REGIONAL RESOURCE STEWARDSHIP COUNCIL MEETING

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VOLUME II OF II

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TENNESSEE VALLEY AUTHORITY
400 WEST SUMMIT HILL DRIVE
KNOXVILLE, TENNESSEE 37902

REPORTED BY:

KIMBERLY J. NIXON, RPR
NATIONAL REPORTING AGENCY
1255 MARKET STREET
CHATTANOOGA, TENNESSEE 37402
423.267.8059
800.261.8059
423.266.4447 (FAX)

MEMBERS OF THE REGIONAL RESOURCE STEWARDSHIP COUNCIL

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MR. BRUCE SHUPP (COUNCIL CHAIR)

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MR. KARL DUDLEY

TENNESSEE VALLEY AUTHORITY REPRESENTATIVE

KATE JACKSON, Ph.D.
EXECUTIVE VICE PRESIDENT
TENNESSEE VALLEY AUTHORITY
DESIGNATED FEDERAL OFFICER
400 WEST SUMMIT HILL DRIVE, WT11A-K
KNOXVILLE, TENNESSEE 37902

P R O C E E D I N G S

CHAIRMAN BRUCE SHUPP: Good morning. We're going to start out with -- right now with the Bear Creek discussion, unless there's any administrative business that anybody has or wants to take up before we begin.

Phil Comer did have one -- something he wanted to bring up. Phil is not here, as you can see. He's probably on his way. We will work him in when time permits.

Does anybody else have anything?

All right. Let's begin right with the Bear Creek discussion.

Warren, are you ready to go?

MR. WARREN BEHLAU: Sure.

CHAIRMAN BRUCE SHUPP: All right.

MR. WARREN BEHLAU: Well, good

morning. I would like to start the day with a presentation that kind of pulls together several of the topics that we talked about yesterday, the Bear Creek Dam.

Basically we're looking at an asset management program with special operations. We're pulling in dam safety. We have got some focused monitoring going on down there. We're pulling in the

emergency preparedness program that Wayne talked about yesterday. We're going to start with a pop quiz and see how well you were listening yesterday.

What's one thing that's common between these three sites, the Taum Sauk project in Missouri, the New Orleans levies, and the dam in Kauai, Hawaii?

MS. MILES MENNELL: They failed.

MR. WARREN BEHLAU: Okay. They are earthen embankments that failed. What TVA is doing is making sure that doesn't happen at the Bear Creek Dam.

Let me give you a little bit of an orientation here of where we're talking about. In TVA service area, like Jerry, I am going to use the mouse here because I will be pointing a lot, we're

looking at the Bear Creek projects that are in this area.

The Bear Creek project is a series of four reservoirs that were created through the tributary development project. They are basically created for agricultural, flood control, economic development, water supply, and recreation.

What's interesting is in the 1960s vintage planning documents, they considered recreation fishing, hunting, swimming, boating, skiing and picnicking. I thought that was interesting that they threw that one in there.

The Bear Creek, if I can get the mouse to work here again, come on, Bear Creek Dam is this reservoir, and it's one of the four. There's Upper Bear Creek, Big Creek, Little Bear, and Cedar Creek. There's a floatway that goes between these two reservoirs that's a canoeing area, a lot of people canoe this stretch. The creek then flows into the Mississippi, back into Alabama and down into the Tennessee River and Pickwick Reservoir.

Now, these four dams, again, were built for those four purposes that I talked about.

None of them generate electricity or revenue for TVA.

Now, the dam itself, to give you a little of orientation on this one as well, again, as Janet talked about yesterday, if you're standing on the dam looking downstream, this is the left side and this is the right side. I will talk left and right frequently through this presentation.

Some of the structures here, here's the intake structure and down below it it has gates as Jerry talked about yesterday. Of course, these are a lot smaller. It's a lot smaller dam. There's a pipe -- a 9-foot pipe that goes underneath and

through the dam and out to the sluiceway where the creek goes on down below the dam. Over here is the spillway.

Now, the reservoir here is pictured at the summer pool or a 576 elevation. Winter pool is 11 feet lower. The spillway over here is 26 feet higher. So the water would have to raise 26 feet for it to go over this spillway. The dam is about 1,400 feet long. It's 68 feet from the crest or the very top here where the road is down to the bottom of the reservoir where the flood plain is.

The maximum elevation that has been recorded at this reservoir was 609, an elevation of 609. So the water was 7 feet deep as it went over the spillway, pretty significant water movement there. The reservoir this dam creates is 568 acres. It was built in 1969 for $9 million of appropriated money.

Now, the 50,000 foot overview of what's going on here, we have got foundation problems. We're managing the elevations to buy us time and build in some safety factor. We have a long-term solution that we're trying to find through this project and this process right now, and we've kicked off a NEPA study to help us do that. The

overall objective here is to ensure the safety and well-being of the public.

While the dam was being constructed they cleared off the area, and I will point out a couple of things here. There's a creek running through. It flows from, let me make sure it's the same one on the screen, yeah, left to right. The original creek bed is right here.

The dam actually will pass through in

this area. And you can kind of see this hump in the background, we use that for a frame of reference in the next picture. Kind of get an idea of where that is. You can see some of the features here that have been dug out for the dam construction, and then you see this little pit right here, right in the path of the dam. That pit looks like this, and there's the hump again, that's the approach on the left side of the dam.

What you're looking at here is a limestone structure, a karst limestone or cave-type structure where you have various voids or cavities in the rock. Originally they are filled with soil, but over the years, as we've found with the water pressure from the dam, these voids have been washed clean with the soil and allowed a path for the water

to flow through it.

And as you can tell during construction, they already had water problems. There's a little pump here and they are pumping water out of that little cavity.

Since the dam was filled in 1969, the dam started leaking. They noticed a wet spot down

below the dam and tried to start figuring out what was the cause. In '72 they started a grouting project, and I will talk a little bit more about what that means, on the right and left side, and they slowed the flow from 800 gallons per minute down to 200 gallons per minute.

Now, just to get a feel for what that is, 800 gallons per minute would be about the size of four large refrigerators, the outside diameter or shape of four large refrigerators, that much water in a minute.

Now, that's not a lot when you talk about thousands of cubic feet per second that are flowing through the mainstream dams, but the situation here is this is flowing through the dam as opposed to where it's supposed to through the sluiceway or spillway. In the '90s the seepage or leakage continued to increase and went back up to

where it was.

I guess one other thing I probably ought to say is all dams leak. In earthen dams you have water that moves through the dam, that's to be expected. The problem is when you have it moving

through the dam and it carries construction material or some of the soils with it compromising the structure.

If it flows around the dam or under the dam through rock, something that still has integrity after the water has passed through it, it's okay. If it goes through the dam and it starts to erode it, the structure is compromised.

Now, grouting, what you do is drill holes down into the dam and you start pumping it full of a grouting compound. It's similar to what you use when you grout tiles in your kitchen or your bathroom, the stuff in the middle, or mortar for bricks, the same kind of compound. You drill down in there, pump it full, bring it up a little bit more, keep pumping it, filling it, move over several feet and do the same thing.

If you have a hole that takes a lot of grout, and we had some that would take 400 bags of grout, you don't go over as far. You split the

difference between the two holes in your design. You drill down again and you start pumping that up. If that one takes a lot of grout, you split the

difference again and pump the grout in that space.

Ideally what you're trying to do is build a water barrier inside the dam to prevent that water from flowing through and eroding the construction material. In this lower right-hand picture you can see some of the tops of the drill casings in a line here where they were drilled and pumped with grout.

Over the years we continued to do engineering studies and determined that on the right-hand side where we had seen flow through some rock, we determined that there was flow through rock on this right-hand side. We would lower the reservoir and do physical inspections and find out there really wasn't a significant structural issue, and since it was flowing through rock we figured that was okay. We then learned that there was about a 500-foot strip through this section of the dam that had a concentrated leaking or seepage problem.

Then in November and December of 2004 we kicked off another grouting program. This was, I guess, the third one. We focused in that problem

area. As we were drilling down, as I said before,

and pumping grout into the ground, we identified a lot of voids. It was mostly in the area where -- the construction materials for the dam were laid on top of the existing soils and karst structures or the limestone. In those construction photos, they didn't clean it off much more than what we saw. They just built it right on top.

That's why we have got the problem we have got right now, they didn't clean it down to bedrock. So we have got a path for that water to flow through. So now we're drilling and finding these voids that were there and created over the years of water flowing through that dam.

We also found what we call a direct connection to the toe drain. I will explain the toe drain here in just a minute. As we drilled some of those holes we thought, well, let's see what happens when you put water in those voids, where is it going to go.

So we pumped water into some of those voids and we'd see it come out the bottom edge of the dam. So we knew exactly -- there was a path, I won't say exactly, we knew there was a path between those

voids and coming out the bottom of the dam, not in the tailways where the water is supposed to go but out in the grassy area.

Of course, Murphy's Law hit, and while this work was going on we had a significant flood that suspended our work.

Now, to tell you a little bit more about what we did during that project and where it occurred, you can see going across the upstream side of the dam -- and by the way, the dam or the -- the reservoir is lowered to an elevation 15 feet below winter pool. It was lowered to allow the Franklin County Water Authority to build the intakes for their water treatment facility two and a half miles upstream.

We took advantage of that water being low to do our grouting project. It's better to grout while there's not water flowing through the structure. It would just be like trying to put grout in your tiles while it's under water or trying to mortar your bricks under water. You want to have it as dry as possible so it doesn't wash it away. We built this construction road across the front of the

dam so that we could get the equipment in there and work.

Now, again, here's that intake

structure, and you can't really see it, but here's some of the gates on the front, and we have two monitoring stations below the dam. Here's one and here's one. Here's where we did the drilling and grouting.

The funny thing was that when we pumped water and dye into some holes here, it would show up in this monitoring station over here. It didn't show up in the one directly across.

We also knew that there were various sinkholes. We have seen sinkholes in the area for years. There was some sinkholes out in this mudflat area. We poured dye in it and it showed up in this monitoring station over here. It's a very interesting site. You don't know exactly what the path is, you just know it's getting from Point A to Point B and it shouldn't be.

Also, take a good look at the -- this construction road. There's kind of a high point here. You will see that again in a minute.

Some other studies that were done a little bit later, but it's easier to talk about while this slide is up. We measured the temperature of the water that was coming out at the toe of the dam and compared that to the temperature of the water in the

reservoir, they were the same. If water is moving slowly through the dam, as they should do in an earthen embankment and it takes time to pass through, it should be cooled off, just as if you were to go into a cave in the summertime, it's cooler. If water is going through the ground it should cool off. It was the same temperature. You know you have connection between the reservoir and the areas where the water was flowing out.

Okay. Remember that spot right there, when the flood came, there's that same spot. In a matter of 48 hours the reservoir rose 40 feet. As a matter of fact, the drilling equipment that was on the road continued to back to higher ground until it got to this point and we had to call a crane in to pick it up off of this high point and set it on the road so that we could keep it from getting in the reservoir. The water came up, like I said, 40 feet

in 48 hours, stayed that way for a week, and then jumped up another 10 feet.

The rainfall has a significant impact on the elevations of this reservoir. I have been told in the past that a 1-inch rain could cause this reservoir to rise 10 feet. Now, that's probably in the wintertime. As Steve talked about yesterday,

there's a better correlation between rainfall and runoff in the wintertime when there isn't a lot of trees, leaves and grass soaking up the water.

Just last night, in the last 12 hours with the rain that came through Northern Alabama, we had a 1-inch rain down there and the reservoir jumped up 7 feet. Okay. So it's still happening. We don't have as much because we have some grass and vegetation to soak up the water, but it still jumps up. It's a very reactive reservoir.

In this picture, again, the spillway elevation, 602, the water is 2 feet higher than that. So the water is 2 feet deep as it goes across this spill.

We had our dam safety individuals and engineers down at the site while this was taking

place watching to see what was going on, noticed some problems here and some problems down in here. I've got some more pictures that will kind of explain this a little bit better.

Down in the tailways, as I am pointing to in this orientation picture, we had boils coming up in the water. Basically the water was flowing through some structure underground and popping up in the tailways. It wasn't flowing through that 9-foot

pipe, it was just popping up someplace under ground.

At the toe of the dam in this area, and again, the toe is the bottom edge, the downstream edge of the dam, there was a spot right about here where we saw another sinkhole, it's about 3 feet across, but after the water receded we were left with a sinkhole. So we knew we had some materials being washed away below the dam.

This monitoring station is the one that's in the center part of the dam. You can see here also sediments being washed away. There were boils coming up in that area as well. After the water receded, we started to see more sinkholes up in this portion of the reservoir.

I think there was a large one right here, that was this one, it's about 10 feet across, it was in this area. About 6 feet across they were scattered, again, up in this muddy flat area.

This one, this sink hole, was up in a tree line that's just outside the picture. One of the engineers on-site dropped a tape measure down in it to try to figure how deep it was. It went down 17 feet and he couldn't find the bottom.

Shortly thereafter we brought in two truck loads of concrete to try to fill it up and it

could have taken a little bit more concrete. Who knows where it goes.

Also, one other note. In about -- I guess it was about three weeks ago we had a bulldozer operator working down here in this site. It's interesting, this is a small stream but it has a lot of high flow at certain times and it washes a lot of driftwood down towards the dam.

There were probably about 2 acres worth of driftwood laying down here. Each spring we try to push that up into piles and burn it so that the wood doesn't plug this intake structure. Even

though it's a 9-foot diameter pipe, we can't control how fastly or how fast that water will rise.

Okay. We're trying to keep it down, but just last night it jumped up 7 feet. We're trying to get that water out of there. We can't stand to have water plugging up the trash racks and the intake. So we push it up in piles and burn it.

Well, while he was down there pushing the driftwood up into piles, he noticed another sinkhole. He said it was about a foot-and-a-half deep, but it was large enough that he could drive his entire bulldozer into it. Thank goodness he didn't do that, but it was big enough that he could, and

that was while the reservoir was down at winter pool. It's a very dynamic site. We have a lot of things going on down there.

After the flood we lowered the reservoir back down to an elevation of 560 again so that it would be fairly dry inside the dam to do our grouting, we continued to do that until the scheduled spring fill, and also developed some emergency management procedures once we started to understand a little bit more of the seriousness of some of the

leakage and structural issues down there.

We also repaired the toe drain. And what a toe drain is, it's very similar to a french drain system, if you're familiar with that. It's the black corrugated pipe that has holes in it that you may have around your house. It's buried there with a lot of gravel. So as the water tries to enter the foundation of your house, it gets into the pipe and is drained away from your house.

