the State of Tennessee.

MR. JOHN BIAGI: Which is probably the highest in the country?

MR. MITCH JONES: The 18?

MR. JOHN BIAGI: Uh-huh.

MR. MITCH JONES: So that $5 goes into your operating fund and you're asking the utility to foot the cost to stock it?

MR. JOHN BIAGI: The $5 goes to run our three trout hatcheries that raise 900,000 trout that are stocked across the State of Georgia and about 4,000 miles of trout streams.

The Fish & Wildlife Service has been stocking these mitigation tailwaters for the State of Georgia. So Georgia has not invested money in those tailwater stockings.

MR. MITCH JONES: Okay.

FACILITATOR WILSON TAYLOR: Will.

MR. WILL NELSON: And I guess really this question really could go to both state's representatives. If we're talking stocking the tailwaters, who is stocking the water above the lake? I know on the Toccoa River that river is stocked, who's paying for that stocking?

MR. JOHN BIAGI: We do.

FACILITATOR WILSON TAYLOR: So Georgia is paying for the stocking above the lake, TVA is -- you're asking TVA to pay for it below the lake?

MR. JOHN BIAGI: The Fish & Wildlife Service is asking TVA.

FACILITATOR WILSON TAYLOR: Fish & Wildlife Service. Okay. Thank you.

Jason.

MR. JASON YARBROUGH: Good morning. I am Jason Yarbrough. I manage TVA's aquatic monitoring program. I would just like to say thank you for letting me come and share a little time with you and give you a little information. I appreciate this opportunity.

TVA has a pretty big challenge in balancing the demands of all of our residents and happenings of the Tennessee Valley. When the TVA Act was initially enacted, the main focus areas were on flood control, navigation, and then low cost power production.

As you may have noticed in the late winter, early spring rains that we had, flood control is still pretty much one of our main focuses. Keeping the channels open for cargo coming up and down the river to supply our industries is still very important. We're still trying to achieve low cost power production, but with the power production you have got an increase in inhabitants over the Valley

in the years. So having a clean and readily available water supply for those inhabitants and the industries had also become one of our main focus areas.

Well, when you bring in more people living on our shorelines they want to have some recreational activities associated with our reservoirs and streams. So that's become yet another one of our focus areas.

With all of the wonderful resources that we have, being a good steward of those in recent years, recent for me 10, 20 years, has really popped up on the radar.

So to give you a little bit of overview of the vast size of the Tennessee River Valley, the light tan or ecru color is the TVA watershed and then the darker tan is our power service area.

We have dams all over this seven-state area. Most of the dams are multi-purpose dams. They are used for water supply. They are used for electric power generation, for flood control, for recreational releases.

Behind those dams you have got our reservoirs. We have got approximately 650,000 acres

of reservoirs behind those dams. They are warm water, cold water, a mixture of habitats.

Also in the Valley we have got -- this number encompasses all of the -- even the tiny streams, 42,000 miles of rivers and streams in this area. So there's a lot of water that we're looking at here.

I appreciate the kind words from Frank earlier about the lake improvement plan and the reservoir release improvements that we started. Back in '91 TVA implemented this plan because we had a lot of areas below our tailwaters that were just dry riverbeds, low to no oxygen, because when you do put these large dams in place you stack up a lot of water behind them and the depths of that water is fairly cold because you don't get much sunlight penetration and dissolved oxygen is at or near zero. So the water coming out of the dams is not really good habitat for our native warm water fish.

So what we did in '91 is we implemented minimum flows, and to do that we used weir systems below the dams to back up water that when we're not generating will allow a slow release of water. We used small turbines as was shown to you at our Blue Ridge Dam.

We pulse water periodically. As was mentioned, we have an app out that you can see when we're going to be pulsing water to keep the riverbed wet. At Tellico we have a siphon that comes over the top of the dam and gives you mere 8 cubic feet per second of water coming through, but that's enough to keep the riverbed wet which is good for them and for our inhabitants.

We have also installed aeration systems throughout the Valley. And those systems are noted here on the picture at the bottom. They are as complex as the aeration weirs. That can be anything from the stair-step concrete emplacements to the finger weirs that I will show you here in just a moment. They do a really good job of aerating.

Then you have auto-venting turbines. We can put a turbine in the dam that will actually produce and supply oxygen into the water flowing through the dam while we're producing electricity also.

Then you have surface water pumps. These are like really big ceiling fans. I think they are like 19 feet in diameter. They inject water. While they are pushing water down, that warm water gets circulated that's oxygenated and you get the

oxygen being pushed down into the water that's being pulled through the dam and sent to the tailwaters below.

