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2
3 REGIONAL RESOURCE STEWARDSHIP COUNCIL MEETING
4 APRIL 19TH & 20TH, 2012
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P R O C E E D I N G S

1
2 DFO MR. BRUCE SCHOFIELD: Good
3 morning.

4 FACILITATOR MR. WILSON TAYLOR: Good
5 morning.

6 DFO MR. BRUCE SCHOFIELD: Thanks,
7 Wilson. If we can start kind of settling in we will
8 kick this off and get right into business.

9 I want to welcome the Council back to
10 Chattanooga. I think we're going to have a good
11 meeting over the next couple of days. I think you
12 will find our topics of interest to you, and the trip
13 this afternoon will be educational.

14 So with the welcome I would like to
15 give a special welcome to Jack Simmons, our newest
16 member of the Regional Resource Stewardship Council.
17 Jack, we will probably get you to give a little brief
18 bio for the folks. In a second or two, you will do
19 that.

20 By way of introduction, I wanted to
21 give you a brief discussion or talk about some of the
22 activities that have gone on in TVA since we last
23 met. The departure of our Chief Operating Officer
24 Bill McCollum was announced. And as a result of
25 that, we have taken the opportunity to kind of

1 realign functions to go do that.

2 Anda is not here today because she has
3 taken on a new role in our engineering organization
4 to go do that. What we did with the realignment is
5 pull nuclear out and pull anything that's non-nuclear
6 generation out and that now is reporting to Kim
7 Greene. Anda is working for Kim as senior vice
8 president of engineering for coal, gas, and hydro to
9 go do that. So that's taking up all of her time
10 right now.

11 The other piece of that is Preston
12 Swafford has got our nuclear generation. Mike Skaggs
13 has nuclear construction. They both report to Tom
14 Kilgore. Kim, as I said, has all generation that is
15 not nuclear and also reports to Tom. We then have
16 our General Counsel as a direct report. We have John
17 Thomas, who is our Chief Financial Officer, in that
18 organization.

19 And then everything that's left we
20 created an Administrative Services Organization which
21 is headed by Janet Herrin. That's where land and
22 shoreline, which was my previous position, had its
23 home and we found a new one for it in the
24 Administrative Services.

25 What we did was combine all

1 properties. So what my role now is I take care of
2 all of TVA's property interests, whether they are
3 structural buildings or natural resources. So it
4 made sense to put that together.

5 So that's kind of the reorg. We're
6 still working through all of the personnel impacts to
7 go that. I have already been asked at least once
8 today, can we get a recent -- an up-to-date org
9 chart, no, because we don't have one.

10 We expect to roll all of this out and
11 get all of the cascading -- you know, we have got
12 Tom's directs. We have got most of their directs in
13 place. And as we're rolling out to fill that out, we
14 hope to have this done in the late May time frame and
15 we will provide Council with an updated copy or a
16 link to our web site that will provide that piece.

17 So there's my quick overview of that.
18 I will be around for questions, but for right now I
19 will turn it over to Deb Woolley and Mr. Wilson
20 Taylor to help facilitate and go through that.

21 Thank you. And welcome again.

22 FACILITATOR MR. WILSON TAYLOR: Thank
23 you, Bruce.

24 CHAIR MRS. DEBORAH WOOLLEY: Thank
25 you. Does anybody have any questions for Bruce

1 besides the reorg chart? It's kind of musical
2 chairs.

3 Welcome. This is our first meeting of
4 this year and we're glad to have you here. Jack,
5 we're glad you joined us. I think -- why don't we
6 just go around the room and let everybody introduce
7 themselves and you can tell us a little bit about
8 what you do and we can tell you about what we do.

9 Phil, do you want to start?

10 MR. PHIL HAZLE: Phil Hazle from
11 Cumberland, Kentucky.

12 MR. MARK HOMMICH: Mark Hommich with
13 Volunteer Barge in Nashville representing navigation
14 interests.

15 MRS. AVIS KENNEDY: Avis Kennedy. I'm
16 retired from the U.S. Army Corps of Engineers, and I
17 am representing recreation interests.

18 FACILITATOR MR. WILSON TAYLOR: Just a
19 quick -- if I can interrupt you and remind everybody,
20 you need to turn your mics on this time. They are
21 not like the mics where they come on automatically.