The same thing with a toe drain system on the dam, we have a series of pipes that are down here at the bottom edge of the dam collecting that water and getting it into the tailways without running cross the surface or washing away more sediment. So we repaired that and enlarged it.

We installed something called a piezometer, several piezometers, and I will tell you a little bit more about those in just a minute, and performed something called cone penetration tests.

Now, cone penetration tests, it's fairly simple but high tech at the same time. You basically have a steel shaft that has a cone shaped device on the end of it and you push it vertically

into the soil. And if you have ever done any digging, if you dig into sand, it's really easy to put your shovel into sand. If you have got clay or tight soil, it's harder to put the shovel into that soil.

The same thing, they measure the resistance of this cone being pushed down into the soil and they can tell whether or not you have soft soils or tight clays or if you even have voids.

They did that in this area and found a pocket about 10 feet deep that basically put up no resistance, it's either a void or very soft material. So we know we have some structural issues there as well.

Now, piezometers, it's a simple tool that helps us measure the water table inside the dam. Again, you drill a hole down into the dam, or

whichever area you want to monitor, and put a PVC pipe, the white plastic pipe, down into the ground. It's got holes drilled into it so that as the water that's outside the pipe rises the water inside the pipe will equalize. If the water goes down, the water in the pipe will go down.

So we can come down at anytime and take the cap off the top of the pipe, drop an instrument down the top and figure out how far the water table is below the surface of the ground.

After we did all of that work, we refilled the reservoir to the summer pool elevation and the seepage or leakage had cut down in half from 800 to 400 gallons per minute, but we started to observe a bulge in something we called the phreatic surface. A phreatic surface is not where our kids think they are going to store all of their stuff when they go to school or get a small apartment, a phreatic surface is basically that water table that's inside the dam. I've got another picture that will show you that.

If you look at this top line here, this demonstrates typically what you want to see in a dam. If the water -- the reservoir is on this side. You would expect the water table, if you were to

drill a hole into the dam, to be fairly high on that side, but as it moves through the dam you want it to taper off so that it runs down underground. Again, this is very slow moving water, and that's okay.

The problem is when this phreatic surface gets close to the surface and eventually comes out, it starts to erode the embankment. As we saw in some of the pictures that Janet showed us early yesterday morning, what happens when you have water coming out of an embankment.

Well, we have noticed with the piezometers that we have a bulge in the left portion of the dam where the water is very close to the surface, and we predict that if the water were to come up to a flood condition it could get almost to the surface.

So since we have learned that, we've changed our operating elevation to be 8 feet lower in the summertime than typical, we keep it at 568, and we formalize those emergency procedures with the local emergency management group.

What we did there was initiate some training. We put some materials on-site so that if we did have something breaking through the dam we could get in there and plug it with different sizes

of riprap. We have equipment available for immediate dispatch. We also have a plan, if the water rises to

the old summer pool of 576, we -- I'm trying to get the words right on the emergency operations center, the first stage of emergency operations center, I guess we alert them that we have a situation.

If it gets up to 580 or just 4 feet above the old summer pool, it goes into the status where they break out the books and they start turning things on and getting ready. Okay. We're preparing for an emergency situation if it were to happen.

We also dispatch our dam safety engineers and they will be on-site 24 hours a day, day and night out there with flashlights looking in the reservoir to see if we have any whirlpools that might signify that we have got a fallout in the reservoir and on the back side of the dam to make sure that we don't have a washout and erosion starting.

Well, due to all of the information that we had gathered, the bulge in the phreatic surface, increase flow through the dam, recommendations from our Hydro Board of Consultants and a joint decision within TVA, we have got to do something. We know that we can't hold that reservoir

down and maintain the safety and well-being of the public. We have got to take some kind of an action.

So we have kicked off a National Environmental Policy Act or NEPA study to figure out what some of these long-term alternatives are and what the possibly impacts could be. Through this process we will identify concerns, issues with the public and other cooperating agencies, develop some alternatives, evaluate those, and document the results and make a decision on what we're going to do.

Some of the known issues that we have down there, obviously the downstream public safety, we need to ensure that they are safe. Now, we talked about high hazard dams yesterday and Bear Creek, when it was built, was classified as a low hazard dam. Since then the Town of Red Bay below the reservoir, about 15 miles below the reservoir, has continued to develop. It's now classified as a high hazard dam. Due to the degradation that we're aware of inside the dam, it's also considered a high risk dam. So we have got to maintain this public safety.

One fortunate thing is most of the

land down below the reservoir is agricultural. We don't have a bunch of houses down there. We do know from flood damage reduction studies that there are approximately 110 structures that would be affected if the dam were to release. Just a few of those are houses, and we understand the water would get into the house but not sweep it off of its foundation, like the dam release in Kauai.

Some of the environmental issues that we're aware of, we have endangered species mussel in the tailwater. If we have a lot of sediment that gets on top of those, they probably wouldn't survive.

Water supply, the Franklin County Water Authority, as I talked about their construction of their intakes, they just completed a $15 million project to have a water supply for the Franklin County. They are on the verge of supplying their first drops of water to the community. They are undergoing their permitting process right now. So they are very interested in having a dam there.

Cultural and archeological issues, we know that there's artifacts in the area. We know that there's been Native American Communities in the

area up to 12,000 years ago. There were also early settlers that passed through there. So there's some interest in that area as well.

Another fortunate thing is there isn't residential development on this reservoir, where in most of the other reservoirs we would have an outcry with lowered elevations from the residents, we don't have any.

However, from an economic standpoint we have a Bear Creek Development Authority that manages two campgrounds and an education center on that reservoir. With the water levels down they have actually closed those campgrounds and are losing revenue because they don't have anybody coming into them.

From a recreation standpoint, of the four reservoirs down there, there's some very prime -- Bruce, very prime bass fishing in the area. I participated in the game fish, the shocking surveys where they go out and shock the fish up and study how many fish and what the health is, the other reservoirs in the area had a pretty solid bass population. Bear Creek didn't have quite as strong

bass population but it did have a pretty good crappie population, good size crappie. There's a lot of local fishermen that visit this reservoir quite frequently. They would like to see the reservoir back up as well.

One other thing I should note, in the examples that Janet gave and that I quizzed you on this morning about the earthen embankment failures, you saw a catastrophic release, just a huge wall of water coming out of these things. We're fortunate that even though they didn't build the dam so that the embankment was built on clean ground rock, they did build it with the right materials. It's a compacted clay. If this dam were to start to give way, it would slowly erode. It wouldn't just collapse and have this huge wall of water come down and take out all of the town below it. It's going to be a slow release of water.

It's projected that the town of Red Bay would see the arrival or the first change of elevation of water two-and-a-half hours after the dam failure. Seven hours later they would actually see it crest. So there's time -- and this is built into

that emergency preparedness as well, there's time to notify people and take preventative action and get people out of the way.

Some of the preliminary options, and again, this is not an exhaustive list, this is just a quick, high level look at some of the things that could possibly be done at the site. Of course, the first one is no action. In a NEPA study you have to

list the no action option and tell why it's not acceptable. If we tried to operate the dam as it was originally designed or even with the modified elevations, we know that we're going to have trouble. It's not a long-term solution. We can't ensure the integrity or the safety and well-being of the public operating it this way.

We have proposed possibly lowering the spillway so that we would have enough water in the reservoir to keep water at the intake structure for the water treatment facility but hopefully figure out a design that will allow enough water to pass over or through the dam so that it doesn't raise to the elevations that creates an unsafe situation. We have our engineers looking into that.

Other possibilities are repairs. There's a couple of repairs that we have benchmarks on. One, grouting, we talked about grouting earlier. At Logan Martin Reservoir in Central -- North Central Alabama, they have had a similar leakage problem. It's a little bit bigger dam. They've spent $40 million over the years grouting and trying to patch this dam, and they still haven't fixed it.

I have recently spoken with the Corps of Engineers specifically about grouting programs and

repairs, and they tell me that they have learned over the years that grouting is a temporary fix, it only lasts for 12 to 17 years. You just continue to do it over and over and over.

Another proposed fix is a cutoff wall, which is being done at Wolf Creek Dam. We had the gentleman yesterday from the Corps put his slide up there that showed all the different projects. Wolf Creek Dam, it's actually up in Kentucky, but it creates the Cumberland Lake and the downstream flow actually gets to Nashville eventually. If that dam were to fail, it would actually flood Nashville. So they are very serious about their fix and trying to

get it done as fast as they can and completed.

They are spending $300 million in seven years to build a structure inside the dam. Essentially if you go across the dam, like the roads that go across most of the dams you see in the pictures, they will cut trench down through the road all the way down to bedrock that may be several feet wide and they fill it back with concrete all the way across the dam. So they are trying to create this barrier, again, so that the water doesn't flow through the dam, it goes through the intake structure and spillways as it's supposed to. $300 million in

seven years to make that one work.

Of course, the last preliminary option there is a breach of some kind restoring the creek channel back to its natural flow.

Now, I did want to tell you, as we talked about the NEPA approach, this is not just a bugs and bunnies type study. Let me list the things that we will be looking at through this study.

It includes but not necessarily limited to potential impacts on water quality, water supply, aquatic and terrestrial ecology, endangered

and threatened species, wetlands, flooding and floodplains, recreation, aesthetics and visual resources, land use including agricultural operations, historical and agricultural resources and socioeconomic resources. So it's a pretty wide array. It's not just an environmental study. It actually gets into the economics as well.

Now, some of the options on the screen, just kind of an order of magnitude and a rough guess of what some of these things might cost, again, the first one, there's no cost to that, but that's not a real solution.

This one, it could cost 10 to $15 million, we're not sure yet.

A grouting project could cost 5 to $10 million, but, again, it's a patch. We don't think it's a permanent fix at this point. We just don't know.

Cutoff wall, that could cost around $40 million.

The breach could cost 3 to $5 million. That kind of gives you a ballpark for what some of these things could cost us. Again, that's just the

actual work at the dam location.

So a recap, we have got some significant dynamic issues at this site. We're continuing to see leakage and seepage through the dam and it continues to increase. We feel that if we see another flood condition, we will get increased permanent damage.

We have jointly agreed with our Hydro Board of Consultants it's time to take some physical action and get a long-term or permanent solution. Maintain that reservoir at a lower elevation to build in a safety factor, but, again, we know that's not a permanent solution. We can help keep the reservoir down, but we can't keep it from coming up in a flood.

We're closely monitoring the situation to try to ensure the safety and well-being of the

public, and through this NEPA study we intend to find a long-term solution to make that happen and keep the public safe.

And with that, Bruce and Dave, I'll open it up to questions.

CHAIRMAN BRUCE SHUPP: All right. Questions?

Jimmy.

MR. JIMMY BARNETT: Can you pour what I call sheetwall piling all around the front of them instead of pouring that concrete in that slit trench you're talking about?

MR. WARREN BEHLAU: As a matter of fact, that was one of the options kicked around as well. Our engineers tell me that that would be more costly than some of the options we have in there right now, but that is something that is being considered.

MR. JIMMY BARNETT: Is there any way to cover the floor of the reservoir far enough out to keep it from going through the sinkholes or do those sinkholes go all the way back up?

MR. WARREN BEHLAU: Some of the sinkholes would go at least 100 yards in front of the dam, that was another possibility that was

considered, and I'm not sure exactly why they decided that wouldn't be a fix. I can find out and get back with you, but that had been looked at within the last year and it was determined that it wouldn't work. I can get back with you on that if you would like me

to.

MR. W. C. NELSON: I was curious about why there's no residential development on the lake.

MR. WARREN BEHLAU: The Bear Creek Development Authority, as I understand it, has dictated the land use around that reservoir, and they don't approve of residential development. It's just the two campgrounds and that education center.

MR. W. C. NELSON: Who owns the land?

MR. WARREN BEHLAU: That's a good question. It's a very complex situation.

Bridgette, could you help me with that answer?

MS. BRIDGETTE ELLIS: Yeah. All of those lands around all the Bear Creek's reservoirs were acquired for these purposes. So they were acquired in the name of the Development Authority or they were acquired by TVA. So all of those are lands that are publicly owned.

Part of the planning process of where

we work around these reservoirs, we developed land plans. So there are only various places where you do have the residential economic development types

around the reservoirs.

MR. W. C. NELSON: I guess I missed some of the information, but what the purpose of building these dams?

MR. WARREN BEHLAU: It was a four-fold purpose, economic development, water supply, recreation and flood control.

MR. AUSTIN CARROLL: Picnicking.

MR. WARREN BEHLAU: Picnicking is part of the recreation.

MR. W. C. NELSON: So there was no economic benefit to TVA?

MR. WARREN BEHLAU: Correct. These are not power generating facilities. There's no revenue to TVA.

MR. W. C. NELSON: Maybe you should give them to someone.

MR. WARREN BEHLAU: Pardon me?

MR. W. C. NELSON: Maybe you should give them to Alabama.

MR. WARREN BEHLAU: Give them to Alabama, put up a "for sale" sign.

CHAIRMAN BRUCE SHUPP: They are

extremely scenic bodies of water. I mean, they are beautiful little lakes. They are well maintained. The Bear Creek Development Authority does good job. They are not real heavily used, but they are used and the people that use them really enjoy them. I mean, they are great assets to the area. They are not insignificant little bodies of waters, I mean, they are really nice.

Cedar is what, 2,000 acres?

MR. WARREN BEHLAU: You may be right. I don't have the exact-

CHAIRMAN BRUCE SHUPP: One of them is a couple thousand acres, and this is one of the smaller ones.

MR. WARREN BEHLAU: It is the smallest. I had some other information I remembered.

Since 2004 when we had the big flood that I showed you the picture, we have had the reservoir come up to 580 and we have activated the Emergency Operations Center twice, and that's just since November of 2004. So it jumps up on us pretty fast.

CHAIRMAN BRUCE SHUPP: Austin.

MR. AUSTIN CARROLL: Now, this dam was put in, I guess, at the request of the locals down there back when? I mean, they wanted it for these -- for the flood control and the water and water supply, those kinds of things, correct?

MR. WARREN BEHLAU: Well, it was part of a tributary development project, and I am probably going to need some help to answer exactly what was driving that back in the '60s. I don't believe it was a local request.

MR. AUSTIN CARROLL: I mean, who wanted these things anyway?

MR. WAYNE POPPE: There was something -- when TVA finished its primary dam building work, there was something called the Tributary Development Act that was -- and a group that was put together. Actually, there were a whole series of reservoirs and tributaries that were looked at primarily for flood control purposes.