Then on the bottom right you have line diffusers. If any of you are gardeners you have got the little black soaker hoses that you turn it on and it's just a nice, little soak coming out. Well, we will take and put liquid oxygen that we have pressurized and vaporized and push it through those little diffuser lines. And when I say little, they are like 2 to 3 inches in diameter, something like that, and we will push liquid oxygen into the reservoir.

We will also use something -- with liquid oxygen we will use something as low tech as compressors or air blowers to put oxygen in through those diffuser lines also.

Since '91 TVA has spent $60 million installing these capital projects. So that's a pretty big investment to make these areas inhabitable. So as you can see, with these two programs we have been able to keep an extra 180 miles of riverbed wet and oxygenate another 300 miles of river, that's a pretty nice little project.

The aeration systems that we have

installed at our 16 projects, and you can see those listed up here, but some projects get more than one system installed. We will start off with the lowest cost that we think -- lowest cost type of aeration system that we can install and then evaluate that and then if we need to we will bump it up to the next level. We spend annually 3 to $4 million on these systems.

The bottom left is one of the liquid oxygen storage tanks and vaporizer. The next slide over is one of the surface water pumps. I think this is at Cherokee Dam. The next one is one of our weirs. Then the right slide is one of the turbines. And I am not an engineer by trade and so it's really, really difficult for me to explain how that works. So I am not going to. If you want to know, I will find an engineer that can explain that to you.

Now, South Holston, and I am not playing favorites. I could talk about any of the 16 projects that we have worked at. South Holston just had really pretty pictures. So I am showing -- this is the weir, that went from a dry -- mostly dry riverbed to becoming a world class trout fishery. People are coming in from all over the place to fish this. It's really a wonderful story. Just to

mention a few others, Blue Ridge, another wonderful trout fishery.

We also do these projects for more than just good fishing. Excuse me. We have changed our flows at our Bear Creek projects to help out endangered mussels that are living below those tailwaters.

At Tims Ford we have warmed the water up just a little bit, which actually improved the trout fishery there and also improved the warm water fishery below that area. So these projects are more than just for good fishing. Although, we like the good fishing.

This Council, if you have been on it, then you will know a little bit about our Natural Resources Plan, which has been enacted to help us become better stewards and to identify problem areas and focus our monies on those areas.

The first one is the shoreline stabilization. To date we have protected over 100 miles of critically eroding area at 500 sites, and those sites are anything from just bends in the river to cultural archeological sites that need to be protected, and that's near and dear to my heart. So I am really proud of that one.

We're focusing on nutrient source watershed identification. The retention rate, which is how long the water stays behind on one of our dams before it passes to the next reservoir, our retention rates are pretty quick compared to natural lakes. So we don't have quite the problem that naturally occurring lakes have with phosphorus and nitrogen loading into reservoirs.

It's still an issue that we need to look at. So we're identifying the top three reservoirs that have issues with nutrient loading. We're going to come up with a plan to reduce that loading and then implement it.

The Duck River will be my point for the third and fourth bullets aquatic ecology management. The river was featured in National Geographic a couple of years ago in the story about one square foot. They came in with a -- the green box is one square foot and then they sat there and saw what passed through it within a day.

The Tennessee River Valley is one of the most diverse systems in North America. Well, it is the most diverse system. It is a source of pride for us, and the Duck River is absolutely gorgeous. If you ever have the opportunity to go out and just

wade that area and look at it, it's very serene and very calming and it's a source of pride for those of us in aquatic monitoring.

Stream and tailwater monitoring, that's what we do. I will talk about it in a little more depth a little bit later.

So to this point I have talked about the capital projects, the big things that we have done. To make a sports analogy, what we have done is we have built a stadium. We have supplied the stadium with the best turf, the best locker rooms, the best seats for the fans that we possibly can to this point. What I want to move into now is how we monitor what we have done to make sure the conditions stay great for those players that we're putting in the water.

So to do that we use what we call the vital signs monitoring program. Much like when you go to the doctor, the first thing they do, they check your blood pressure, your height, your weight, they check your temperature to see if those basic metrics are in alignment with what they would expect. If they see something that's wrong, they will know exactly where to start looking to see what's wrong with it.

So we use a basic set of metrics much like doctors do with vital signs on you to see where we have problems with our water bodies. The objective of this, as you can read up there, is to provide current and long-term data to support TVA's power production operations and its stewardship of the Tennessee Valley.

Case in point, we can be out on a reservoir monitoring DO. If we see that the dissolved oxygen in that area is low, we can call one of the dams operators and have them send a slug of highly oxygenated water toward us to increase the dissolved oxygen in the area that we're working, and that's happened on more than one occasion.