22 DFO MR. BRUCE SCHOFIELD: Push the
23 button in the middle.

24 MR. RUSSELL TOWNSEND: I'm Russ
25 Townsend. I'm the Tribal Historic Preservation

1 Officer for the Eastern Band of Cherokee Indians.

2 MR. MICHAEL GOODMAN: I'm Mike
3 Goodman. I'm from Temple Inland in Waverly,
4 Tennessee, and I represent direct serve.

5 MR. MARK IVERSON: My name is Mark
6 Iverson from Bowling Green, Kentucky representing
7 Bowling Green Municipal Utilities, one of the
8 distributors.

9 MRS. JEAN ELMORE: Jean Elmore. It
10 doesn't want to stay on.

11 MR. TOM LITTLEPAGE: There's a message
12 there.

13 MRS. JEAN ELMORE: I'm Jean Elmore
14 from West Point, Mississippi, and I am a Mississippi
15 representative.

16 MR. PAUL SLOAN: Paul Sloan,
17 Nashville, retired citizen at large.

18 MR. TOM LITTLEPAGE: I'm Tom
19 Littlepage with the State of Alabama, and I manage
20 water quantity programs for the State.

21 MRS. RENEE HOYOS: Renee Hoyos,
22 Executive Director, Tennessee Clean Water Network.

23 MR. KARL DUDLEY: I have got the same
24 one, I believe, Jean. Karl Dudley, Pickwick Electric
25 Cooperative in Selmer, Tennessee, and I'm one of the

1 power distributors.

2 MR. GEORGE KITCHENS: George Kitchens
3 with Joe Wheeler EMC in North Alabama, another one of
4 the utilities that resells TVA power.

5 MR. JACK SIMMONS: I'm Jack Simmons
6 with Tennessee Valley Public Power Association.
7 First meeting. Glad to be here. We have four power
8 distributor representatives on this committee, three
9 of whom you have already met this morning. I am the
10 fourth one.

11 We actually represent all of the 155
12 local utilities, 50 cooperatives, 105 municipals who
13 purchase power from TVA and sell it at the retail
14 level in the Valley. So we represent them in
15 discussions with TVA on rates and contracts, energy
16 efficiency, demand response, all the programs that
17 roll out to the power distributors, and then we're
18 also their advocacy in Washington.

19 MR. BOB MARTINEAU: I'm Bob Martineau
20 from Nashville, the Commissioner of the Department of
21 Environmental Conservation for the state.

22 CHAIR MRS. DEBORAH WOOLLEY: And I'm
23 Deb Woolley and I'm President of the Tennessee
24 Chamber of Commerce and Industry, which is a
25 statewide business association.

1 FACILITATOR MR. WILSON TAYLOR: And
2 I'm Wilson Taylor with TVA.

3 CHAIR MRS. DEBORAH WOOLLEY: Do you
4 want to go through the people in the back of the
5 room?

6 DFO MR. BRUCE SCHOFIELD: We can, yes.

7 MS. BETH KEEL: I'm Beth Keel.

8 FACILITATOR MR. WILSON TAYLOR: If you
9 could, stand up.

10 MS. BETH KEEL: I just welcome you all
11 because obviously I have worked with you for several
12 rounds here. Thanks for coming. Appreciate it.

13 FACILITATOR MR. WILSON TAYLOR: John,
14 we're going to need you to stand up so she can record
15 your name here.

16 MR. JOHN MYER: John Myer with
17 Environmental Policy in TVA. Thank you.

18 MRS. KELLY LOVE: Hi. I'm Kelly Love.
19 I'm an in-house attorney with TVA.

20 MS. TIFFANY FOSTER: Good morning.
21 I'm Tiffany Foster. I'm our partnerships and
22 education specialist and property in property and
23 resources.

24 MRS. TINA GUINN: I'm Tina Guinn and I
25 manage natural resource planning and programs.

1 MR. EVAN CREWS: I'm Evan Crews and
2 I'm with the Property and Natural Resources Division,
3 formerly Land and Shoreline Management.

4 MR. RICHARD HOLLAND: I'm Richard
5 Holland. I'm here just as a citizen observer.

6 MS. LIZ UPCHURCH: I'm Liz Upchurch.
7 I work for TVA.

8 MR. CHUCH BACH: I'm Chuck Bach. I am
9 manager of river scheduling. My staff and I will be
10 giving you an update on the river here shortly.