The Bear Creek area was a set of four. The Beach Creek system was a set of eight. Out of that grew the Tims Ford project and the Normandy and Columbia projects. So it's what I would characterize

as not major reservoir development projects but smaller stream, primarily flood control, projects.

MR. AUSTIN CARROLL: Well, I mean, I would think there's still that need for flood control there, I mean, just from a public perspective.

I mean, what's the odds of getting federal appropriations to repair or replace that dam?

I mean, I don't see that that needs to come out of power money. If they wanted -- if it's that important, then let those folks down there get their appropriations. If not, just knock it out and let her flow.

DR. KATE JACKSON: And I think that's exactly what this study process is going to do. Obviously, we are beginning to talk to elected officials in that area, but the issue we have to deal with as the asset owner is because of the physical situation there we can't wait for X plus 17 years to be able to get appropriations to do something.

That clearly is going to be something that comes up during the study process, but in the meantime we're going to have to make a decision on what the best thing is for the safety of the public

and management of that asset, and that's what the study is going to do.

MR. AUSTIN CARROLL: Well, I would do the least expensive.

DR. KATE JACKSON: We appreciate that feedback.

MR. W. C. NELSON: You could probably accelerate the process by breaching the dam and allowing the water to go back into the original streambeds, and then I think you would get action to correct it.

DR. KATE JACKSON: Totally understand. We still have to deal with our responsibilities under NEPA. I mean, obviously we're all thinking similar thoughts.

CHAIRMAN BRUCE SHUPP: What's the danger -- how flashy would that valley get if you did breach it and just go with the original stream bed?

MR. WARREN BEHLAU: Our flood analysts are working on that right now, as a matter of fact, trying to build up some information and understand the actual impacts. I don't have that answer yet, but that will be something evaluated in the study.

CHAIRMAN BRUCE SHUPP: But it could be something that would affect some of those 100 structures?

MR. WARREN BEHLAU: Yes, the preliminary estimates are, yes. Now, of course, we're looking at this failure as being something like the picture, where the water is very high and we've had continued rains, you know, worst-case scenario.

CHAIRMAN BRUCE SHUPP: I'm talking if you breached it and went to the stream bed, of course, you would lose your water intake.

What's the cost of replacing the water intake?

MR. WARREN BEHLAU: We're looking at that as well. That one is a little tricky. You could possibly build a weir or something just downstream so that the water would pool up enough to keep the intake wet or you could build a pipe structure over to another reservoir, which it's estimated that could be 2 to $4 million, again, order of magnitude. We don't know exactly the best way to deal with that.

It would seem that you could somehow

take advantage of that existing structure to maintain that pool, yet, lower the risk of a dam failure. Exactly what that answer is, I don't know.

CHAIRMAN BRUCE SHUPP: Tom.

MR. TOM VORHOLT: Well, you kind of asked my question. I noticed that there's another dam upstream of this one. So, I guess, my thought was how significant is the value of flood control at this particular project, given the fact that there's

a second dam that's upstream of this one?

MR. WARREN BEHLAU: Good question. As a matter of fact, when Upper Bear is at summer pool it has zero flood storage. The water actually goes over the spillway when it just increases above summer pool.

There's a water intake structure on that reservoir as well. We've talked about the possibility of building in some more margin of safety by lowering Upper Bear by several feet. We have residents on that reservoir, and the gain that you would have by lowering that reservoir is so insignificant with the volatility of the water coming in.

As a matter of fact, we looked at keeping it at summer pool and trying to drop it if we see a large system coming and found out it would take four days to lower that reservoir 3 feet. The intakes and sluiceways on these two dams are just so small that we were kind of -- our hands are tied on how to get that water out.

MR. TOM VORHOLT: Maybe in the process of the NEPA study that's something -- you can look at that upstream project, because it seems to me economic development is minimal since there's no

residents on the lake. You've got two campgrounds. Water supply seems to be the biggest issue since it does supply water.

Recreation, I mean, is it worth $40 million?

I mean, it's something that seems like -- of the four that you mentioned, it seems like water supply is really the only significant one, I mean, as far as I can see. I mean, it's got to be worked through the process. I mean, you're talking $40 million for five or -- I don't know how many people fish there, but it doesn't sound like a lot.

CHAIRMAN BRUCE SHUPP: How does the local community look at it?

MR. WARREN BEHLAU: They have been waiting to see that reservoir back the way it was since the day we dropped it.

CHAIRMAN BRUCE SHUPP: All at TVA expense?

MR. AUSTIN CARROLL: Ratepayers' expense.

MR. WARREN BEHLAU: They would like to see it back up, whatever the cost is, whoever pays.

CHAIRMAN BRUCE SHUPP: There's no willingness for cost sharing on anybody's part?

MR. WARREN BEHLAU: Well, again, that's something that could be approached within that NEPA study. I know some of the local politicians are dealing with that question right now trying to figure out how we could possibly do this.

MR. JIMMY BARNETT: Have you talked to Roger Bedford down there?

MR. WARREN BEHLAU: Pardon me?

MR. JIMMY BARNETT: Have you talked to Roger Bedford?

MR. WARREN BEHLAU: I don't know that name.

MR. TOM VORHOLT: He's a State Senator.

MR. JIMMY BARNETT: State Senator down there. He was on the Council here for a while.

MR. WARREN BEHLAU: Okay. We have talked to some of the congressional staff that cover that area and they are aware of the situation.

MR. KENNETH DARNELL: Anyone who is familiar with North Alabama is not surprised that there are karst structures down there. How did the dam get built on top of a karst structure in the first place?

MR. WARREN BEHLAU: Well, you will

probably find that most of the dams throughout the Tennessee Valley have karst structures in it, around it, close to it. It's just a matter of whether or not they did the proper preparation when they built it. The other three dams in that area, built in the same topography, no problem.

MR. KENNETH DARNELL: And the proper preparation would have been?

MR. WARREN BEHLAU: Clean it down to solid bedrock.

MR. KENNETH DARNELL: And then grout the voids at that time?

MR. WARREN BEHLAU: If there were voids, yes.

MR. KENNETH DARNELL: And why was this much money allowed to be put into a water intake on a reservoir that was having obvious problems?

MR. WARREN BEHLAU: It was -- it was believed at the time that they were constructing this water intake or the treatment facility that the dam could be repaired and that it would work, and we have determined that after we have spent a million-and-a-half dollars trying that, that it may not.

MR. KENNETH DARNELL: But I am also

hearing -- I think you say that you could go in there with the wall and spend $40 million on it, which by the time it's over will be probably 80 million, and you're still not sure that's going to fix the problem.

MR. WARREN BEHLAU: Our dam safety

engineers have proposed that that fix would have a very high percentage of success. They think it would work.

And again, the Corps of Engineers is spending $300 million using that same technique at Wolf Creek Dam, and this is after they have tried several different fixes.

MR. KENNETH DARNELL: There's a tremendous amount of difference in Wolf Creek Dam and what stands behind it and what stands behind this one. I tend to agree with Austin and the other guys, the downside potential for TVA is tremendous on this thing, considering failure down the road. I think a nice little natural stream flowing down that valley would probably be very cost effective.

MR. TOM VORHOLT: And for the mussel population also.

CHAIRMAN BRUCE SHUPP: Any other questions?

We're going to get the chance to give recommendations and have more discussion later on this issue. So the questions now should focus on drawing more information out. We will give our

recommendation later.

Any more questions?

MR. AUSTIN CARROLL: Do we have -- is this the -- is this the worst dam problem we have got? I mean, are we seeing this at any other dams? I mean, this is the worst. What's the next worst?

MR. WARREN BEHLAU: Within the TVA system?

MR. AUSTIN CARROLL: Yes.

MR. WARREN BEHLAU: This is the only dam that has this leakage problem and concern in the TVA system.

DR. KATE JACKSON: We have other dam problems though.

MR. WARREN BEHLAU: You saw some of those yesterday, but not with the potential of failure that this one has.

DR. KATE JACKSON: I mean, we talked about Chick lock and the concrete growth. We talked about Fontana and the concrete growth. We talked about Blue Ridge, I mean, obviously there's some dam

safety and seismic potential issues there that we are working on very hard and carefully, but this is

the -- this is the seepy, leaky issue.

MR. AUSTIN CARROLL: Okay. I just was curious if this was the only one or if this was the worst one.

MR. WARREN BEHLAU: It is.

MR. AUSTIN CARROLL: Maybe some others are on down the line as far as fixing or getting worse of whatever.

MR. WARREN BEHLAU: As far as we know today, this is the only one under these circumstances.

CHAIRMAN BRUCE SHUPP: Miles.

MS. MILES MENNELL: But this is the only one that's not impounding water or not generating, this is -- this dam is just sort of out there, the problem with the seepage, the other dams have a specific purpose within the TVA --

DR. KATE JACKSON: All of our dams have specific purposes, and we have many non-power dams.

MS. MILES MENNELL: I understand that. Right.

DR. KATE JACKSON: So that's as much

as you're going to get from me.

MS. MILES MENNELL: Thank you very much for your comment.

CHAIRMAN BRUCE SHUPP: Ken.

MR. KENNETH DARNELL: You're talking about taking immediate action. What is the time frame and is the NEPA study going to have to be completed before any action is taken?

MR. WARREN BEHLAU: Very good question. The NEPA study has been scheduled to be completed in December of 2007. Now, we are currently working on a design and a proposal to get out there and do some additional site investigation to understand more of what's going on inside that dam to understand just how urgent the situation is. If we find out that it's degraded much further than we had expected, we need to accelerate our plans and take some kind of emergency action.

If we determine that the dam is still structurally viable, concerned but viable, it will allow us to work through that process and make the right decision and allow the time for all the public input. So we have kind of got one path planned out,

but we're also trying to allow for the possibility of a more urgent action.

CHAIRMAN BRUCE SHUPP: Any other questions?

Warren, thank you very much.

MR. WARREN BEHLAU: Thank you.

CHAIRMAN BRUCE SHUPP: We move on to Janet to explain the TVA questions.

MS. JANET HERRIN: Good morning. I have got to put on my glasses here. Okay. There's been a lot of good discussion I think that has clarified some of these questions coming out, but I will go over them and see if there's some additional questions before we begin the discussion, I guess, after the public comment, is that correct?

CHAIRMAN BRUCE SHUPP: Correct.

MS. JANET HERRIN: So TVA has missioned-based responsibilities for stewardship of water and land-based resources and infrastructure throughout the Tennessee Valley. TVA conducts programs to maintain this infrastructure and to coordinate with the appropriate local, state and federal agencies in the event of emergencies. So we

would ask the Council to respond to the following questions based on the information that we have provided to you over the past day and a half.

I am going to address these basically two at a time because we have -- the first two are related and the second two are related and the third two are related.

So, first of all, how do you perceive the adequacy of TVAs infrastructure stewardship activities?

What we would like to understand there is you have heard us talk about what we do. We're interested in what you perceive is our strengths, but, more importantly, we would like to see what you think is our weaknesses in our stewardship program, and then that takes you into the second question.

Do you have any suggestions for improvement in TVA's infrastructure stewardship activities?

So in the first question, as you discuss the strengths and weaknesses or opportunities for improvement, we would be interested in those opportunities in the second question.

Are there any questions or clarification on those first two?

Okay. No. 3: How do you perceive the adequacy of TVA's emergency preparedness and coordination efforts with the U.S. Army Corps of Engineers and state and local agencies?

Here again, we're asking for you to help us understand our strengths, but, more importantly, our weaknesses. In fact, Jimmy, I think you talked a little bit yesterday about some water infrastructure notifications, that might be an area there, but particularly weaknesses that you saw.

And then, again, in No. 4: Do you have any suggestions for improvement in TVA's emergency preparedness and coordination efforts?

After you have the discussion about the strengths and weaknesses, how might we improve the program based on what you have seen here?

Any questions or clarification on those two?

Okay. And then the last two. Has TVA considered a full range of options for Bear Creek Dam? And then directly related to that, what other

options should be considered?

What we're -- you heard Warren talk. We're moving into a public scoping process and we would -- as we prepare for that public scoping process, we would like your perspective, what are the issues, what are concerns, what are options? You have heard us talk, you've started to express some of those things that would help us prepare for those

public scoping sessions.

Any questions?

CHAIRMAN BRUCE SHUPP: They are all ready to go.

MS. JANET HERRIN: I can see that. They told me to keep talking, what I did on summer vacation, no, I'll stop there.

CHAIRMAN BRUCE SHUPP: Thank you. Now, one important point, we're going to take a break until the public comment period at 9:30, but one important point, we have got a quorum of 11, don't anybody leave when we get into the recommendation session because without that quorum our recommendations mean nothing. So don't leave. Don't take extended phone conversations out here. Let's

all stay here. We just have a bare quorum.

MR. AUSTIN CARROLL: What's it worth to you, Mr. Chairman?

CHAIRMAN BRUCE SHUPP: Pardon me?

MR. AUSTIN CARROLL: What's it worth to you, Mr. Chairman?

CHAIRMAN BRUCE SHUPP: It's not worth anything to me but it is to Kate.

DR. KATE JACKSON: I will buy your lunch.

CHAIRMAN BRUCE SHUPP: Good deal. What a deal. Oh, let me tell you, when we get into the public comment period we're going to address the two letters or one letter and one e-mail that's in your package in your folder.

If you haven't read them, I suggest you read them during the break because Dave is going to go through them for discussion right before we go to the public comment because they came in in early March, I believe, right?

FACILITATOR DAVE WAHUS: Early May.

CHAIRMAN BRUCE SHUPP: Early May.

FACILITATOR DAVE WAHUS: They are the

last two items in your package.

CHAIRMAN BRUCE SHUPP: Concerning Elk River Development and the tributary on Elk River. So with that, let's break until 9:30 and then we'll get into the public comments.

(Brief recess.)

CHAIRMAN BRUCE SHUPP: Take your seats, please. Take your seats, please. Okay. Here's the game plan. We heard from Phil saying he -- Sandy called Phil. Phil didn't call here. Phil said under the circumstances, and I'll put that in quotations because we don't know, but under the

circumstances he felt it was better if he stayed home today. So he's okay, I mean, that's all we know. So he's not coming. So his presentation will go by the wayside. There are no public here at the present time.

So the game plan for us is to -- Dave will discuss these two, one e-mail and one letter that we have, and then we will move on to discussion of the questions.

Dave.

FACILITATOR DAVE WAHUS: And as I

understand it, Bruce, you want these two statements or these two letters inserted into the record in their entirety?

CHAIRMAN BRUCE SHUPP: Entirety, right. By the way, there will be box lunches here as usual, and they will be here at about quarter to 11:00, to let you know that.