So the vital signs monitoring program has four core activities or vital signs that we're looking at. That's the reservoir ecological health, that's where we're focusing on the reservoirs themselves. We check -- I will come back to that in a little more detail in just a second.

We do sports fish assessments. Now, I know the focus today has been on trout and that's a sports fish. Well, the sports fish assessments that we're doing are on black bass and crappie. So we don't really go looking for trout, I'm sorry to say.

With a little more money we would be happy to try.

Then we also look at contaminants in fish flesh. We want to protect our inhabitants of the Valley who enjoy eating the fish that they catch out of the river. So will go through, and we do this jointly with the other state agencies, to collect fish tissue and analyze it for any contaminants that may be harmful to the inhabitants of the Valley.

Then lastly the stream and tailwater ecological health, that's where we go out and we look at the streams and tailwaters. We will discuss that in detail in just a second.

What I -- the takeaway from this though is that we look at warm water and cold water systems. We don't just focus on trout. We don't just focus on large mouth bass. We don't just focus on one specific species. We look at the entire Valley all together because we're responsible for the whole thing.

Now, this slide right here gives you the vital signs and the reservoir ecological health sites that we do. We -- now, TVA has more than 31 reservoirs, but we monitor the health of 31 reservoirs at 69 sites. I know that's a lot of numbers to throw at you, but just know that we cover

the entire Valley when we're looking at these areas.

To do the reservoir monitoring we have what we call -- oops, wrong way -- the reservoir ecological health, which is comprised of water quality, fish community assessments, and then the community assessments.

Now, the water quality, which is the slide -- next to the last slides on top and bottom, it's really hard to get a good picture of that happening because it's usually like watching paint dry. You dip it in a little bucket of water and you pour it into another bucket and you send it off to a lab for analysis.

The fish community assessment is a lot more interesting to me personally because that's what I do. It's shocking fish, netting fish. We look for health, length, weight. There's 12 metrics that we look at, and we're not going to go into because that would bore you to tears but to me it's exciting.

And then the last slides over here, that's our spring sport fish assessment, that's fun. We're in the process of doing that right now. If you enjoy looking at a lot of large mouth bass and small mouth bass, check out our web site and make an appointment to come out and ride with us. We welcome

the public to come. It's really enjoyable.

And just because we're talking about trout today, I felt it necessary to put a couple of pictures of trout on the top. Although, those are kind of rare for us to see when we're doing the reservoir stuff.

The stream monitoring, we monitor about 500 stream sites on a five-year rotational basis. So we cover -- we try to cover a representative sample across the entire Valley every year. For the discussion today, the trout, we focus on 17 tailwaters, and those get done on a two-year rotation basis.

So the stream monitoring it's done, and you will forgive me because I am fixing to have to go scientific on you and I'm sorry to do that, but we use an index of biotic integrity.

Now, can anybody tell me what that means?

I couldn't either until I studied it really hard. It's 12 metrics that we look at that tells us how healthy the fisheries are. I know scientists, we love metrics, and I apologize for that. So the fish -- how healthy that fish community is in these tailwaters and in these streams, that's

our long-term indicator of how healthy that water body is.

Now, we also look at the benthic community. That's the bugs, the caddisfly, larvae, the mayflies, dragonflies, those guys. Those are our short-term indicators of how healthy that water body is. If they are not present there's not a food source for the fish and so the fish are not going to be there in the long-term.

So we look at both of those communities, and then we compare that to what -- if we had a pristine-never-touched-by-man stream, that would be the ideal thing to compare these streams to. Unfortunately, in the Tennessee Valley we don't have that anymore. So we compare it to the best that we can possibly find. Then we report all of this data out to our state partners and anyone -- universities, anyone that's interested in it.

As you can see, we use a little bit of electric fishing in some of the bigger waters. We seine the fish in big and medium waters. In the lower right corner, if it's an area where there's threatened and endangered species electricity stays at home and we a put on the snorkeling gear, which is a lot of fun.

Then in the lower right corner, that's one of our benthic analysis experts. It could be a state project that he's working on since he's propped up on his shovel. I apologize, I just had to throw it in there.

Again, since we're talking about trout today, I felt it necessary to show you some small trout that we collect.

With that, I will entertain any questions that I may be able to answer. And if I can't answer it, then I will try by best to get someone that will. Oh, yeah, and that is me by the way.

FACILITATOR WILSON TAYLOR: Russell.

CHAIR RUSSELL TOWNSEND: Yeah, Jason, I heard you mention it being necessary to warm some of the waters.

MR. JASON YARBROUGH: Yes.

CHAIR RUSSELL TOWNSEND: Is there any good data on the use of line diffusers and liquid oxygen and the additional cooling to the waters? Is it minimal? Has that metric been taken?