11 MR. NATE HUNT: I'm Nate (could not
12 hear his introduction.)

13 FACILITATOR MR. WILSON TAYLOR: I
14 didn't get — who was the last speaker?

15 MR. NATE HUNT: Nate Hunt with the
16 Southern Environmental Law Center.

17 DFO MR. BRUCE SCHOFIELD: Thank you,
18 Nate.

19 MR. PERRY CHIEF: Perry Chief with TVA
20 Environmental Policy.

21 MS. ERICA WADL: Erica Wadl with TVA
22 in Department of Natural Resources.

23 MS. JENNIFER DODD: Jennifer Dodd. I
24 am in River Scheduling, and I am responsible for
25 non-power access.

1 MS. SYLVIA WHITEHOUSE: Sylvia
2 Whitehouse. I'm from TVA Inspector General's Office.

3 CHAIR MRS. DEBORAH WOOLLEY: Is it on?

4 Thank you. It's always glad (sic) to
5 have so many of the TVA staff here because it's a
6 chance to learn.

7 I just want to say briefly that I
8 think it's a really exciting meeting. I think we've
9 got some very interesting presentations. I am really
10 looking forward to the trip up on Raccoon Mountain.
11 I have never been up there. So for those of you who
12 have, you can understand why I am looking forward to
13 this. I think it's going to be good.

14 When we started looking at the
15 discussion questions for this meeting I kind of
16 thought, uh-oh, it's all come home now because I
17 think how many Councils have sat and talked about the
18 different challenges and the different opportunities
19 TVA has and we keep throwing out the idea of, well,
20 you need to do some partnerships. You ought to work
21 with the private sector. You ought to work with the
22 public sector. Do some partnerships.

23 Well, this is kind of coming home now
24 because we're going to look through a lot of this
25 stuff, and then our four discussion questions, which

1 are under the tab that we will be dealing with
2 tomorrow, is really asking us to start putting some
3 meat around our suggestions that we keep making to
4 use partnerships.

5 So as we go through the presentations
6 and our discussions today, I think it's just kind of
7 to keep that in the back of your mind that that's
8 where we're going with the whole thing. With that, I
9 am going to turn it over to Wilson who can run it a
10 whole lot better than me.

11 FACILITATOR MR. WILSON TAYLOR: Thank
12 you, Deb. We will see how well I do today.

13 First I want to review the agenda just
14 real quickly. You have already heard Chuck Bach
15 mention that his team is going to talk about the
16 river. Bruce Schofield is going to come back and
17 give you an overview of the whole meeting about what
18 we're going to talk about.

19 Some things to highlight is an update
20 on the NRP, we're going to hear from that. The tour
21 this afternoon at Raccoon Mountain, I think that's
22 going to be a real good time. I think the weather is
23 going to cooperate. I remember one tour we had
24 planned and the weather was not as cooperative. So I
25 think today is going to work out a little bit better

1 hopefully.

2 As Deb said, tomorrow we will be
3 discussing those questions and maybe have some
4 citizens here to ask questions and give their input.

5 As a reminder, when you are talking or
6 want to make a comment, if you can remember to put
7 your name tent up, that way we can make sure we
8 recognize everybody.

9 Another reminder about the
10 microphones, make sure you turn it on. If we forget
11 that, then I will probably remind you, if that's
12 okay.

13 If you're at the back table and we ask
14 you a question, it would be preferable is you could
15 come up to the front and use the microphone here to
16 make sure everybody can hear you.

17 Then I think that's -- as far as
18 breaks go, we have those listed in the program in the
19 agenda, but if we need to take breaks at different
20 times certainly I think the Chair would willing to do
21 that as well.

22 So, Madam Chair, anything else?

23 CHAIR MRS. DEBORAH WOOLLEY: Let's
24 move it ahead.

25 FACILITATOR MR. WILSON TAYLOR: Okay.

1 Thank you. So Tina Guinn.

2 MRS. TINA GUINN: That last weather
3 field trip was the last topic I brought to you. So I
4 promise not to talk about non-navigables today,
5 unless you have a question to decide, I can certainly
6 answer that.

7 As Wilson said, I am Tina Guinn, and I
8 am happy to bring you an update on the NRP, something
9 I know that this Council worked very hard on. We
10 wanted to let you know what had been going on as far
11 as activities regarding the NRP since the Board
12 accepted the Natural Resource Plan in August of 2011.

13 The purpose of the NRP is a plan to
14 guide TVA's responsible management of natural
15 resources over the next 20 years. Resources --
16 resource areas included in the NRP are biological,
17 cultural, recreation, water, lands planning, and
18 public engagement.

19 The priorities of the NRP are to
20 integrate the objectives of these six resource areas,
21 provide optimum public land use benefits and balance
22 competing and sometimes conflicting resource uses.

23 Every five years the NRP will be
24 reviewed and potentially refreshed to address changes
25 in these objectives and/or improve the methods of

1 meeting these objectives.