FACILITATOR DAVE WAHUS: The first letter is from Victor P. Dura from Rogersville, Alabama dated May 4th. The letter is to you, The Council, and Victor indicated that he had recently had reason to review the Wheeler Reservoir Land Management Plan which was released in December of 1995 and he was dismayed to find how inappropriate

and outdated, in his opinion, the planned land use designations are, given the phenomenal growth pressures the area has experienced in the past five or six years, and he requests that the Wheeler Plan be scheduled for update as soon as practical.

He believes that a priority should be established for the plan update, particularly since the March 17th, 2005 meeting of the Regional Resource Stewardship Council meeting identified, quote,

development pressures, unquote, as one of the underlying factors supporting the need for a plan's revision.

The second communication is an e-mail dated May 9th from Robin Burchfield. Again, the e-mail is to you, The Council Members. Robin goes on to say, I would like to voice my concerns and request TVA take another look at their natural resources and environmental impacts on all reservoirs. It is time for new and updated land management plans, especially on Wheeler Reservoir. The present one is outdated due to all the growth in the area since 1995. TVA appears to be in the real estate business and not into the environmental stewardship. They are leasing or selling my land, in parenthesis, public, and land they took from others to private individuals for

personal profit. It has got to stop. Please consider helping save some of our natural habitats for overdevelopments and commercial recreation. Not everything is about money. Something needs to be left alone for our future generations to see and enjoy.

I did not read them in their entirety,

but that's a summary of what they have to say.

MR. BILL FORSYTH: What's happening down there that's caused these letters? Is it residential development on TVA land?

CHAIRMAN BRUCE SHUPP: I would like TVA to address that so we can get a little bit more facts on the issue.

DR. KATE JACKSON: There is a commercial recreation proposal for use of 91 acres of TVA property on the Elk River there near Rogersville, Alabama. It is compatible with the land use allocation that was developed in that reservoir plan. You're all familiar with that planning process and how we go about it.

That plan allocates that piece there for commercial recreation and visual management. And based on the input that we have gotten, we have conducted, you know, environmental review, we have

had a couple of public meetings, we have looked at the environmental impacts, and we don't find that there are significant environmental impacts.

Now, you know, significant to somebody that lives next door to it and significant from the

standpoint of sort of the technical criteria with respect to significance on specific, either natural or cultural resources, are sometimes different.

So our view is this is appropriate use of that land probably and that there are not -- there are not significant environmental impacts. So it is consistent with the allocation.

We have also done additional surveys. I mean, some of the comments, these don't necessarily show, but some of the other comments that we're getting is that there are safety issues and that there are density-of-use issues, you know, too many boaters and too much use, and we have gone and looked at sort of carrying capacity issues and is there some other supply, is there a need for this commercial recreation for these boat docks, that sort of thing, and our view is there is a need for it there.

CHAIRMAN BRUCE SHUPP: At that particular location?

DR. KATE JACKSON: At that particular

location.

CHAIRMAN BRUCE SHUPP: One of the letters suggest an alternative -- the e-mail, I

guess, suggested an alternative location. Is that something that's been discussed and examined?

DR. KATE JACKSON: Yes. And we believe that there is a need for this kind of recreation there, and there isn't an easy close substitute.

CHAIRMAN BRUCE SHUPP: What about the public meetings you have had and the community feelings on this? Are these negative -- are these negative viewpoints minority compared to the other comments you have had?

DR. KATE JACKSON: No.

CHAIRMAN BRUCE SHUPP: You have had a lot of negative comments?

DR. KATE JACKSON: Yes.

CHAIRMAN BRUCE SHUPP: Questions? Comments?

Jimmy.

MR. JIMMY BARNETT: Being from that area I hear a lot, and it's a very contentious issue. I guess my personal opinion, I think it would be nice to have one there, but I have heard from a lot of

folks in the environmental community and, boy, they

are out drumming up business, as some of these letters have indicated, this e-mail in particular. They are very much against anything disturbing the natural beauty of what's out there.

You know, I can sympathize with that, but if it's controlled in a manner, which I think TVA has gone about it, I think it's -- could be a good thing out there. It's just a personal opinion.

CHAIRMAN BRUCE SHUPP: Other comments?

What stage is the decision process in, Kate?

DR. KATE JACKSON: We're roughly toward the end of this whole process, and we will have to make a determination as to the recommendation we make to the Board with respect to it.

The Board is, you know, very concerned about land issues. They have obviously gotten lots of input from elected officials, from stakeholders, and they are going to look closely at land issues clearly.

CHAIRMAN BRUCE SHUPP: What about the suggestion or request that it's time to redo the land management plan?

DR. KATE JACKSON: Well, you know, as you know, you-all looked at this process -- in this reservoir land planning process, we look at the kinds of pressures, the activity on specific reservoirs and whether or not we have planned those reservoirs for it and when that was, what's changed, and that's -- those kinds of things are the things that drive us to change -- to change a schedule for that reservoir planning process.

We're currently just completing the Watts Bar Reservoir Plan. We have just kicked off all of the mountain reservoirs, sort of those down there where you folks are. So that's kind of our current process. Obviously, on an ongoing basis, we look at what the development issues are and make a decision as to when we schedule that, and it has been a decade.

CHAIRMAN BRUCE SHUPP: So where are you with Wheeler?

DR. KATE JACKSON: It's probably not next. There are some that are older than that. So, you know, we need to look at that, and my boss has asked us to look carefully at kind of the schedule

and can we accelerate some of those. So we're examining that.

CHAIRMAN BRUCE SHUPP: Jimmy.

MR. JIMMY BARNETT: One additional comment for Kate is that there is a lot of development that folks would like to do on the northside of the river.

On the southside of the river there is a development, as is mentioned in one of these communications, all the way from Decatur back down to our neck of the woods. From an economic development, it would be nice to see something on that side of the river, but there's not that much traffic. It's not that -- it's not that popular to try to put something on the southside over there because the traffic goes down 72 so much more than it does down Alternate 20 or Alternate 72, Highway 20.

CHAIRMAN BRUCE SHUPP: There is infrastructure over there, isn't there, water, sewer, lights?

MR. JIMMY BARNETT: Not in a lot of areas between, say, Town Creek and Decatur. It's pretty well wide open.

CHAIRMAN BRUCE SHUPP: What about this new subdivision, will they have to put in their own infrastructure or will they have to hook on to an ongoing sewer system?

MR. JIMMY BARNETT: I can't answer

that.

DR. KATE JACKSON: What new subdivision?

MR. JIMMY BARNETT: It's a marina.

CHAIRMAN BRUCE SHUPP: The new development, I'm sorry.

DR. KATE JACKSON: It's not residential, I want to make that clear. The proposal is for recreation facilities generally, a campground, rental cottages, restaurant, small 50 boat marina, something like that. I just didn't want that in the record.

CHAIRMAN BRUCE SHUPP: Good point. You don't know if there is city sewer there of any kind?

MR. JIMMY BARNETT: It's not city sewer. It probably would have to be self developed by the developer.

CHAIRMAN BRUCE SHUPP: Any other comments? Okay.

(The following are the public comments received via e-mail from Robin Burchfield and via a letter from Victor P. Dura.)

E-mail from Robin Burchfield is as follows:

"I would like to voice my concerns and request TVA take another look at their natural resources and environmental impacts on all reservoirs. It is time for new and updated Land Management Plans, especially on Wheeler Reservoir. The present one is outdated due to all the growth in the area since 1995. Any decisions made based on the Plan are not in the best interest of the people or the environment. TVA appears to be in the real estate business and not into the Environmental Stewardship. They are leasing or selling my land (public) and land they took from others to private individuals for personal profit. It has got to stop!

I am not against the development of new recreation areas in the valley. I was born and raised in Oak Ridge, Tennessee and grew up on TVA

reservoirs. I currently live on the Elk River in Rogersville, Alabama. Bubba Doss has put in a request to TVA for a recreational development on 91 acres on Tract 21 to build a marina and campground. According to the 1995 Land Management Plan, this lot was allocated for Commercial Recreation and Visual Management but this area and the public has identified Ginseng growing here, Mussel beds in an area to be dredged, Eagles and Osprey feeding in this

area, spawning areas for fish but TVA's FEA says, "There will be no significant impacts to this site." The Public used to ride horses and ATVs in this area but TVA put up chains to keep them out due to the erosion they were causing and now they will let someone come in and bulldoze approximately 60 of the 91 acres with no impact!

I'm sorry but I beg to differ. This area on Elk RIver is already overdeveloped. Across from the proposed marina there are multimillion dollar condos going in with approximately 120 boat slips. Within 5 miles of this proposed marina there are 2 marinas and campgrounds, (Bayhill Marina, Lucy's Branch Campground and Joe Wheeler State Park),

all on the same side of the Tennessee River. Now when the Tennessee River is too rough everyone comes onto the Elk RIver which is causing erosion of our shorelines. An additional 100 boats will be detrimental to our Elk River. There are several other sites in the Land Management Plan where commercial recreation can go. There is nothing on the southside of the Tennessee River from Decatur to Wheeler Dam. There are several safe harbors on that side which are deep enough for a marina. One site could be Spring Creek. There used to be a restaurant

there (according to our Elders in the area) and was closed due to the drugs and roughness. The water lines and electric should all be there. If Mr. Doss is willing to pay to have Barnett Road widened and paved approximately 1 mile, he surely could pay to have the road fixed going into Spring Creek which is less than 1/10 mile. Please consider helping save some of our natural habitats from overdevelopments and commercial recreation. Not everything is about money, some things need to be left alone for our future generations to see and enjoy."

Letter from Victor P. Dura is as

follows:

"Thank you for the opportunity to submit comments to the Council. I, and several members of the community near the mouth of the Elk River (miles 1.5) have recently had reason to review the Wheeler Reservoir Land Management Plan (released Dec. 1995). We were dismayed to find how inappropriate and outdated (in our opinion) the Plan Land Use designations are, given the phenomenal growth pressures the area has experienced in the past five or six years. The area now is nothing like that described at the time the Plan was developed (probably in 1994 or early 1995). The area is now

much more intensely developed than at the time the data in the plan was collected.

We understand the Land Management Plans are generally on a ten-year review cycle, but that period is not a "hard" requirement. Indeed that period has already passed for the Wheeler Reservoir plan. Accordingly, I would like to request that the Wheeler plan be scheduled for update as soon as practicable. We believe that a priority should be established for the plan update, particularly since

the March 17, 2005 meeting of the Regional Resource Stewardship Council Meeting identified “development pressures” as one of the underlying factors supporting the need for a plan’s revision.”

(The proceedings continued as follows:)

FACILITATOR DAVE WAHUS: Well, you have been -- can we bring that down there?

Thank you.

We have been listening and doing a lot of listening and heard some fantastic presentations yesterday and then again this morning. So now it’s time to get the feedback to TVA.

We’re going to be assisted here. Could we have the screen, please? Thank you.

Catherine Mackey is going to help me, as she has in the past, to record your comments.

So what we will do, we will go through and we will record anything and everything that you -- any comments or anything you have to say. Then after we have gone through all of it, we will go back and review it and see if you have any second thoughts before I turn this back to -- the floor back

to Bruce, unless there is a different process that you wish to follow.

Okay. Let's start with the first question, and that question deals with the infrastructure. The first two questions are related.

How do you perceive the adequacy of TVA's infrastructure stewardship activities?

Well, we can break it down into strengths and weaknesses, as Janet suggested. Weaknesses or opportunity for improvement, however you want to look at it.

What are the strengths of the -- how do you perceive the adequacy of TVA's infrastructure stewardship activities?

Don't everybody talk at the same time.

Bill.

MR. BILL FORSYTH: I live close to

several projects and I have been around them all my life, and I don't see anything TVA could do more than what they are doing really. They tend to jump on any problem that comes up pretty quickly and you don't see many problems come up.

FACILITATOR DAVE WAHUS: Okay.

Austin.

MR. AUSTIN CARROLL: Well, it's a little bit like I said yesterday, giving the vastness of facilities and infrastructure that TVA has, I think that they do a good job keeping all the balls in the air. Seemingly, you know, the integrity of that infrastructure is good.

So, you know, based on what I know I would commend TVA for that, but on the other hand, you know, I'm getting the information from TVA and, you know, I'm not sure that, you know, I am qualified to say, yeah, you know, that's the right amount of stuff that we're doing or we need to do more or the integrity of them is good or not so good or whatever.

I mean, my sense of it is that it is good, but, you know, it would seem like, you know, a third-party looking in, you know, maybe doing some kind of audit of facilities from time to time, like maybe Homeland Security. They not only need to look

at TVA's infrastructure and how it's maintained and what TVA's readiness is for emergencies and preparedness for terrorism and those kinds of things, but it would seem like they need to be looking at

those kinds of facilities all across the country and doing some kind of periodic audit, you know, to make sure that things are kept up to snuff and that we are prepared and that sort of thing.

Now, I know TVA indicated they had some peer reviews and I think that's good, but it's kind of like having an independent auditor look at your books, and I think that's a good, healthy thing to do. I think somehow or another it would be good if you had the same sort of thing as far as TVA's infrastructure and preparedness, that kind of thing.

FACILITATOR DAVE WAHUS: Okay. Bruce.

CHAIRMAN BRUCE SHUPP: Ken was first.

FACILITATOR DAVE WAHUS: I'm sorry. Ken.

MR. KENNETH DARNELL: As far as weaknesses, given the amount of infrastructure we're talking about, I don't see there is any way that it can be -- you can say that the stewardship activities are adequate given the constraints that TVA is having to work under now, the budgetary constraints, there's

too much out there to be done, but as a strength I think the job that they are doing and the success

that they have with this is due to the passion that all of these people have displayed these past two days in these programs and in working with the infrastructure.

The people seem to -- they are very personal about this -- about these dams and reservoirs and the roads and bridges and things. They have a personal interest in it and appear to have gone above and beyond, but the one glaring weakness that's always going to be there is the adequacy of funding.

FACILITATOR DAVE WAHUS: Let's make sure we identify that. We do have financial constraints.

Did we capture your comments up there?

MR. KENNETH DARNELL: I think so.

FACILITATOR DAVE WAHUS: Bruce.

CHAIRMAN BRUCE SHUPP: Yeah. I just want to say that Austin represented what I wanted to say pretty thoroughly, with one exception, and Ken started to touch on it, that I think that our comment should say that, you know, we're not really that qualified to make that judgment, that there should be

outside audit from experts to do that, and that we respect the responsiveness, the responsibility, the competence and the commitment on the staff to address these issues, that we have confidence that TVA staff is doing as good as they can do, and I think that's an important thing I would like to get on the record. Whether or not you're doing everything you should be doing, I'm not sure we can say that, but I think outside audit would be a good way to go with that.