MR. JASON YARBROUGH: To be honest with you, Russell, that is not my area of expertise. I am sure that there's data out there that support it

and I will be happy to get that to you if you will give me contact information.

CHAIR RUSSELL TOWNSEND: Sure.

MR. JASON YARBROUGH: I will send you more than you want to read.

CHAIR RUSSELL TOWNSEND: Okay. Thank you, sir.

MR. JASON YARBROUGH: Oh, man, I have got it easy. If there's no questions, I thank you for your time and I am going to get out of the way, Wilson.

FACILITATOR WILSON TAYLOR: Thank you, Jason. So, Joe, I will turn it over to you if you want a final Q&A and for you to sort of close us out in this session.

DFO JOE HOAGLAND: So I think we have given you an overview of the different things that each agency does and how we do them.

Are there any other -- now that you have heard kind of all the pieces, are there any other questions, information, data, anything else that you-all feel you need to help understand the situation a little better?

I believe everybody is staying through today and tomorrow -- oh, just today. So we need to

get what we can out of the folks today.

CHAIR RUSSELL TOWNSEND: One thing, Joe, I just would just like to say is that I think for this Council to really be able to speak to this issue we need to understand the long-term impacts of not stocking these rivers.

We need to try to understand better not only the economic downside to stocking rainbow trout in these tailwaters, but we need to understand the biological impacts as well. Three years doesn't give us much time to gather that data, and I think a lot of us need to be thinking about those types of issues between now and tomorrow when we answer these questions.

You know, the short answer that has been -- that I have taken away from this morning is that if these trout were not stocked there wouldn't be any aquatic wildlife below the dams. I find that kind of difficult to believe because I understand biology enough to understand that if there's a vacant knitch something moves into it. It might not be something desirable.

If you have seen the movie Chernobyl Diaries, you know, when the people moved out the cannibal zombies moved in. So something is always

going to go back in to an open -- to an open ecological knitch, and I think we need to understand what those changes would be.

I think we need to understand TVA's legal responsibilities to the wildlife resources, not just what they desire to do with regard to good stewardship but what they are required to do with regard to good stewardship.

So we can -- I think it's going to take those kinds of in-depth discussions to allow this committee to really provide input on who the ultimate funder of this -- these projects should be.

DFO JOE HOAGLAND: Okay. Good point.

FACILITATOR WILSON TAYLOR: Thanks, Russell.

DFO JOE HOAGLAND: So I am going to look to our panelists for a moment on the first question. Is that something we can answer now or is that something that --

MR. JOHN BIAGI: I can take a short stab.

FACILITATOR WILSON TAYLOR: Grab a mic.

MR. JOHN BIAGI: That's a great question, Russell. I think the best way to explain

that, at least in the case of the Blue Ridge tailwater, when I say there's nothing there, what I mean is there is no valuable recreational fishery.

There will still be some minnows, some suckers. There will be fish there, but the small mouth bass fishery and the large mouth bass fishery that would be there if the dam was not there would not be there, which is what likely is going to support the recreational fishery.

CHAIR RUSSELL TOWNSEND: One thing I would like to comment on, and thank you very much, I was talking with one of the Fish & Wildlife Service folks, US Fish & Wildlife Service folks at the break and I was talking to Joe last night at dinner about the perspective that I bring to this issue coming from Cherokee, North Carolina and working for an Indian tribe.

There is a -- some of you may know that we are very dependent on our trout fishing industry in Cherokee and we stock the Oconaluftee. It's probably one of the most stocked rivers in the southeast, and we depend on that for a lot of economic value.

Our elders though are at odds with our economic development folks because our tribal elders

want to see the silverside and the hogsuckers and the mumbleheads come back because that's what they used to rely on and that's what they used to eat and that's what tastes good to them and that's what they want.

So unlike navigable and non-navigable houseboats where I don't really have a lot of capability to provide input on those resources, even as an archeologist I understand that there are a lot of facets to this discussion and this argument or not this argument, but this situation that we find ourselves in.

And so I want to see a lot of discussion and a lot of data and a lot of thought going towards those questions because I think TVA has a stewardship responsibility, but I know from my elders the stewardship responsibility is not always what the economic sports fishermen want to look at. So I want to look at this very carefully.

FACILITATOR WILSON TAYLOR: Comments? Jack.

MR. JACK SIMMONS: I would like to hear some comments from all of the presenters if they have expertise in this area but specifically relating to some things that Russell brought up about the

environmental aspects of this, not necessarily from the sport fishing perspective but from -- if you look at the things that you see that TVA has done here over the years in terms of improving the habitat, Jason, I know you mentioned the vital sign monitoring and so on, has there been an improvement as a result of those programs in the aquatic insects and snails and all of the food chain, if you will, that's necessary to support whatever type fishery it is?