2 I hope that some of these slides that
3 you see in your book and on the screen behind me are
4 familiar to you. I have pulled them from the NRP in
5 hopes that we would briefly recap some of the ideas
6 and then go into some of the activities on how they
7 fit into the plan.

8 The NRP direction takes TVA from a
9 reactive inconsistent resource management approach to
10 an integrated and proactive management approach.
11 Some of the themes that you will see in this table
12 are inconsistency across the Valley, different
13 offices approaching resource areas and projects
14 differently, inconsistency in messaging perhaps,
15 scattered data that we -- you know, we had data but
16 maybe one person didn't know where it was at or it
17 wasn't all in one place. So we did find themes in
18 here that TVA needed to address.

19 This slide, I really like this picture
20 a lot because the NRP acknowledges that resources are
21 integrated in the real world and so TVA's management
22 approach should be the same.

23 On this particular tract of land on
24 Wheeler Reservoir, it's called tract 198, but we tend
25 to call it Paint Rock, you can see representatives or

1 reflections of each of the six resource areas in the
2 NRP.

3 We have cultural features, rock art,
4 that are very sensitive and need protection on the
5 walls of the cliff facing here. We also have human
6 remains at this site.

7 There is a recreation component in
8 that rock climbers like to use these areas to climb
9 the bluff. I imagine that would be fun. It's not
10 something I myself would go do. You know, it's a
11 natural setting. It's beautiful. They see the rock
12 art.

13 In the water that faces this
14 particular tract we have habitat for endangered
15 mussel species. The land cover on this tract is also
16 a potential habitat for species, including eagles and
17 Paragon falcons there that are known from the area.
18 So you see we have all the resources combined right
19 here in this one tract.

20 Next year when we do lands planning on
21 Wheeler Reservoir we will be converting this probably
22 to a Zone 3, which indicates that these sensitive
23 resources are present. We also see this tract as
24 lending itself to a public outreach and education
25 component, especially with the rock climbers, so that

1 we can show them where to climb and why we might
2 restrict them to certain areas of the tract.

3 Because resources are integrated so
4 should we be in our approach. Since last August we
5 have organized our natural resource management group
6 into teams. These teams are not aligned by resource,
7 in other words, a group of biologists, a group of
8 archeologists, a group of education specialists, but
9 rather by functions, basically planning and
10 implementation.

11 You will see up here we have planning
12 and program teams and then two implementation teams
13 that cover the Eastern side of the Valley and the
14 Western side of the Valley. Experts from each of the
15 six resource areas, recreation, water, cultural, et
16 cetera, populate these teams so that they can work
17 together and collaborate together in an integrated
18 setting.

19 This is a fairly simple diagram of our
20 approach, and we do matrix out to other groups within
21 TVA, such as the ARPA officers, people who do data
22 collection on water quality, and our compliance
23 groups.

24 In the NRP we listed several measures
25 of success that we wanted to reach. On this slide,

1 note that several of these are 20 years out. It is a
2 20-year plan, for instance, conducting archeological
3 surveys on 60,000 to 100,000 acres of TVA land.

4 Some of the measures of success on
5 this page are a little more short-term in their
6 duration, such as reassess water quality and aquatic
7 life of all streams and reservoirs and share data,
8 that's three to five years out.

9 And our lands plan, which you will
10 hear me repeat often because we're working very hard
11 on that, converting all of those land plans that are
12 multiple-use allocation to single-use parcel
13 allocation, we have set a three- to five-year goal
14 for ourselves on that.

15 So how do we do this?

16 The NRP implementation strategy takes
17 a phased approach. In Phase 1 we establish a
18 foundation by continuing to meet our regulatory and
19 legal requirements, understanding the condition of
20 the resources, having good data management, and
21 planning.

22 In Phase 2 we implement programs to
23 positively affect resource conditions. We evaluate
24 the effectiveness of these programs. We are
25 systematic in our approach. We form partnerships to

1 assist us in our -- in achieving our goals.

2 Hopefully, at that time we will be five years out and
3 we will take a pause and review the NRP.

4 In Phase 3 we will continue to enhance
5 and improve our stewardship efforts by continuing
6 partnerships and expanding our efforts and we will
7 update land management plans on a rotational cycle.

8 I would like to specifically look at
9 Phase 1 because that's where we're at now. The keys
10 to success in Phase 1 are maintaining our current
11 efforts, expanding our data management, gaining a
12 better understanding of the resource base and
13 condition, developing and maintaining partnerships,
14 establishing assessment processes and metrics, and
15 again, adopting reservoir land plans to single-use
16 parcel allocation.