The other question I have and we haven't talked about it, and I am sure you can't talk about it, is how the terrorism factor is addressed. We have no way of knowing whether that's adequate to meet the perceived threat levels, whatever they are, and I am sure everybody wonders about that. And you can't talk about it, I'm sure. That's a concern I have.

FACILITATOR DAVE WAHUS: Let me ask a question to help me understand what you said a moment ago, Austin. You said a -- you talked about a third-party audit perhaps by the Department of Homeland Security. Homeland Security looks at security, does Homeland Security look at all aspects

of stewardship or are we talking about another outside entity or were you just throwing up a for

example type --

MR. AUSTIN CARROLL: That was a for example. I mean, they may look at certain aspects, you know, but it would just seem like an outside audit of qualified -- for a qualified group to look at it might be a healthy thing to do. Not to say that TVA is not doing everything that they can do, but, you know, I'm just not as a -- I don't have enough knowledge to say whether -- how good it is.

FACILITATOR DAVE WAHUS: You're looking for a validation.

MR. AUSTIN CARROLL: Yeah, I mean, you know, some kind of independent validation.

FACILITATOR DAVE WAHUS: Okay. Bruce.

CHAIRMAN BRUCE SHUPP: I just thinking about this last night, maybe the Corps of Engineers should validate TVA and TVA should validate the Corps, because who is better in the world at moving water and taking care of that infrastructure than those two agencies. Where do you go for that expertise? And I'm asking questions of staff now.

DR. KATE JACKSON: Do you want me to respond?

CHAIRMAN BRUCE SHUPP: Yes, please.

DR. KATE JACKSON: And we actively do benchmarking on not just the structural kind of asset management but also O&M costs and capital costs per installed megawatt but also on the -- through the non-power activities and not solely related to water barrier.

We also focus on how much do you spend on and how do you deploy your responsibilities for managing land assets, recreation assets, water quality activities, and we do that in a variety of ways.

Obviously, investor-owned utilities spend money. They spend money in a different way. They are FERC regulated and they have other kinds of things that they focus on. So we look at that data as sort of one data set.

We, in addition, focus almost specifically on the federal land dam managers. So that's folks not just limited to the Corps but also includes the Bureau of Reclamation, I mean, that's

another really big and extremely effective organization. We do go back and forth and look at each other's assets and do a lot of that.

And in addition then, we have the Hydro Board of Consultants, which is specifically focused on dam safety activities and not just, what's

the condition of that bridge or that spillway gate, but also, is your dam safety program an adequate program? Do you have a series of inspections? Do you have discipline in that? Do you audit those? So it's a programmatic examination of dam safety.

Now, what we do is we do have some gaps. I mean, we spend more money than investor-owned utilities and some federal managers on some maintenance activities in the hydro world, and that's largely because we're doing a lot of that hydro modernization activity. So we do look at those very carefully, but that does not mean that, you know, your recommendation is not useful. We could continue to do that or maybe do a bit more of it.

Does that answer that?

CHAIRMAN BRUCE SHUPP: Yeah. The Hydro Board of Review, where are they people? Are

they from other agencies or from universities? Where do they come from?

DR. KATE JACKSON: They are typically independent consultants that are sort of renowned experts in the world of dam safety. If you want specific credentials, you will have to ask. We can provide those to you.

FACILITATOR DAVE WAHUS: Austin.

MR. AUSTIN CARROLL: Do they come in and like look at what you're doing and produce a report that's available to the public and that sort of thing?

DR. KATE JACKSON: We don't make that available to the public, but, yes, they do. Dam safety, you know, they provide input to Janet. Janet is the dam safety officer for the Agency. She has a dotted-line reporting relationship around me, so directly to the Board theoretically, but we don't know what that means right now. So directly to the CEO.

So if I said, Janet, we don't need to worry about that, she says, yes, we do and we're going to. So that's the way that program is

established, and that's consistent with the federal dam safety guidelines.

Do you want to add anything? Do you want to go around me and add anything?

MR. AUSTIN CARROLL: I just think that, you know, you should have some auditor that's very similar to having an independent auditor audit your books where they come in and look at the integrity of your procedures and look at your numbers and then they produce a report that's available to

the public and that kind of thing. It's just a good check-and-balance methodology to go about it, and it would seem like that might be a healthy thing to do as far as TVA infrastructure.

FACILITATOR DAVE WAHUS: Bruce.

CHAIRMAN BRUCE SHUPP: Before you answer, let me get my two cents in there. I was just going to say that if you're asking us to comment on whether you're doing an adequate job and we're suggesting you do studies to determine that by outside groups, but if you do that and you don't make that information public, how does anybody know whether you're doing a good job or not?

MS. JANET HERRIN: I will answer that. We are responsible every two years to do a biannual report to Congress, and everybody who is covered by the federal guidelines for dam safety has to do that.

We provide our answers to about ten different questions to FEMA. They put that into a large document that is then submitted to Congress, and we have to explain, what is the purpose, how many inspections, how many people do work in your dam safety, what is the training, what training courses did you provide, how many of your people attended those training courses, how many projects are you

currently working on, what deficiencies do you have that you haven't addressed, when will these projects be done, how much do you spend this year, how much did you spend last year, how many people did you have in your program last year, how many do you have this year, what public participation have you had.

Jerry, what other questions?

There's a variety. It's about a 25- or 30-page document, the last one that we did. And then again, like I said, that is taken -- the report of TVA stays as a report of TVA and then FEMA

provides a report where they bring everything and say the dam safety programs are generally adequate with these exemptions, there's lessons learned. We can provide you the TVA report, the last one we did, and we can provide you the FEMA report if you would like to see that, but we are required to file that every two years.

CHAIRMAN BRUCE SHUPP: That's the public output.

MR. AUSTIN CARROLL: But then what happens like on the bridges, is there something parallel of the integrity of the bridges and other infrastructure besides the dams that is reported or made available to public?

MS. JANET HERRIN: We have to file the inspection reports with the Federal Highway Administration. I don't know what the Federal Highway Administration does beyond that.

MR. JERRY GIBSON: I don't know either.

MS. JANET HERRIN: I would have to find that out, but those reports do go to the Federal Highway Administration to make sure they are in

compliance with the standards that are required of all bridge owners.

MR. AUSTIN CARROLL: And the same kind of question about -- what about emergency preparedness and, like, readiness for terrorism and --

MS. JANET HERRIN: Emergency preparedness is covered in the biannual report to Congress, how many emergency action plans have you had, how many drills, functional drills, how many table-top drills, who participated in those, again, that is documented in the report to Congress.

DR. KATE JACKSON: And then, in addition, our Agency wide, I mean, you know, we focus really on kind of our level of urgency preparedness, then the Agency-wide things like our participation in

the National Incident Management System and our continuity of operations planning, all of that goes into homeland security as an agency.

MR. AUSTIN CARROLL: I mean, who looks at the hardness of the assets and looks for holes or whatever in protection for terrorism, for example?

DR. KATE JACKSON: And again,

that's -- we at the Agency level plan and that goes to Homeland Security, and we are consistent with what other dam owners do.

One of the issues associated with terrorism on dam sites is dams were constructed to be accessible. So, you know, you can do some things, but you're not going to keep the public away from what the public believes is the public assets. So you have got to kind of balance that. You're forced to balance that.

MR. AUSTIN CARROLL: They keep them away from the Capital Building.

DR. KATE JACKSON: Yep. They keep them away from nuclear plant sites too, but the rules for waterways are written differently unfortunately. We would like to keep, for many reasons, fishermen out of the spillway area.

CHAIRMAN BRUCE SHUPP: It's good you

don't run for office.

DR. KATE JACKSON: Yes. No plans to run for office.

MS. JANET HERRIN: After 9/11 we did do a very thorough analysis using the same program

that the Corps of Engineers used to address the security, and at that time we found out -- you heard Mike Ensch talk about fencing that we did. We did do some physical security things.

We closed our visitor centers that were adjacent to the dams. The Corps of Engineers has closed the locks. You cannot walk up on the lock on Sunday afternoon and have your picnic and watch people lock through. So we have, at least from access to the facilities, have removed that. Now, you obviously have the water access.

We also have some the -- water watch, is that -- water watch folks, lake watch, and those are some of the private citizens that come together and they are just looking for unusual things around the projects, but that's strictly at the interest of the local residents.

FACILITATOR DAVE WAHUS: That's like a neighbor watch in a residential area.

MS. JANET HERRIN: Yes. And we do get

calls. The TVA police has gotten some calls. I remember one of what they thought was an abandoned houseboat drifting. We have gotten some calls as a

result of the lake watch.

MR. AUSTIN CARROLL: I mean, what's in these boats and barges that are locked through? I mean, do they carry gasoline?

MR. TOM VORHOLT: Sure. Yes. Chemicals. Gasoline. I don't think there's anything on the Tennessee River that's too nasty compared to some other rivers.

MR. AUSTIN CARROLL: What about the personnel working on these barges, I mean, are they checked out?

MR. TOM VORHOLT: Oh, yeah. Absolutely. We have security plans in place for every vessel. All employees are screened. They are -- when they get on and off they are checked. There's -- we're required by the U.S. Coast Guard to have a security plan in place for the vessels and for the company.

MR. TOM LITTLEPAGE: We really haven't mentioned the Coast Guard, but they play a key role.

MR. AUSTIN CARROLL: It just seems like there would be a vulnerability when you're

locking something through like gasoline or amonium

nitrate.

MR. TOM VORHOLT: There's no amonium nitrate that moves on the Tennessee River fortunately, but it still can and does move in some quantities on other river segments.

We have security plans in place for the vessels. TVA and Corps and lock masters are all under, you know, alert and watch. There's some risk that you're never going to completely eliminate but you do your best to mitigate it.

CHAIRMAN BRUCE SHUPP: Jimmy.

MR. JIMMY BARNETT: I would just like to be on the record as saying that I commend TVA for the thoroughness of their PM program, having been associated on a lot smaller scale with some PM programs.

One of the things that concerned me in all of the dissertation that went on, which was very excellent, concrete falling from the bottom of a bridge, that one disturbed me that it went on as long as it did before something was done, just simply because if it's deteriorating -- being from West Tennessee where there's several wooden bridges that I

crossed in my youth, sometimes a community got together and milled the lumber out of trees that we had around in various locations and refurbished the bridge ourselves and the county thanked us for it and just went on. Of course, you can't do that these kinds of days, the counties can't.

But for a bridge to go that long, and I know there's lots of laws and everything that you have to go by and DOT has a say in it and everything, but that one -- I guess of all the things that I have heard, that one sort of bothered me more than anything, even the Bear Creek Dam situation, which we will talk about in a minute or some of the other dams I have heard y'all talk about and the concrete growth and that sort of thing, I have seen that in one of the trips we took.

I think everything that TVA has somebody is looking at it and I commend you for it. It's a huge task. It's a huge task in our little utility, both at Jackson and Sheffield, where we started going down and inspecting all the manholes. You'd be surprised what I found in manholes, and they are supposed to have a big, huge, you know, top on

them and that sort of thing. It was unusual to find some things that were down there.

Even in our manhole system in Sheffield, the things we dug out of there you went, how in the world did they ever get in there? Somebody probably had to pry open the lid to throw it in there. So the things that go on, if you don't have somebody looking at them, can wind up causing problems.

I don't know how TVA could get more thorough than they seem to be, but I like Austin's comment about probably having something that you can give to the public, and maybe it's part of this two-year report that you give to Congress, but who would read it, I don't know. A synopsis of it would probably be something of, hey, we passed with flying colors or we passed or, well, we've got this one little thing we need to do, but you don't need to say something about it unless you're going to do something about it because somebody is going to be out there jumping up and down if you don't.

Basically my comment is I commend TVA for what I understand, which is limited, but I have a

lot of empathy with Austin's suggestion, maybe Bruce's and others, if you had somebody out there who looked at it, I don't care who, it could be Tom Jones or Sally Smith, that looked at it and said, yeah, it's great and here's my credentials, and therefore,

I can say that. Putting that out there, I think, might rest a lot of folks' thoughts.

FACILITATOR DAVE WAHUS: Other comments?

Any other strengths that we need to address or you would like to add?

Any other weaknesses?

MR. AUSTIN CARROLL: I just keep thinking about this, like, who over -- who oversees the -- like the barge companies to ensure that you're meeting certain standards as far as security of your personnel, you know, similar to people that work at airports.

MR. TOM VORHOLT: The U.S. Coast Guard is now part of Homeland Security.

MR. AUSTIN CARROLL: So they require background checks and all of that kind of stuff?

MR. TOM VORHOLT: Well, we do as a

company, but all of the captains and pilots are licensed by the U.S. Coast Guard. Like I said, every vessel has a security plan. Those are reviewed by the Coast Guard. The Coast Guard does board periodically vessels and does inspections.

MR. AUSTIN CARROLL: Okay. And TVA -- does TVA get involved with Coast Guard, I mean, that much? Are they visible out there and you-all -- have you got some assurances that they're -- that's what is going through those locks and everything is secure?

DR. KATE JACKSON: Yes. And we also work with them in marking, you know, they mark the commercial navigation channel, and we do do drills with them and participate in their drills.

FACILITATOR DAVE WAHUS: Okay. Any other comments?

Let's go to question No. 2. Do you have any suggestions for improvements in TVA's infrastructure stewardship activities?

As I look at the weaknesses up here, maybe you have already answered that question, but if not, do you have any suggestions for improvements in

the infrastructure stewardship activities?

Bruce.

CHAIRMAN BRUCE SHUPP: My feeling is the answer is the same for both issues, that we have confidence in TVA and we respect the confidence of their staff and we think they are doing a good job, but we don't have the expertise to -- most of us don't have the expertise to judge or make a judgment and we would think they would need some outside

audits to determine what they need.

FACILITATOR DAVE WAHUS: So the weaknesses that you have identified up there would be the response to question -- essentially the response to question No. 2.

Jimmy.

MR. JIMMY BARNETT: I guess the only comment I had was the same kind of comment I had yesterday. I'm trying to be totally honest how much did I look at where the water was, I really didn't, but sometimes I was surprised at where the water was coming our way. I probably didn't pay enough attention to what all of the -- what all of the TVA people were telling us.

I don't know if maybe a reemphasis or a public education for people who have facilities, like, water intaking, wastewater outflow structures, but communicate strictly to the managers saying, hey, here's what we offer, maybe you should take a look at it more often, that might have been an impetus for me to look at it better, sort of jog, hey, you ought to be looking at this kind of a thing.