I'm just curious if we have seen the -- has TVA been able to put back or restore or enhance the living conditions, if you will, for the game fisheries, whether they are there through stocking or through natural or whether, as Russell said, other species will come in if you don't stock the trout. I am just curious about the -- are we seeing a baseline improvement on the ecology?

MR. FRANK FISS: From what I understand from talking to -- TVA actually does more monitoring of the invertebrates and such, the things that would be food base for whatever is living there, and they have seen a good response. I am sure Jason has reams of data on that. He doesn't want to brag right now, but there has been a positive response and that's why we have had a positive response of

survival of the fish that we're stocking.

DFO JOE HOAGLAND: Jason, do you want to add anything?

MR. JASON YARBROUGH: I would prefer to not be self-serving at this point, but, yeah, it looks wonderful after the improvements that we have made there. We do have reams of data we could have put up there, but you would all be in tears at this point.

DFO JOE HOAGLAND: But that information -- well, I shouldn't say all of it, some of that information is available on our website, right, as part of our --

MR. JASON YARBROUGH: Yes, sir. On our external web we post a lot of the reservoir data. We're working on getting our stream data out there for the public to see also.

FACILITATOR WILSON TAYLOR: Mitch.

MR. MITCH JONES: Mr. Fiss, I want to go back to you again. I have got to follow the money. You're collecting $18 for approximately 65,000 trout stamps. That million dollars goes where?

MR. FRANK FISS: That million dollars goes to our agency budget and in its grandest shape

is not allocated in any way, and then we do our budget process to allocate money throughout our entire agency.

It would be -- one of the things that we do with the money when we get it is -- and if you want to say that some of that is clearly going to trout eventually, but we are stocking, like I said, the State of Georgia, not just these tailwaters.

We have somewhere between 120 and 140 locations that we're stocking around the state as well and that -- you know, there is agency overhead and everything else, enforcement, research management that's going on.

Projects like Jason talked about, we do that similar type of work across the state on wild trout streams and these areas. Trout streams are kind of free -- the wild trout streams are kind of free in a sense that we don't have to stock, but we do put a lot of our research dollars and effort into maintaining native stocks of trout as well.

MR. MITCH JONES: Do you see the quandary that I think a few of us are in; and that is, you're collecting the recreational dollar, the direct recreational dollar, the U.S. in each state, and then coming back to the utility and asking them

to fund the effort which -- let me finish, which rolls downhill on occasion to the ratepayers, to those of us in the room. I need a little better understanding why that is.

MR. FRANK FISS: Yeah. The way the sportsmen would look at it as our ratepayer, if you will, is that these federal projects are generating power and providing flood control to the greater society at a cost of a lost river that has to be mitigated.

So why should they subsidize the federal power company for doing that service? Why should the fishermen subsidize the federal power company?

It doesn't matter how much money we're taking in, it's not our price to pay, that's our -- that would be our perspective.

FACILITATOR WILSON TAYLOR: Brad.

MR. BRAD KREPS: Just going back to the last question. I was just curious. I mean, it sounds like there have been some real improvements in terms of how the dams are managed and the quality of the downstream fisheries and the survivability of some of the stocked species.

I guess in my mind I'm thinking if you

can increase that survivability, then your cost or need to stock intensively goes down, which would reduce this on the cost side of this challenge.

So I am just kind of curious, have we pushed it as far as we can in terms of the successes and improvements to the dam management or other strategies that would increase the quality of the survivability of the fish stocks?

If we haven't, what more could we do on that end because that -- you know, those improvements would reduce the number of fish we need to stock, and therefore, reduce the dollar number we're trying to get to. So I'm just curious if y'all can speak to that a little bit.

Are there more things we can do in terms of dam management and otherwise that would increase the health of the downstream fishing?

FACILITATOR WILSON TAYLOR: Go ahead.

MR. FRANK FISS: I think that the work that TVA has done on habitat and water quality have brought them into compliance with state rules and that has been great and that allows a lot of benefit.

I don't -- and those standards are set based on minimum -- well, I don't know how they set the standards, but those standards that they have set

will provide adequate habitat. If you improve the oxygen even more or provided more flow, it's not necessarily going to make survival better.

We think that those -- hitting those targets of six part per million in oxygen and having the optimal flows for these trout that have been probably studied by your engineers to see what will fill the channel, that work has been done.

On the trout production side, you know, we have invested in figuring out whether or not we should be stocking small fish or big fish or which species and we adjust accordingly. We could be doing a lot more of that research, we just don't have the funding for it. We have identified that as a need. As we go along every year things change a little bit and you wonder if you should be doing things a little differently.