17 This is a slide where you see really
18 the crux of what we have been doing to achieve those
19 keys to success. What this chart shows is each
20 resource area, the key to success that the different
21 activities align with and then these particular
22 actions.

23 For example, under biological
24 resources we're doing land condition assessments, and
25 this year we just completed looking at over 20,000

1 acres of undeveloped TVA managed properties. We have
2 also assessed all of our trails finding some that
3 needed to be closed and others that we honestly
4 didn't know we had.

5 So all of those have been surveyed and
6 mapped, and we hope to get that out to the public
7 soon. And I will let Tiffany talk more about trails
8 on this ranch.

9 In our cultural resources we are doing
10 a Section 110 survey of all TVA properties that would
11 be structures. So that's something we haven't had
12 the opportunity before. So we are very pleased that
13 we were able to do that this year, and that's gaining
14 a better understanding of the resource base and
15 condition but also putting that into a database that
16 we're proposing for our cultural resources.

17 We have also switched to a focused
18 regional ARPA approach finding that our resources
19 were stretched fairly thin across the Valley. So we
20 looked at where the real looting activities were
21 occurring and where we had help from local agencies
22 in going after some of these looters. So we have
23 taken from -- going from a plan where we just checked
24 all around the Valley to really focusing on trying to
25 get some of these folks in the areas where they are

1 most active.

2 Recreation, we had a capital
3 campground improvement initiative this year.

4 In our water resources, we are doing
5 what we're calling a state-of-the-water update.
6 We're using our annual data that TVA has been
7 collecting for years but also reaching out to
8 agencies and other groups for the data they have and
9 putting together a paper that we hope tells the story
10 of the Tennessee River, not just particular
11 reservoirs where we may have people working and not
12 communicating, but what is the story of the entire
13 river system. We hope to complete that this year.

14 As I have said, we're doing our
15 reservoir lands planning this year. We're working on
16 Kentucky lands plan. I think this week they will
17 finish converting the multiple-use allocations to
18 single use. There's still much work to be done in
19 writing the plan, but that's a major milestone they
20 are meeting. Next year we will be looking at Wheeler
21 Reservoir.

22 I am not going to highlight anything
23 in public engagement. I am going to leave that to
24 Tiffany in the next presentation. Then in all
25 resource areas we're working on program development.

1 Now, I mentioned integration, of
2 course, this chart breaks everything down into
3 resources, but we are trying to integrate our
4 efforts.

5 For instance, with the land condition
6 assessment, we're moving to include cultural analysis
7 along with the biological analysis so that we can
8 look at each parcel and what the impacts or needs are
9 for each parcel more holistically.

10 Our data is a place where we're really
11 trying to integrate. We have a lot of data housed in
12 different places. So we're trying to create one
13 viewer or platform so that the person can look at
14 that data, pull a potential parcel of land up, know
15 what the biological condition is.

16 Are there any cultural resources
17 there?

18 Is it on the reservoir?

19 Is it affecting water quality in some
20 way?

21 Are there recreation opportunities,
22 both dispersed and commercial?

23 Where is it in the plan?

24 What is it zoned for?

25 Are there any volunteer opportunities

1 or partnership opportunities on that parcel?

2 And even, have we done activities on
3 that parcel with volunteers in the past or
4 partnerships?

5 So we would like for this data viewer
6 to give us a snapshot of everything on each area of
7 land, and I think that's something that we can
8 achieve and will be very helpful.

9 In reaching Phase 2, which we hope to
10 do by the end of 2014, we have started some
11 initiatives in 2012. We have done consistent signage
12 across the Valley. We started our dewatering
13 revitalization program, a green campground pilot, an
14 outdoor classroom pilot, and our waterfront yards
15 pilot.

16 One of our major focuses, however, is
17 partnerships. In order to reach Phase 2 by 2014 we
18 have to have partners, and these fall in the areas of
19 volunteers, stewardship foundation, corporate
20 stewardship, and strategic partnerships. That will
21 be what Tiffany will be speaking to in a few moments.

22 That's our update.

23 FACILITATOR MR. WILSON TAYLOR: Okay.
24 Questions or comments?

25 Russ.

1 MR. RUSSELL TOWNSEND: I see you
2 didn't mention law enforcement in partnerships. How
3 is that going to work out?

4 MRS. TINA GUINN: We will retain our
5 two ARPA officers. Right now we're going to have
6 them focusing in the -- well, parts of Kentucky
7 Reservoir, Pickwick, Wheeler, and Gunter'sville
8 because that's where we're seeing the most activity
9 on TVA land. So we're working with them.