FACILITATOR DAVE WAHUS: Somebody else had their tent up.

Tom.

MR. TOM LITTLEPAGE: I too am impressed with the way TVA has developed a structure trying to be responsive to a wide range. I think historically TVA has kind of built in flood responses and dam safety related issues and that was the mindset for many, many years. I think given the changes that have occurred over the last several years, that has been broadened.

The only thing I would look at in terms of suggestion is working through, and I guess it's the incident management infrastructure, just to make sure that TVA is in the loop with regards to

discussions of what are current, credible threats and to the degree federal agencies are working to share information about what the expectations are, what we think will occur, might occur, and just encourage that coordination loop, because that seems like it's been a problem in the past, as well as looking at developing that coordination with multiple state EMA functions.

I think individually you deal with EMA as a whole, just make sure that process is working. When multiple states may be involved in some cross-boundary issue, make sure that you have kind of got that coordination loop closed.

And then lastly in terms of suggestions, my experience has been you can do a lot of table-top exercises and they all seem to work well, but until you actually conduct a real-word exercise, which has significant operational costs and implications to personnel and preventative maintenance activities, those kinds of things, but if those kinds of things where you physically tell somebody, okay, your cell phone is dead, now you go figure out a way to communicate, real world exercise,

not something you would look at doing every year, but on a periodic basis to try to get a realistic scenario to truly test your response capability. There are a lot of expenses to those, but there's some real value if you would do that.

FACILITATOR DAVE WAHUS: Okay. Any other suggestions?

Let's go to question No. 3 then. How do you perceive the adequacy of TVA's emergency preparedness and coordination efforts with the U.S. Army Corps of Engineers and states and local agencies?

Again, Janet suggested that we look at strengths and weaknesses. First of all, strengths, how do you perceive the adequacy of emergency

preparedness and coordination efforts with everyone that they coordinate with or should be coordinating with?

Miles.

MS. MILES MENNELL: I will make a comment to that, if I may. First of all, let me just say to me that it's awesome the myriad of details and the stuff that TVA has to do, and yesterday was very

educational for me. That compliment aside, I have a question.

In the past ATVG, that Association of Tennessee Valley Governments, on a number of occasions has been approached by TVPPA to talk about finding ways that we could coordinate FEMA activities or we could educate local governments better, the opportunities to participate with TVPPA by implication, and obviously TVA, because local governments don't always have the resources or the manpower or the know-how.

And I am talking about at the very local level. I am not talking about the federal agencies. I'm talking about the guys on site in towns or counties or whatever. So a comment I would make, which isn't necessarily a strength, but I would encourage those kinds of partnerships.

And we had talked with TVPPA about trying to develop some kind of curriculum, and I don't know the proper place, but it seems to me that that partnership could be in TVPPA's interest and TVA's interest and certainly the interest of local governments to get them up to speed, and maybe that's

happening already and I'm just not privy to it.

FACILITATOR DAVE WAHUS: Did we capture your thoughts there?

MS. MILES MENNELL: Good enough. Well, not ATVG, with local governments specifically or through ATVG, but specifically with local governments. I know that that has been a concern in the past and over the years, the issue being, at least in Tennessee Valley Public Power Authorities, a concern that the left hand doesn't always know what the right hand is doing, especially at the local level. It would seem to me at this time and all times it would be incumbent upon us to get everybody on board.

DR. KATE JACKSON: At the end of that sentence would you add local government?

MS. MILES MENNELL: Because I am specifically referencing six counties and six towns.

FACILITATOR DAVE WAHUS: Is that okay?

Let's put up here Miles commended TVA for their efforts in the myriad of detail that they have to work quickly.

MS. MILES MENNELL: It's extraordinary

and actually impressive. I am not just saying getting information to them, I am talking about getting training to them also or participating in exercises or whatever, the whole spectrum.

FACILITATOR DAVE WAHUS: Did we capture it?

MS. MILES MENNELL: Close enough. Thank you.

FACILITATOR DAVE WAHUS: Other comments?

Ken. I didn't see your placard up.

MR. KENNETH DARNELL: I think we have seen in the disasters that part of the failures have been the inability of competing agencies to work together. One of the strengths that I see here is TVA's willingness to work with the Corps and with state and emergency management agencies and the willingness of those other agencies to work with the TVA on a shoulder-to-shoulder basis, that's one of the strength that I see.

FACILITATOR DAVE WAHUS: Thank you.

Any other strengths?

Weaknesses?

Do you have any suggestions for improvement in TVA's emergency preparedness and coordination efforts? How can the program be improved?

Ken.

MR. KENNETH DARNELL: It still seems fragmented, even within TVA you have teams that deal with the power side, the nuclear side, the reservoirs. It seems that there would need to be some central overriding committee or group or something to coordinate the efforts of all the divisions within TVA.

FACILITATOR DAVE WAHUS: So from your perspective there is fragmentation.

MR. KENNETH DARNELL: Yes.

FACILITATOR DAVE WAHUS: Okay. Any other comments?

Okay. Let's go to question No. 5, and we're shifting now and we're going away from -- we're going to be more specific about -- and you had a number of comments and questions. So I am expecting to hear some suggestions.

Has TVA considered a full range of

options for Bear Creek Dam? And if not, what other options should be considered?

As Janet -- if I can remember what Janet said, they are going out with a scoping meeting in June and they are looking for your thoughts to help them prepare for that scoping meeting and to make sure that they can do a good job when they approach the public and present this challenge to them. So any input that you have would be very, very helpful.

Tom.

MR. TOM VORHOLT: I think you should find David Nye, wherever he is. Obviously, this doesn't have the breath and depth of an ROS, but to a smaller degree or smaller scale, I mean, seriously maybe that kind of process that was used in the ROS where you form some inneragency teams and you pull some people together into this NEPA process.

I mean, the ROS was much greater in scope and we completed it in just over a year, but I think a lot of that was driven by David Nye and his leadership of the process and his management of the process. So that's my suggestion.

FACILITATOR DAVE WAHUS: Miles, you had your card up and then you brought it back down.

MS. MILES MENNELL: Well, I was going to say essentially the same thing, but I was going to raise the question, and I don't expect Kate or anyone else here to comment on this, but it would seem to me -- and I understand that all of TVA's dams are important, but it would seem to me in going through the public scoping process that maybe some of these things need to be prioritized, what's essential to TVA's mission now and what isn't, and maybe that needs to be specifically evaluated too as a appropriate, not just activities, activities and facilities.

FACILITATOR DAVE WAHUS: Bruce.

CHAIRMAN BRUCE SHUPP: During the scoping, and I'm sure this will be done, I just want to go on the record with it, it's important for the public to know the cost of all the options involved, because I believe the cost to TVA, to the local community, to the state of breaching and shutting down the facility are going to be very significant. I mean, there's long-term costs to the local economy.

There's fixed costs to replace the campgrounds, to replace the water intakes, et cetera, that type of thing, and if they understand that and are sympathetic to those real costs.

And I wonder if those costs could be turned into costs to fix it and how that would compare of sharing the costs to repair it the way it should be repaired, I hope that's looked at closely.

I have no idea what the cost benefit evaluation of that would be, but what could become a hostile environment during those scoping sessions, I hope, can turn into a very educational environment to talk about these real world situations that exists out there.

FACILITATOR DAVE WAHUS: Miles.

MS. MILES MENNELL: I just want to add a comment to Bruce's comment. ATVG, as ATVG, we certainly would like to -- would go to any length and hope that we would all go to any lengths to avoid putting any more financial costs or burdens on local governments. I would be remiss if I didn't say that. Also, I just need to say federal appropriations, and I won't elaborate.

FACILITATOR DAVE WAHUS: Tom.

MR. TOM VORHOLT: Yeah, I was just going to comment, Bruce, I think you made some assumptions that, I think, the NEPA process has to work through in what the costs are and what the benefits are. I mean, I don't know, but I think

that's what the NEPA process has to address, and hopefully, you know, that will be done in a manner and forum that all of that can be put on the table and digested and looked at.

I think the other comment is, I mean, TVA probably needs to look at some of the secondary -- I mean, is this a federal issue or is this a state issue?

I mean, I understand you want to keep your stewardship activities, I understand that fully, and there's probably nobody better to do a lot of the stewardship activities that you're doing than you, but when it comes to a 568 acre lake that has no economic development, recreation doesn't seem to be a huge issue there, I mean, going back to Miles' comment, I guess, I mean, on the priority list it seems to be hardly on the radar screen.

FACILITATOR DAVE WAHUS: Austin.

MR. AUSTIN CARROLL: Talking about cost sharing, I mean, power money is paying for -- you know, the ratepayers are paying for the maintenance and, you know, the remediation actions that are being done down there now to prevent the dam from breaching on its own, and it sounds like there may have to be some additional amount of work done

just to keep it propped up for the what, 17 months, or what did you say, how long is the process going to take?

DR. KATE JACKSON: To complete the study.

MR. AUSTIN CARROLL: You know, in my thinking, you know, ratepayers have already done their part. So I would -- you know, I would be opposed to any other power money being spent on it.

I think that, you know, certainly the TVPPA and other people involved in power and that are responsible to the ratepayers need to be notified of the process to have an opportunity to be there at hearings and so forth and to make comments.

You know, I think you have got to work

through that process and you have got to keep it going until you can come to some determination, but I would urge you to do that as soon as you could and decide what you're going to do with that dog.

FACILITATOR DAVE WAHUS: Okay. Thank you.

Tom.

MR. TOM LITTLEPAGE: Along those lines, I guess, what I would caution is to be sensitive to looking at this situation in a vacuum

and realize that there are a number of non-powered earthen dams and tributary located projects, and that to the degree TVA takes an approach with this one, it needs to be applied across the basin as part of a larger perspective on how these kinds of activities are going to be viewed.

FACILITATOR DAVE WAHUS: So whatever you do here is going to affect -- is going to be a precedent for future potential action on the other similar type of dams?

MR. TOM VORHOLT: The other thing I would add to that is to make sure you're looking at the condition of this project in providing some

benchmark against how those other dams are performing, you know, is this dramatically out of line with what we're seeing or is this the first of potentially other similar problems that may be occurring elsewhere in the basin.

FACILITATOR DAVE WAHUS: So we heard that it might be different, it needs to be documented clearly, is what you're saying?

MR. TOM LITTLEPAGE: Where does it rank given the performance of not necessarily these kind of dams just in the basin but those that may be situated in a similar sort or geographic scenario,

the karst issue.

FACILITATOR DAVE WAHUS: Okay. Other comments?

Yes, Jimmy.

MR. JIMMY BARNETT: One comment that I can about guarantee you will hear is that, hey, if TVA had constructed it right in the first place it wouldn't have messed up, I mean, that's just a standard public reaction to stuff like that.

You do have a problem with the safety issue that is inherent with having the facility. My

comment to somebody, I forget now who it was, during the break was, it might have been Wayne, that if there's a safety issue, then that ought to be dealt with first because that's human lives involved and property and so forth.

You can gently propose it, you know. The ultimate thing to do would be to ease a breach into the existing thing and put it back while the process is going on and you discuss the cost sharing or how do we get up to a permanent thing, but I sure would hate to have it drug out and a sudden breach cause some loss of life or something like that, that would be an irreparable kind of thing to happen down there. And nothing you do is going to satisfy

everybody, as you well know.

So I guess I favor the idea of, if you need to, go ahead and say, hey, we have got to breach it for safety purposes right now, but a permanent solution will have to be worked out with all the parties involved. And I firmly agree that there ought to be some participation by somebody other than the power suppliers or the citizens who use the power.

FACILITATOR DAVE WAHUS: And I think that's part of the process or to do it through the NEPA process, that's what drive that process.

Any other comments?

Yes, Don.

MR. DON GOWAN: As we talked it was clear to me that there's some major issues that are being talked about today. Some of us, certainly me, do not have the capacity intellectually to even understand some of these issues. I mean, these are beyond belief.

My biggest concern is that -- by the way, all the comments have been very positive and very useful. I think it's very important that we don't burden Kate and TVA with a lot of work that may come to me that I don't understand. So there has to

be some balance so that we don't put more on TVA, because they are doing a great job already with very limited resources. So I will leave it at that.

FACILITATOR DAVE WAHUS: Any other comments?

Let's go back to the first question and review then. Any other options that should be

considered?

We kind of asked those questions together. Anything else that should be considered?

Okay. Let's go back to Question No. 1. Question No. 1: How do you perceive the adequacy of TVA's infrastructure stewardship activities?

The strengths:

Nothing TVA could do more than it's doing.

TVA can't do more than it's going right now.

Given the vastness of the facilities, TVA does a good job with the infrastructure it has.

The integrity of the infrastructure is good.

The passion for the infrastructure stewardship activities by the TVA staff is commendable.

Commend TVA on the thoroughness of its preventive maintenance program.

Did we miss anything that you want to say here?

Is there anything that we said under

the strengths that you don't want in your report to TVA?

Okay. Hearing no reaction, I am going to assume that you want it as it is.

We'll move on. Weaknesses:

Given the financial restraints, there is too much to be done for TVA to accomplish all that needs to be done in all of its infrastructure, not enough money to do everything that needs to be done, in other words.

Reports of the Hydro Review Board are not available to the public.

And what we have done is taken out the other weaknesses that you identified that are really suggestions and we moved them down into the response to the second question.

So in response to weaknesses, are there any other weaknesses we need to add?

Do we -- do we need to modify or take either one of those two weaknesses out of there?

Okay. Question No. 2: Do you have any suggestions for improvement in TVA's infrastructure stewardship activity?

There's a number here. So I am going to stop after each one and see if you agree or disagree and if you want to make any modifications that captured what you wanted to say.

Respect the confidence and expertise, you have a great respect for the confidence and the expertise of TVA staff, however, an outside audit is necessary.

Need a periodic third-party audit of infrastructure, perhaps by the Department of Homeland Security or other qualified group in addition to the TVA peer review process. Did that capture what you wanted to say?

Okay. Council is not qualified to make judgements regarding TVA's infrastructure stewardship activities. Third-party independent audit is a good idea for independent validation of TVA's activities.

And that should probably be stewardship activities, is that what you were getting at when we say -- the end of that third one, infrastructure stewardship activities, does that capture what you wanted to say?

Yes, Ken.

MR. KENNETH DARNELL: We could probably merge those three statements into a single statement.

FACILITATOR DAVE WAHUS: You could and we could do a lot of wordsmithing, but I think we're getting the idea to focus on what you're trying to say.

MR. AUSTIN CARROLL: Well, I would say you could put infrastructure stewardship/emergency preparedness.