FACILITATOR WILSON TAYLOR: We will go to Joe.

DFO JOE HOAGLAND: So one thing to add to that too is as we look at the river and -- you know, I think Jason showed the chart, we're trying to balance, right, all of the different activities that are going on between, you know, everything from flood control to recreation to the power production. So a

lot of work has gone into how much can we release? How much can we oxygenate and still try to balance all of those parameters?

FACILITATOR WILSON TAYLOR: Mitch.

MR. MITCH JONES: I wanted to wait just a minute, Mr. Fiss, before I got back to this. If you didn't have a dam you wouldn't have a trout.

MR. FRANK FISS: And that might not be bad thing because we would have a natural running river that would provide recreational benefits from fishing. There are warm water rivers in the country somewhere I'm sure that have economic development right up to the banks because people enjoy fishing and boating on those rivers.

So, you know, at some point we have to say, well, how much -- how good do we -- we're in a weird position here as an agency. It doesn't matter what the habitat is, our charge is to make it as good as it possibly can be. So you're -- you know, there could be some negotiating there on how good is good enough, but that is something that we have to involve our constituents in in a broader questioning because a lot of the things we do we don't have -- we don't have to stock brook trout. We just know that fishermen kind of like it and, you know, it's a good

thing. We don't have to stock brown trout, but we do feel an obligation to do the best we can with the resources that we are provided to manage.

MR. MITCH JONES: Fair enough.

FACILITATOR WILSON TAYLOR: Jack.

MR. JACK SIMMONS: You know, as we're living in the Valley and we enjoy all of the what I would say premiere and tremendous natural resources here. You mentioned the diversity earlier. We have got one of the most diverse biological things, especially in our lakes and reservoirs and rivers, but we kind of get used to that.

You know, you hear about things out in the Pacific northwest and what they are doing with their salmon and so on, but I am just curious, John, with Georgia, I know Georgia Power has got 15 or 20 dams, something like that, have they done any kind of mitigation things like TVA has related to minimal flows and DO enhancement?

What's your relationship with them and how do they participate in this type of thing so we can sort of benchmark what we do versus what others do?

MR. JOHN BIAGI: Sure. It's a much different process dealing with a power company that

falls under the Federal Energy Regulatory Commission.

So you have to go through a process of looking at the project, how it's operated, how it impacts recreation, cultural, natural resources, and you go through about a -- I guess Terry would probably be one of the better ones to talk about this since he came from a company that used to work with some of these projects, but you go through a negotiation process and a research process to kind of highlight what the problems are.

They also fall under the Clean Water Act that the Federal Power Administration or the federal agencies don't fall under. So they have to meet state water quality standards. They do enhancements and mitigation to meet those up to and including -- you know, on one project they pay us to produce walleye to stock in their reservoir every year.

FACILITATOR WILSON TAYLOR: Tom.

MR. TOM LITTLEPAGE: I guess I'm struck by -- this is a very interesting discussion, and to me it's one of the really appropriate uses of the Council with a broad background of the members that are here.

This issue is one where it seems to me

TVA has provided a number of benefits that are relatively easy to describe and quantify to the Valley, and I think the challenge of this issue is to look at -- to the degree that there is a stocking of non-native and non self-sustaining fisheries to support an economic development benefit, among other things, and what is the obligation of the organization relative to either state or some local or private partnerships for that activity, and I don't know that I have an answer to that yet.

It really is challenging to think -- you know, the slide I think that Frank put up and said, well, we just think it's a federal responsibility because we think it is, and I would agree with that to the extent that the dams represent an impact to the natural fisheries and an attempt to try and restore what would have been there had the projects not been built, I certainly think there's an obligation to do that.

To look at going beyond that to try to create a sport fishing industry that otherwise wouldn't exist to me represents a borderline challenge and whether that's an appropriate activity or use of TVA dollars to do that.

And I am kind of like Jack here, I'm

very interested to see the obligations that have been met by other agencies such as the Corps, you know, to look at to what degree they have stepped into this and provided -- is there a federal benchmark to say what have agencies done to step in and provide this economic development activity to, if you will, a relatively select group of beneficiaries?

MS. LINDA KELSEY: Yeah. The other agencies that have been reimbursing the Fish & Wildlife Service that I mentioned earlier, the Corps, the Bureau of Rec, Bonneville Power, they are -- they recognize both. They agree that they are responsible for paying for the mitigation with the fish, mitigating of the impact with the fish, and they are also responsible for doing the other similar stewardship responsibilities within those reservoirs and systems, such as adhering to the Clean Water Act and water quality standards that follows, as well as the Endangered Species Act. So they look at it as a responsibility to do both of those things.

FACILITATOR WILSON TAYLOR: Other questions or comments for our panelists while we still have them available?