10 We have other investigators that will
11 be with TVA-P that will be available to help them as
12 needed. If we're seeing something and we feel like
13 we need extra help, we have been told that we can use
14 some other investigators as well.

15 CHAIR MRS. DEBORAH WOOLLEY: I just
16 want to say that having been part of this Council and
17 working on the plan, I have worked on a lot of
18 strategic plans and I have seen them get bound up,
19 ready, and put on the shelf, and I am impressed with
20 the implementation schedule you have out there and
21 the route you're going, but most of all the
22 accountability that comes with it, that there's
23 actual items to check off. So I think it's an
24 excellent start, and I congratulate you and the
25 staff.

1 MRS. RENEE HOYOS: It's a wonderful
2 plan. I was just curious if we're going to have a
3 talk about how we're going to fund it. I believe
4 that was part of the conversation we had the last
5 time, and I can't remember how we concluded that
6 along with, you know, I understand there's been some
7 cuts in the environmental program as well.

8 DFO MR. BRUCE SCHOFIELD: Well, we are
9 open to any questions on that particular funding.
10 And as we go back to the basis for the -- what we
11 referred to as the custodial level, TVA will continue
12 to fund it that. Those are the requirements that we
13 have to have to meet basic laws, rules, regulations.

14 The remaining piece of that funding is
15 part of the partnership aspect that we're going to go
16 do, whether that's in kind labor, in kind materials
17 or actual funding through some partnerships which we
18 have going.

19 I think Tiffany can speak to a little
20 bit about that, but in order to get to the preferred
21 alternative it's going to take almost a 50/50 between
22 TVA's funding as well as partnerships from local
23 communities, state agencies, other federal agencies
24 if we can get that. That's a growth that we have in
25 the funding.

1 One of the targets that we have in
2 land and shoreline today as one of the measures for
3 the NRP, and we refer to as leveraged funding, and
4 the target is in this first year as we're kicking it
5 off the ground is to take and find partnerships where
6 we leverage at least 10 percent as a target, the big
7 target is 15, the stretch target is 20 of the
8 \$9 million that TVA has in the game from the front
9 end to meet the custodial level.

10 So we're looking for upwards of
11 900,000 to a million dollars that we can credit in
12 partnerships to continue to do that. So there's the
13 total spend that we think we put back into the
14 resources of about 10 million for FY12.

15 Does that help?

16 MRS. RENEE HOYOS: Yes.

17 MRS. TINA GUINN: I think also by
18 having a planning team we're focused on using our
19 resources, which includes funding more wisely and
20 more strategically, and also our partnerships.
21 That's where you will see the word strategic a lot,
22 which means really think about this and how it fits
23 into the program and what both partners are getting
24 from it.

25 FACILITATOR MR. WILSON TAYLOR: Paul.

1 MR. PAUL SLOAN: Bruce, I would be
2 interested in --

3 FACILITATOR MR. WILSON TAYLOR: Your
4 mic.

5 MR. PAUL SLOAN: I would be
6 interested -- this is maybe a question for our next
7 meeting since -- I think this is excellent to revisit
8 the NRP each meeting for an update, and I agree with
9 Madam Chairman that this is excellent.

10 The impact of off-road vehicles on TVA
11 resources, both authorized and unauthorized, I would
12 be very interested in -- that strikes me as one of
13 those potential impacts and uses that's changing as
14 we go along. So the response has to change and the
15 planning has to change. And the NRP is adaptive
16 enough, I presume, to respond to that.

17 I would be interested in sort of where
18 TVA is on that and what are the different impacts
19 that you're seeing, as I said, both authorized and
20 unauthorized on our -- on the resources you own and
21 on the resources that, you know, you have access on.

22 DFO MR. BRUCE SCHOFIELD: And we will
23 take that as maybe a suggestion for the next meeting.
24 But also, you know, this afternoon as we move through
25 we have several knowledgeable individuals in the room

1 that can respond to those questions.

2 It is a growing problem both on -- and
3 we see a great deal of it particularly during the
4 winter months water, you know, with low water levels
5 and there's mud bogs that people just love to go play
6 in. There's ongoing issues on right-of-ways that TVA
7 has.

8 What we sometimes struggle with is
9 there's TVA owned land, there's TVA controlled land,
10 there's land that TVA may have an easement on to go
11 use, particularly for power lines that we don't own,
12 and we have no authority to prevent that activity.
13 The land owner does.