FACILITATOR DAVE WAHUS: Okay. Slash emergency preparedness activities. Good suggestion.

Anything else?

Okay. The next one. Perhaps the Army Corps of Engineers and TVA could validate each other's infrastructure stewardship activities. Corps evaluates TVA and TVA evaluates the Corps.

Any comments? Anything else?

Okay. Re-emphasis on public education on water intakes, outflows, and for those who manage those facilities. Anything you want to do to that?

Okay. Make sure TVA is informed of

current credible threats known by the federal government. Does that capture what you wanted to say?

We're going to stop for a moment. The question that comes to my mind as I read that comment or that suggestion is, how is TVA going to make sure that they are informed of all current credible threats known by the federal government?

That may be a wonderful goal, but I'm not sure how they do that. Maybe if some of you have an idea as to how they should go about doing it, it's time to say it. Maybe there are ways of making sure that the federal government tells them everything, I don't know.

DR. KATE JACKSON: Do you want me to respond?

FACILITATOR DAVE WAHUS: No, you don't have to respond. I am looking for comments from the group here.

MR. TOM LITTLEPAGE: And I'm not sure what the appropriate vehicle is. I know that being part of the National Instance Management may be a way to tap into that, because I am sure all the

appropriate federal agencies are involved in that collective group.

FACILITATOR DAVE WAHUS: Very good, that's kind of what I was looking for. Thank you.

Any other comments on that?

Okay. Conduct real-world exercises instead of table-top exercises on a periodic basis to truly test response capabilities. And what someone suggested is -- was that Tom that suggested that you go through the process and say to someone that your cell phone is dead, now, how are you going to communicate, and take those type of exercises.

MR. TOM VORHOLT: The wording should be "in addition to" instead of the --

FACILITATOR DAVE WAHUS: Those can be really interesting and very frustrating for the participants having participated in some of those in the past. You get a great deal of information from them.

MR. AUSTIN CARROLL: I have a comment.

FACILITATOR DAVE WAHUS: Yes, sir.

MR. AUSTIN CARROLL: Back up there, you know, as far as an independent audit, I would

think it would need to be done periodically. I don't know if it necessarily needs to be done every year, you know, maybe every three years or something along those lines, and a report be published and be made available to the public.

FACILITATOR DAVE WAHUS: Okay. We do have periodic up there already.

MR. AUSTIN CARROLL: Okay.

FACILITATOR DAVE WAHUS: But we can add the report should be available to the public. Okay.

MR. TOM LITTLEPAGE: I'm not sure how you would handle that given the report may identify weaknesses that you would not want available to the public. So you would have to figure out a way to provide that process such that the public knew there was an ongoing activity associated with the review and TVA was working to address whatever deficiencies were identified without getting into a lot of specifics.

MR. AUSTIN CARROLL: National deficiencies are on the evening news every night. So I don't know that it makes a lot of difference.

MR. TOM LITTLEPAGE: I don't know that that's a good thing though.

MR. KENNETH DARNELL: I think that covered adequate. It says a report, not necessarily the report.

FACILITATOR DAVE WAHUS: Any other changes or modifications you wanted to make to any of the responses to question No. 2? Any additional items that we need add to that?

Jimmy.

MR. JIMMY BARNETT: Let me ask you a question, Kate. During the homeland security thing all of the communities up and down the river, like Sheffield and Florence, et cetera, were required, and TVA did some work for us to make a report on if something happened upriver were we able to take care -- what would we do in case of a spill by a tanker or a barge or a wreck on a bridge or somebody tosses some arsenic over the side or whatever, and we had to pinpoint a lot of point sources of potential contamination of the river. Did y'all get a report of all of that also?

DR. KATE JACKSON: Not to my

knowledge. I think a lot of that information went into homeland security and it began to establish their priorities for the kinds of things that they, homeland security, would be sending out for requirements for federal agencies and others to be able to address from a homeland security perspective. To my knowledge, we never saw a report.

MR. JIMMY BARNETT: Would reports like that be of benefit to you?

DR. KATE JACKSON: Well, again, I will go back to Tom's point, you probably don't want to share the best injection points for some sort of chemical or biological contaminants to be put into a municipal water system, I mean, that's probably not a good idea.

So, you know, the way that we participate in that is via our federal relationship with homeland security, executive orders that come, homeland security requirements that come, design basis kinds of accidents or credible threats that come via the Nuclear Regulatory Commission to our nuclear side of the house, and then the TVA police are actively related to all of the anti-terrorism

task force activities, homeland security activities, and they provide us guidelines and frameworks within which we plan and provide capital to the kinds of things that we would address and do address.

MR. JIMMY BARNETT: I was thinking y'all being a federal agency and dealing with the river in which the contaminants would be, would it be a helpful and necessary thing for you?

DR. KATE JACKSON: We have looked at that, as has homeland security, and generally, it's very difficult to put enough material in reservoirs

to have a significant impact in a non-visible way.

I mean, you need truckloads of arsenic or truckloads of some sort of biological contaminant, and, you know, you go back to, you can tell when they are doing that. That's difficult.

There are many easier places to strike fear and terror into people's hearts, and you saw the picture of Neyland Stadium, that's more likely than dumping something into Douglas.

So what homeland security has done is come up with a priority list of the kinds of things that should be addressed, and generally contamination

of surface water is not very high on the priority list, and, you know, terrorist attacks, physical terrorist attacks of a dam structure is not on the list either recognizing -- maybe with the exception of Bear Creek, it's relatively difficult to contemplate bombing or blowing up, even if you put a tanker of some nasty explosive on the top of concrete dam, dams are big, momentum filled structures.

MR. BARRY WALTON: Hard targets.

DR. KATE JACKSON: They are hard targets. They found that out during the Second World With, right, with the dam bombers.

FACILITATOR DAVE WAHUS: About 15 or

20 years ago there were three gentlemen, I will call them gentlemen, although I'm not sure that's an adequate term, who lived in Nashville and they decided that they wanted to rob some banks but they didn't want to get caught.

So they took some explosives, some dynamite, and they took it out on the surface -- downstream surface of J. Percy Priest Dam and they were preparing to -- they were going to blow the dam so it would flood Nashville and, you know, everybody

would evacuate and then they would go in and take all the money.

Their engineering intellect was very, very inadequate, and fortunately, the explosive did not go off. They were caught as they were trying to set it and they were put in an appropriate place, and I hope they are still there. But to emphasize the point that dams are hard targets, had the explosive gone off, it would have created a small crater on the surface, and that's an earth filled dam, but it wouldn't have done any damage, and it certainly wouldn't have flooded Nashville.

DR. KATE JACKSON: There are much scarier targets that can be impacted by a rifle from a long way away with a big, old scope, and it ain't a dam.

FACILITATOR DAVE WAHUS: Okay. Jimmy, based on that discussion, are there any other suggestions that you want to make or any changes?

MR. JIMMY BARNETT: No.

FACILITATOR DAVE WAHUS: Before we go away, anything else for response to Question No. 2, any other suggestions?

Okay. Now, let's go to No. 3. How do you perceive the adequacy of TVA's emergency preparedness and coordination efforts with the U.S. Army Corps of Engineers and the state and local agencies?

Under strengths you say:

Commend TVA for their efforts in the myriad of details involved in emergency preparedness training and exercise.

TVA's willingness to work with the United States Corps of Engineers, state and local agencies and the reciprocity of cooperation with those agencies. I guess you're commending TVA on their willingness to work, is that right? Let's add that in the beginning, commend TVA for their willingness. Okay. Good.

Encourage partnerships with agencies

to get information and training to local EMAs and local governments.

Miles.

MS. MILES MENNELL: I don't think that's a strength, it's not a weakness, but it doesn't go under strength. It needs to go someplace

else. It's a suggestion.

FACILITATOR DAVE WAHUS: For the last one?

MS. MILES MENNELL: For the last one.

FACILITATOR DAVE WAHUS: Take the last one and put it down under the suggestions?

MS. MILES MENNELL: That's fine. It's not a weakness.

FACILITATOR DAVE WAHUS: Let's put it down under suggestions, if that's what you want to do.

MS. MILES MENNELL: Yeah.

FACILITATOR DAVE WAHUS: It's your recommendation and certainly not mine.

MS. MILES MENNELL: Cool. That works.

FACILITATOR DAVE WAHUS: Good. So for the remaining two strengths there, are those -- do you want to leave those as they are?

Is there anything that you -- any

changes that you want to make to them?

Any additions?

Okay. Let's hope they all get back from the restroom by the time we get done here so we

will have a quorum.

Okay. Let's go to No. 4. Do you have any suggestions for improvement in TVA's emergency preparedness and coordination efforts?

One, the one we just moved down, encourage partnerships with agencies to get information and training to local EMAs and local governments.

And then the second one is, it seems fragmented, the efforts seem fragmented. Different teams with different pieces of infrastructure dams, transmission, bridges, et cetera, need an overarching committee to oversee those activities to ensure the completeness of the effort.

Tom.

MR. TOM LITTLEPAGE: I guess I don't see that as a significant weakness. I guess looking at the way Wayne described the incident management process where you have technical teams providing input into that process, I'm not sure how they would do it differently given the approach that we heard

that they take with response to instant management.

FACILITATOR DAVE WAHUS: What do you

want to do?

MR. JIMMY BARNETT: And I think also that as need dictates, they have an agency group sitting up here which considers the whole agency and then advises each group that you need to coordinate and you need to do whatever.

FACILITATOR DAVE WAHUS: Is this what you -- what do you want to do?

Tom, what do you suggest?

MR. TOM VORHOLT: I don't know that I agree that -- I just don't know that I agree with the statement, but if the rest of the committee --

FACILITATOR DAVE WAHUS: What do the rest of you think?

We're looking at the second response to question No. 4. The efforts seem fragmented. Different teams deal with different pieces of infrastructure, dams, bridges -- dams, transmission, bridges. Needs an overarching committee to oversee these facilities. These activities ensure completeness of the process.

Was this response -- was this response in response to what you heard downstairs in the

Emergency Operation Center or was it in response to the discussion here?

MR. TOM LITTLEPAGE: The discussion up here.

FACILITATOR DAVE WAHUS: What is the Council's preference?

DR. KATE JACKSON: Can I make a suggestion?

FACILITATOR DAVE WAHUS: Certainly.

DR. KATE JACKSON: You know, if your concern is you don't want to make it look like we might not be doing that because we might be doing that, you could change the recommendation to say, we need to ensure that, if that makes you more comfortable. Although, I missed the beginning of the conversation. So if that's not on target, just ignore it.

FACILITATOR DAVE WAHUS: Need to ensure that there is an overarching committee.

DR. KATE JACKSON: Well, that's what I said.

FACILITATOR DAVE WAHUS: Is that what you want to do?

MR. TOM LITTLEPAGE: That sounds better to me.

FACILITATOR DAVE WAHUS: This isn't what Kate wants, this is what you want as a Council.

MR. JIMMY BARNETT: I like that much better.

FACILITATOR DAVE WAHUS: Okay. I am seeing nods of heads.

MR. KARL DUDLEY: I like that.

FACILITATOR DAVE WAHUS: Okay. Anything else that you want to add in response to Question No. 4?

Then let's go on to Bear Creek. Has TVA considered a full range of options for Bear Creek Dam? What other options should be considered? I think you have responded to both of those under Question No. 5.

The first one was:

Find David Nye.

Form inneragency teams similar to ROS.

Need good management of the process.

Need to evaluate the priorities of facilities, studies to be undertaken, and determine

what is essential to TVA's core mission.

Agreement there?

Disagreement?

Comments?

Public scoping should involve information on the cost of all options.

If the public and local governments are aware of the long-term costs, perhaps those funds could be redirected to fix the seepage problems.

No more cost burdens placed on local governments.

Let's make that last one a separate one. So public scoping should involve information on the cost of all options.

If the public and local governments are aware of the long-term costs, perhaps those funds could be redirected to fix the seepage problems.

DR. KATE JACKSON: Could I ask a clarifying question?

FACILITATOR DAVE WAHUS: Yes.

DR. KATE JACKSON: Bruce, your point there was aware of long-term costs to them?

CHAIRMAN BRUCE SHUPP: Yes, on both

sides, okay, going either direction.

FACILITATOR DAVE WAHUS: Good. Anything you want to change?

Add or subtract? Nope.

The next one:

No more cost burdens should be placed on local governments. Do y'all agree?

Tom.

MR. TOM VORHOLT: No offense, Miles, but somebody has got to incur costs. I don't know what you mean by local governments, maybe state, but I don't know that -- I don't think -- I think it's too premature at this point, without even going through the process, to let's just say not have them share in any of the cost of this.

MS. MILES MENNELL: Then I think you should add that as a bullet then. Put something like we need to explore cost sharing with local governments.

MR. TOM VORHOLT: I think it's premature to say that they shouldn't. I mean, isn't that part of what the NEPA process is about?

I mean, for us to recommend to the

Board that local governments shouldn't share any of burden of the costs, I just think that's premature.

CHAIRMAN BRUCE SHUPP: Tom, I don't think the last -- on this last iteration of the Council, our recommendations were not necessarily all unanimous. They were comments that were brought up. I don't agree with that either, but it's a comment. It's a legitimate thought. It's one that's dealt

with with most of the local governments in the Valley. So, you know, it's their expression of it, and I don't think it reflects unanimity.

MR. TOM VORHOLT: That's fine. If we don't have to have consensus on these points, that's fine.

CHAIRMAN BRUCE SHUPP: I don't think we have to do that.

FACILITATOR DAVE WAHUS: Might I make a suggestion?

You could say, no more cost burden should be placed on local governments, however, it's too premature in the process to say they should not foster in the cost share or you can leave it as it is now.

MR. TOM VORHOLT: I think Bruce's point is probably the pertinent one. If we don't have to have consensus on this, then just leave it.

CHAIRMAN BRUCE SHUPP: TVA understands where it's coming from.

MS. MILES MENNELL: ATVG.

DR. KATE JACKSON: We have it on the record, Miles.

FACILITATOR DAVE WAHUS: Okay. Any other comments or discussions on these two bullets or

on this issue? Okay.

Consider cost sharing so ratepayers do not have the full cost burden. Opposed to any other power funds being spent on this project.

Comments?

DR. KATE JACKSON: Do you want to separate those into two? Well, I'm asking them. I know you can.

FACILITATOR DAVE WAHUS: What do you want to do? What do you want to do?