So, Joe, do you want to go ahead and give us the wrap-up of this?

DFO JOE HOAGLAND: I think there's a couple of things I am hearing here which I think is really good. I think we do need to get you, and I think we can do that, a clearer picture of our obligations that TVA has for all of our impoundments.

When we look at the activities that Jason described and the mitigation and improvement of the habitat, that helps us meet all of the state requirements that we have for each of our impoundments. The stocking of the trout is not considered part of our requirements under those mitigation activities and we -- we will get you the details on how that falls out.

The other thing that I heard, which I think is also good, is if we set the economics aside for a minute, what are the environmental impacts one way or the other on how this works, and I think we can provide some more information on that.

Some of that I think we can probably put together between now and tomorrow before we talk again. We may have to provide some more information after that, but we can see what we can do between now and then.

I appreciate this conversation. I think your comments at the end are right. I have

been struggling with this now for several months trying to figure out how do we -- how should we and how can we deal with this in a long-term sustainable nature?

I think that's really the key to me in all of this is it's not about this year and it's not about the three years that we have got it going, it's about that longer-term picture. Because even if we say, well, it is a federal government responsibility, the fact is that the federal government keeps putting pressure on all of us, whether it's the Fish & Wildlife, whether it's the Corps or the Bureau, all of those entities that get taxpayers dollars are all under pressure.

We, of course, don't get that, but we have the similar issues with the ratepayer. So how do we -- how do we deal with that over the long run I think is the part we have to struggle with.

Mitch.

MR. MITCH JONES: Just for a lighter moment, Tom Littlepage came up with a perfect solution.

DFO JOE HOAGLAND: Joe.

MR. MITCH JONES: TVA is going to create an app. We're going to charge what, $200 for

the app.

DFO JOE HOAGLAND: $200 for the app.

MR. MITCH JONES: 200 for the app. The app is going to tell you when the fishery truck is moving and so you're going to follow the fishery truck now to the creek instead of -- I just wanted to make sure we have a little levity in this.

DFO JOE HOAGLAND: No. No. That's great. We will actually put that on the list.

MR. MITCH JONES: Tom came up with this.

DFO JOE HOAGLAND: Okay. With that, if you do have additional questions though our guests are going to be here certainly through lunch and I think on whatever tour we're going to go on. It's probably the rain tour. So please continue to ask them questions. We will work on some of the answers to some of the other questions you have asked.

I think, Wilson, I will turn it back to you.

FACILITATOR WILSON TAYLOR: Thank you, Joe. Russell had a request for the Council members. So Russell.

CHAIR RUSSELL TOWNSEND: Yeah. I just thought that it might be good for the new Council

members to hear who each of us are, what our constituents are here on the Council, who we're representing. They may have already seen that in the packet and read that, but I just think it would be a good idea to introduce ourselves.

So I will start out and we will go down the line. I am Russell Townsend. I am with the Eastern Band of Cherokee Indians. I am the Tribal Historic Preservation Officer for the Eastern Band. I deal with public history and archeological sites, protection, things like that. I am a member of the Cherokee Nation of Oklahoma where I come from originally.

And before I pass the mic, I want to thank all of our speakers this morning for coming and providing us this information. It was very helpful. Thank you.

DFO JOE HOAGLAND: I am Joe Hoagland. I work for TVA. I have been with TVA for a little over 20 years and worked many years in our environmental and stewardship side and our research and development and some years in operations. I currently have responsibilities for all of our policies with TVA, which includes these kinds of working groups and how we set policy and governance

for the agency.

MR. MARK HOMMRICH: I am Mark Hommrich. I am president of Volunteer Barge & Transport in Nashville, Tennessee. Our company operates barges and provides barge transportation throughout the inland river system, including the Tennessee River, and I'm here to represent navigation interests.

MR. BILL FORSYTH: I am Bill Forsyth. I represent North Carolina on the Council, but I am also a power distributor and Chairman of Murphy Electric Power.

MR. KARL DUDLEY: My name is Karl Dudley. I'm the president of Pickwick Lake Cooperative in Selma, Tennessee. We serve parts of six counties in southwest Tennessee, and I represent the distributors, the Tennessee Valley Public Power Association, and this is my 43rd year to deal with TVA. So it's been an interesting ride, to say the least.

MR. TOM LITTLEPAGE: My name is Tom Littlepage, and I work for the State of Alabama managing our water quantity program for the state. We have another agency that deals with water quality. Our interests have led to the creation of Tennessee

Valley Water Supply Partnership which has membership of water quantity activities of most of the other states. We form kind of an uneasy alliance.