14 So there's -- there's that whole thing
15 of -- it goes back to my fundamental question when I
16 got into land and shoreline when they told me the
17 first question I always had to ask was, who owns the
18 land, because that's what you're going to do.

19 I think you're probably referring to
20 the Aetna Mountain problem. There's a big problem
21 there, but one of the big issues is we don't own the
22 land. So we don't have the authority to control the
23 activity on it unless it affects our transmission
24 lines to go do that.

25 We will provide an update. Maybe we

1 can do something maybe tomorrow morning to give you a
2 little piece on that if we don't get to it this
3 afternoon.

4 CHAIR MRS. DEBORAH WOOLLEY: I would
5 think also that it's creating a new liability issue
6 in terms of accidents or the — not only destruction
7 of the property but in the case of somebody getting
8 hurt.

9 DFO MR. BRUCE SCHOFIELD: Yes.

10 FACILITATOR MR. WILSON TAYLOR: Okay.
11 George, I was looking at you. I thought you had a
12 comment.

13 MR. GEORGE KITCHENS: You just caught
14 me paying attention, Wilson.

15 FACILITATOR MR. WILSON TAYLOR: Sorry
16 about that.

17 Tina, thank you. I think that's all.

18 MRS. TINA GUINN: Thank you.

19 FACILITATOR MR. WILSON TAYLOR: We
20 have a break scheduled, but instead of taking a break
21 we're going to let Bruce go ahead since we're a
22 little bit early.

23 DFO MR. BRUCE SCHOFIELD: And I think
24 when Bruce is done we will still be ahead of schedule
25 because this won't take long.

1 What we want to do is kind of really
2 talk about what we're going to be doing for the rest
3 of today and into tomorrow. We will provide a pretty
4 detailed discussion from Tiffany on what we're doing
5 with partnerships, which goes into Renee's comment
6 about how we're getting money in order to go do this.

7 This afternoon or later this morning
8 Chuck and his team will be talking a great deal about
9 the other piece of a -- the Natural Resource Plan did
10 the 293,000 acres, 11,000 miles of shoreline,
11 essential stewardship piece.

12 The other large piece in stewardship
13 that TVA has is the management of the river system,
14 and Chuck and his team will provide us a good update
15 on that and be available for questions.

16 This afternoon I think we will have a
17 good time going to Raccoon Mountain. We will talk
18 about trails. We will look at the pump storage
19 facility, how that operates. I know it will be a
20 repeat for some of the folks in this room, but we're
21 doing a good job with that one to go do that.

22 The trail system that has been
23 constructed over the last decade on Raccoon Mountain
24 is extensive, and it is one where we do control TVA
25 land. To go to Paul's comment about how it's used

1 and what the trails are, it's a nationally and
2 internationally recognized set of mountain bike
3 trails to go do that.

4 There are international competitions
5 there. It is done under guidance with TVA through
6 easements that have those requirements for how they
7 use it, how they develop it to put minimal impact on
8 the environment to go do that.

9 Then we will come back probably about
10 back at 4:45 and have a little bit of an hour or so
11 to get ready before we go out to have dinner.

12 Tomorrow we will go into the advice
13 session. Behind the tab on questions in your book,
14 there are three questions that we have posed for the
15 Council for this session.

16 What opportunities, i.e., volunteers,
17 corporate partnerships, stewardship foundations, et
18 cetera, should TVA pursue in order to achieve our
19 stewardship goals?

20 It's kind of -- it taps into what
21 Tiffany is going to talk about is how do we go do
22 that?

23 What ideas would the Council give us
24 to help us find ways to go out and initiate those
25 partnerships?

1 What attributes or benefits or
2 outcomes would make a business organization or public
3 entity want to contribute to such a foundation?

4 Then what criteria are important to
5 maintain accountability of said foundations in the
6 eyes of both the contributors as well as the general
7 public?

8 The whole point of the NRP is to
9 provide benefit to the general public because the
10 general public are those people that own those TVA
11 lands to go do that. So I think that will have some
12 lively discussion tomorrow.

13 Questions about what we're going to be
14 doing the next day and a half?

15 Okay. I guess we can -- do we -- how
16 is everybody doing?

17 Do you want to move on into Tiffany?

18 CHAIR MRS. DEBORAH WOOLLEY: Yes.

19 FACILITATOR MR. WILSON TAYLOR: Yes.

20 DFO MR. BRUCE SCHOFIELD: Okay.

21 Tiffany.

22 MS. TIFFANY FOSTER: Good morning. My
23 name is Tiffany Foster. As I said earlier, I am the
24 partnerships and outreach education specialist with
25 TVA, and today I am going to talk about our

1 partnership strategy.