MR. AUSTIN CARROLL: I think I might have been responsible for that. Consider cost sharing so that ratepayers do not have the full cost

burden, what I guess I wanted to say there is that consider that the ratepayers -- it needs to be considered that the ratepayers have already paid for, you know, remedial activities to try to preserve the dam as it is and considerable money -- ratepayer money has already been spent and that should be considered as, you know, their share of the cost without additional costs being imposed on the ratepayers for other activities beyond the process conclusion.

MR. JIMMY BARNETT: I think out of necessity if there is a safety issue and there's a cost of actually putting a breach in there, that's one thing, but to put up this concrete dam or the slabs I suggested of steel down through there, a bunker-type wall, I think that would be excessive given the purpose that's out there, et cetera.

FACILITATOR DAVE WAHUS: Now, before we make any more changes to that, do you agree with that first sentence?

I will read through it. Consider that ratepayers have already paid for remedial activities to try and preserve the dam as it is. Consider

ratepayer money that has been spend should be considered as their contribution and not make them contribute any more money.

Okay. Is that what you want to say?

MR. JIMMY BARNETT: I guess I've got a problem with any more money because of safety issues.

MR. W. C. NELSON: The only other thing I would like to say about that, if it is determined that the dam is unsafe and it has to be breached, TVA would have to bear the expense of breaching it, which was estimated at 4 to $5 million. So I would like to see this go on record that our total contribution would be no more than the cost of breaching the dam if it's required.

MR. JIMMY BARNETT: That's what I was getting at.

FACILITATOR DAVE WAHUS: The total TVA contribution should be no more than the cost of breaching the dam?

MR. W. C. NELSON: Right.

FACILITATOR DAVE WAHUS: And all associated costs which would --

MR. W. C. NELSON: That would solve

the problem of the safety factors.

FACILITATOR DAVE WAHUS: Which would include the economic loss and movement of water treatments or intakes and all the other things that would go along with that, that's -- I'm asking the question if that's what you mean?

MR. W. C. NELSON: No. I just mean breaching the dam, the dollar amount that was estimated at 4 to $5 million.

FACILITATOR DAVE WAHUS: I saw Miles and then -- well, Austin and then Miles and then Bruce. Go ahead, Austin.

MR. AUSTIN CARROLL: I guess I understood that even if the dam broke that it would be a gradual process and not something that would, you know, just wash houses and people away all of a

sudden. So I don't know that that I am even for spending any money to breach the dam, you know. It will open up by itself, you know.

MR. W. C. NELSON: The damage might be more than --

MR. TOM LITTLEPAGE: TVA controlled failure option.

FACILITATOR DAVE WAHUS: Miles.

MS. MILES MENNELL: Maybe this is a good place for me to add that if local governments are going to be -- if they are going to have to be involved in cost sharing, that I would like to see there be some sort of stakeholders' group so that can be carefully negotiated, just like they did in Guntersville, vis-a-via the aquatic weeds, et cetera. So I would hope there would be a forum where all of this could be negotiated.

FACILITATOR DAVE WAHUS: And I think NEPA is a part of that.

Bruce.

CHAIRMAN BRUCE SHUPP: That's an interesting suggestion. My comment is the differences between Miles' comment and Austin and W. C. is that I think that we should go on record here that the Council is as equally divided as the

subjects that are going to be discussing this locally suggesting that the burdens should be all on TVA or burdens should be all on local governments, and the range in between is what's going to be worked out in the NEPA process, that's really what you guys are all

saying.

MS. MILES MENNELL: Are you suggesting a compromise?

CHAIRMAN BRUCE SHUPP: I think that's what it's going to end up as obviously, but there's a strong difference of opinion on the Council just as there is in the -- trying to elucidate the perfect statement about percentages gets us nowhere because it's all going to be worked out in the process.

MS. MILES MENNELL: Yes, but I do think a stakeholder forum would be appropriate as we go forward.

MR. TOM VORHOLT: And Miles, that's why I suggested the same kind of format as the ROS because that's we did is we got all the stakeholders together.

MS. MILES MENNELL: I know. I'm conceding.

MR. TOM VORHOLT: But it's true because, you know, we generated a list of about 100

alternatives that were reduced to eight, and during that process there were negotiations and there was compromise and we came to some understandings to get

to that point.

MS. MILES MENNELL: Including, I think, some cost sharing.

MR. TOM VORHOLT: Probably, yeah, I mean, but that's what that -- to me we're not going to solve it in this room, but if you get the stakeholders -- all the stakeholders together and let them do some of this rather than just say, here's our four alternatives, to me you have already got one strike against you by saying, this is the four, but you don't need to be asking us if there's more, ask the stakeholders.

DR. KATE JACKSON: You are the stakeholders. You represent the stakeholders. So that's -- I mean, that's the beginning of this process.

MR. TOM VORHOLT: But I don't live in Northeast Alabama. I mean, I am in here doing some of that, and I agree with Austin, I mean, we're not talking about appropriated money anymore. I mean, this is coming from people who pay their electricity bills. This isn't -- when it was appropriated money,

not that it's free money or found money, to people

like Austin and others it's a little different.

FACILITATOR DAVE WAHUS: Bruce, go ahead.

CHAIRMAN BRUCE SHUPP: I will bet you, and correct me if I am wrong, but I will bet you that there are not two out of ten stakeholders that live over there that know that there's no appropriated monies.

MR. TOM VORHOLT: But, see, that's what that process is about.

CHAIRMAN BRUCE SHUPP: That's what the process has to do, exactly.

FACILITATOR DAVE WAHUS: What we have just heard you say is that the total ratepayer cost should not be more than the cost estimated for the basic breach of the dam, 4 to $5 million.

Form a stakeholder forum similar to the group formed for Guntersville aquatic plant issues.

Council is divided as to how the cost should be allocated for the preferred alternative.

Is that what you want to say? Did you want to leave it in here?

MS. MILES MENNELL: We're not divided, we just flat out disagree.

FACILITATOR DAVE WAHUS: I'm trying to be diplomatic.

The NEPA process needs to work through the cost benefits and address those issues in a public forum, I heard you restate that not in those exact words, but you have restated that and has essentially restated that again now.

Determine if there is a federal or state issue and the secondary impacts and costs to TVA.

MS. MILES MENNELL: In fairness there, it should be determined if this is federal, state or local issue.

FACILITATOR DAVE WAHUS: Federal, state or local issue. Okay.

Comments or changes? Okay.

This does not seem to be a priority. Do you-all agree on that? Do you want to leave that comment in, Bear Creek does not seem to be a priority?

MR. JIMMY BARNETT: I wouldn't put the

highest priority. That would go over bad.

FACILITATOR DAVE WAHUS: Do you want to take that out completely or do you want to modify it?

MR. TOM VORHOLT: I really wasn't trying to say that. I mean, somebody is a priority. I guess I don't know how to phrase it but --

MS. MILES MENNELL: Shouldn't be.

MR. KENNETH DARNELL: Trying to say it's not a --

MR. TOM VORHOLT: Maybe the way to say it is, I think, given the number of projects and infrastructure, you know, that TVA has to account for, fund, that maybe there should be --

DR. KATE JACKSON: I'm wondering if it's potentially captured in the second bullet, evaluating the priorities of facilities, studies to be undertaken and determine what the potential is of TVA's core mission.

FACILITATOR DAVE WAHUS: It probably is.

MR. TOM VORHOLT: Good point.

FACILITATOR DAVE WAHUS: So do you

want to take that out?

MR. TOM VORHOLT: Yes.

FACILITATOR DAVE WAHUS: Let's take out those two.

Federal appropriation, do you just want to leave that in there to make sure it's not forgotten?

MS. MILES MENNELL: Absolutely. I don't want to forgotten. And if you want, I can put weeds in there, too.

DR. KATE JACKSON: If you would put a characterizing statement around that. That actually doesn't mean much when you haven't lived with all of you so long. If you could just say --

MS. MILES MENNELL: We want them, federal appropriations to help pay some of these costs.

FACILITATOR DAVE WAHUS: Should help pay the costs.

MS. MILES MENNELL: Yeah. Thank you.

FACILITATOR DAVE WAHUS: Okay. The need to apply whatever decisions are made in this study across the basin to other non-power dams, and

the point was there this would probably -- this would probably set a precedent.

Any other comments? Okay.

Based on the analysis of Bear Creek, provide a benchmark to -- that could be used for other non-power dams, including -- what's the last word, the karst, the sinkholes, okay. Sinkholes I understand. That's the type of material underneath. Okay.

If TVA had constructed the dam properly in the first place, the current problems would not exist. Now, that's a comment that you're going -- that someone suggested you're going to get from the public, do you want that in your recommendation.

MR. JIMMY BARNETT: Don't leave it in there like the Council suggested it.

FACILITATOR DAVE WAHUS: So that's my question, how do you want to address it?

Do you want to leave it in as it is or do you want to say, this is a comment that you're probably going to get?

CHAIRMAN BRUCE SHUPP: I would like to

remove that.

FACILITATOR DAVE WAHUS: Any objection to removing it?

MR. JIMMY BARNETT: It was a comment that was --

FACILITATOR DAVE WAHUS: Okay. Let's take that one out.

Safety issues should be dealt with first to protect lives and property. Full agreement on that? I don't see any nodding of heads.

The balance of putting more of a burden on TVA to fix the problems. Help me with this one. Whoever made the suggestion, can you help me out with what you intended?

DR. KATE JACKSON: It was Don.

FACILITATOR DAVE WAHUS: Don, we're going to put some pressure on you here.

MR. DON GOWAN: Sure.

FACILITATOR DAVE WAHUS: The last comment here we need you to help us flesh this out a little bit. Need to balance placing additional burdens on TVA to fix the problem, can we make it a little bit more clearer or more specific so we don't

misunderstand it later as to what you intended here?

MR. DON GOWAN: Sure. I mean, we have talked about a lot of nice things that we can look into. In many of these cases we don't have the expertise to answer these questions. So then we go to TVA for those answers, which takes time and money perhaps. When we talked about doing audits and so forth, that cost money, that cost real money, and I just want everybody to be aware that TVA is pretty burdened already.

FACILITATOR DAVE WAHUS: Would we take

that back up to the second comment up there, without making any changes, Catherine, yet, but is it included up there in evaluating priorities?

MS. MILES MENNELL: It is.

DR. KATE JACKSON: Is this about Bear Creek or is this about the whole system?

MR. DON GOWAN: The whole system.

DR. KATE JACKSON: So it needs to move up to Question 2.

FACILITATOR DAVE WAHUS: Yes.

DR. KATE JACKSON: But I am speaking for the Council, so you guys need to be okay with

that.

FACILITATOR DAVE WAHUS: But if it pertains to the entire system, then it needs to be here rather than under Bear Creek.

MR. DON GOWAN: Absolutely.

FACILITATOR DAVE WAHUS: Again, how do we restate this or how do we state this so that there's no question as to -- help me wordsmith a little bit. Need to balance placing additional burdens on TVA to fix problems across the system or with the --

MR. DON GOWAN: We should just be cautious.

FACILITATOR DAVE WAHUS: Be cautious about placing additional burdens on TVA?

MR. DON GOWAN: Yeah.

FACILITATOR DAVE WAHUS: Okay. Thank you. That helps us understand tomorrow what we said today.

Now, we have reviewed all of these questions. You have made some changes. You have made some additions. You have deleted some things. Anything else that any of you want to say or any of

you have any input that you want to provide to the suggestions that you have made in response to the six questions presented to you today?

Okay. Hearing none, Mr. Chairman, with 11 in the group in here, you do have a quorum, so I would turn it back over to you, but before I do I want to publicly thank Catherine for helping me. Without her help it would not have gone as fast or as efficient, and I do appreciate it.

CHAIRMAN BRUCE SHUPP: Thank you, David, good job as usual. Excellent.

All right. We're at the wrap-up of the meeting. Any other comments from Council members on the record before we move to adjourn?

Go ahead, Ken.

MR. KENNETH DARNELL: This has been an extremely informative session, and I would like to thank the staff of TVA for providing all of this information.

CHAIRMAN BRUCE SHUPP: Thank you.

MR. TOM VORHOLT: I second that.

CHAIRMAN BRUCE SHUPP: Any others?

All right. We have -- the next

meeting is August 16th and 17th right here. Would you like to comment on the contents at all? Do you have any idea on what you're going to do with the last meeting?

DR. KATE JACKSON: We have some ideas. I don't think we're prepared to talk about them.

CHAIRMAN BRUCE SHUPP: All right. I will remind you-all that that is probably the last meeting of this Council, that's a pretty fair assumption.

DR. KATE JACKSON: That's a fair assumption.

FACILITATOR DAVE WAHUS: So I urge you-all to attend and your friends to attend. I will not be there. Tom Vorholt will be chairing that session.

I am going to take this opportunity to

thank TVA for the opportunity to get educated and to serve with all of these wonderful people who I have enjoyed working with all these years. So I won't be seeing you at the next meeting. This is my farewell. Goodbye to all of you and thanks very much to a great staff, really enjoyed it. It was a lot of fun.

Thanks.

MR. TOM VORHOLT: Thank you, Bruce.

CHAIRMAN BRUCE SHUPP: One administrative announcement.

FACILITATOR DAVE WAHUS: Please take your name tags off your coat or wherever you have them and lay them on the table in front of you so that when you return next time you will have it.

Thank you.

CHAIRMAN BRUCE SHUPP: Thank you. One more.

UNIDENTIFIED SPEAKER: Lunches are available just as you go out the door. If you need to leave, feel free to take one with you. If you want to eat it here, in the room where we ate yesterday tables are set up there or you can take it and go back there or in here.

DR. KATE JACKSON: I'd just like to take a moment and thank all of you for coming and

your attention. It's been really difficult to get a quorum, keep that in mind for the August meeting, please. We really appreciate your very helpful and thoughtful comments.

CHAIRMAN BRUCE SHUPP: Meeting adjourned. Thank you.

END OF PROCEEDINGS

REPORTER'S CERTIFICATE

STATE OF TENNESSEE)
: SS.
COUNTY OF HAMILTON)

I, Kimberly J. Nixon, RPR, the officer before whom the foregoing meeting was taken, do hereby certify that the foregoing transcript was taken by me in machine shorthand, and thereafter reduced to typewriting by me;

That the transcript was prepared under my supervision, and attached to this certificate is a true, accurate and complete transcript, as provided by law;

That I am neither counsel for, related to, nor employed by any of the parties to this action; and I further certify that I am not a relative or employee of any attorney or counsel employed by the parties hereto, nor financially or otherwise interested in the outcome of this action; and that the foregoing transcript is complete and accurate in all particulars, as provided by law.

In witness whereof, I have hereunto set my hand this_____day of_____, 2006.

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KIMBERLY J. NIXON, RPR
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