I saw Linda reference the fact that this water is not TVA's water, that TVA manages water from state-to-state, and the states have this opportunity to work together on management issues as we move forward. That's one of the things that I value in this group and in that partnership group is the opportunity to work together as we kind of work through some of these issues.

MR. JACK SIMMONS: I am Jack Simmons with the Tennessee Valley Public Power Association. We represent all of the 155 local power companies across the seven states that are served by TVA. Our members represent about 85 percent of TVA's total electricity usage. The other 15 percent are direct-serve industrial customers by TVA.

We're the interface or organized customer interface between the power companies and TVA on rates and contracts issues and all other TVA related matters. We have a 19 member board. Actually, Karl was on the board that hired me ten years ago. So I guess I did something right back then, Karl.

Then, of course, Mark is one of our members, too. George Kitchens, who isn't here, is one of our members. So we have four representatives from the power distributor community here.

I know, Bill, you are on the board as one of our members, but you came through as a Governor appointee. So we're not trying to stack it up. We're just glad the Governor feels like you need to be here.

We're very interested in obviously any kind of impacts to the power consumers of the valley. There's three basic things that Joe Hoagland has heard me say 100 times, and, Wilson, you have too at the board meetings, that we're concerned about a reliable power supply for economic development in the Valley.

We're also advocates of both affordable competitive rates, and those are two different things. There's some subtleties there. Then also we're very, very interested in a balance of all of the other competing objectives, one of which we're talking about today. We recognize that's part of the overall equation, too.

So I think it's our job to represent our stakeholders that care about all of these things

because our stakeholders are not only power customers but they are also the users of the reservoirs and so on and so forth. So it's a very hard equation to balance, and I just thank everybody on this Council for the input that they provide because I think there's some good things that come out of it.

MR. MITCH JONES: I'm Mitchell Jones and I own and manage a number of resort properties on the Tennessee Valley System and Army Corps system. I represent the Tennessee Marina and Kentucky Marina Associations as their past president, and I live in Knoxville.

MR. PHIL HAZLE: I'm Phil Hazle. I represent the commonwealth of Kentucky, and I live on Kentucky Lake in Calloway County. A little trivia, Kentucky is the only state in the United States that elects a county jailer, that's in our 1850 constitution, and I happen to be that person in Calloway County since 1999.

MR. MARK IVERSON: My name is Mark Iverson, General Manager for Bowling Green Municipal Utilities in Bowling Green, Kentucky. I just ditto what Jack said with trying to strike the right balance between all of these competing interests is a very challenging thing. So we have got to think

about the scope of what TVA has on its plate.

MS. AVIS KENNEDY: My name is Avis Kennedy. I retired about two years ago as Chief of the Natural Resources Management Branch for the Nashville District Corps of Engineers. I have 33 years of experience in land management and recreation management.

FACILITATOR WILSON TAYLOR: Okay. Thank you. Thank you, Russell. Just a couple of quick notes before we go to lunch.

First off, I invite the Council members to take a look at those questions that Joe introduced because we will be talking about those to get your advice tomorrow. So just sort of reflect on what you heard today and kind of look at those questions.

Our legal staff will be counting noses tomorrow to make sure we have a quorum as we give the advice. So we have to have 11 people in the room as we give the advice.

Kelly, is that correct?

MS. KELLY LOVE: That's correct.

FACILITATOR WILSON TAYLOR: So if you're out in the hallway they may ask you to come in so we can make sure we have a quorum at the time we

are giving advice.

Then Kelly also made a note about where these Councils started and Russell shared with me that, you know, he regrets that he was not around to share in the whiskey rebellion.

CHAIR RUSSELL TOWNSEND: It's probably the only one I am qualified for.

FACILITATOR WILSON TAYLOR: With that, Russell, we go to lunch.

CHAIR RUSSELL TOWNSEND: Yes. Break for lunch.

FACILITATOR WILSON TAYLOR: Lunch is at Noon and we will have the field trip after that.

CHAIR RUSSELL TOWNSEND: Beth has some instructions.

MS. BETH KEEL: Lunch is in the Pine Crest 2 room, which you will access by going downstairs through the main restaurant and you will see the doors on the far side and we are all set up there. For the Council members and guests at this meeting table just give me two seconds to give you the cards so they know what they will serve you.

Then after lunch what we are going to do is come upstairs to the front lobby for a few minutes of briefing before we go on our field trip,

which because of the weather will be in vans, but we have that all taken care of and we will have an interesting trip. So we welcome all of you to come on the trip. Just meet us upstairs after lunch.

FACILITATOR WILSON TAYLOR: Thanks, Beth.

CHAIR RUSSELL TOWNSEND: So we will break for lunch.

(Lunch recess was taken, and the meeting continued on April 25, 2013.)