2 As Tina Guinn mentioned just a little
3 while ago, we have been working really hard on
4 developing the Natural Resource Plan. We have
5 started this year on trying to figure out how we're
6 going to go about implementing that plan.

7 And I think it was pretty evident from
8 Tina's slides and her talk the Natural Resource Plan
9 is a lot of programs and it's a lot of work. And
10 obviously TVA, to be able to implement all of these
11 programs and do a great job, is going to need
12 partners. We're going to need to seek help and seek
13 input from outside of our agency to really make this
14 become a great plan and to be able to take care of
15 the resources as we have set out.

16 So today I am going to just outline
17 some of our partnership programs by highlighting some
18 of the ways we're going to try to engage our
19 partners.

20 Y'all, I am having a little bit of
21 allergy issues. So I'm sorry if I'm -- I am going to
22 stop for a minute. I promise I am not crying. My
23 eyes are just draining. So this is really a good
24 program. It's not a bad thing.

25 CHAIR MRS. DEBORAH WOOLLEY: We have

1 that effect on people.

2 MS. TIFFANY FOSTER: Yeah. So I will
3 try to make it through.

4 So partnerships. All righty. I have
5 probably said this word about ten times, and I will
6 say it a whole lot more in this presentation. We use
7 the term a lot. I am sure you guys do as well.

8 For our discussion today kind of the
9 definition we're working on is mutually beneficial
10 strategic relationships. Mutually beneficial is
11 obviously because for these to be sustainable
12 partnerships, we need for everyone involved to feel
13 value and recognize the value in these partnerships.

14 As Tina alluded to in -- in our
15 seeking out partners we need to be strategic. We
16 need to be seeking working with folks that have
17 common goals and common missions with TVA so we can
18 all accomplish what we need to accomplish through
19 this plan.

20 The four programs I am going to focus
21 on today are our strategic partnership program and
22 our volunteer program, and these are partners --
23 these are programs that were already ongoing, but
24 we're looking for ways to enhance the programs, make
25 them more appealing, maybe pull in a wider pool of

1 participants to work with us.

2 We also have the corporate stewardship
3 program and our stewardship foundation program, and
4 these are a couple of ideas that are relatively new
5 to TVA that came about in the Natural Resource Plan.

6 This is what we're hoping to really
7 tap into you guys, into your creativity and your
8 knowledge and expertise to help us figure out what
9 would make these viable programs and help us support
10 some of the natural resource programs.

11 So some of the activities we envision
12 being carried out through some of these programs are
13 habitat restoration, which could be -- we have got a
14 couple of groups right now that are working on public
15 lands. They are planting trees and native warm
16 season grasses, and they are converting what used to
17 be kind of just a fescue grass to an area that really
18 supports a lot of wildlife. It's a really nice
19 situation. They are kind of caretakers of that
20 property.

21 We also -- as Bruce had talked a
22 little while ago, we're going to be looking at
23 Raccoon Mountain. Well, that's a great example of
24 some trail maintenance and trail building where TVA
25 can work with a partner to come in. They work on TVA

1 public lands and through a guided partnership they
2 develop a great trail system and they maintain that,
3 and that helps us out and also helps the community
4 out.

5 We also have other activities where we
6 work a lot of scouting groups and a lot of homeowner
7 associations where they may go out and just pull
8 weeds, kind of like what you do at your house, but
9 they come out and do it on federal lands.

10 They also may help pick up litter and
11 trash. So there's a lot of activities and a lot of
12 instances that volunteers can be involved in and
13 other partnerships can be involved in.

14 So the first program we're going to
15 touch on is our strategic partnership program, and
16 this program really guides TVA to target partners
17 with mutual or overlapping goals. I mean, all
18 agencies have a lot of work to get done. TVA is not
19 alone in this. We're all trying to find ways, you
20 know, work smarter, save money, and to accomplish our
21 goals.

22 By being able to identify partners
23 that share our goals, this is going to be one way
24 we're all going to be able to get something good out
25 of it. We're all going to be able to move forward

1 with our programs.

2 So one existing example we have of a
3 strategic partnership is the Tennessee River Valley
4 Geotourism Map Guide, and some of you guys may be
5 familiar with this and some of you may not.

6 The map guide itself is supported by
7 National Geographic Maps Program. The Tennessee
8 River Valley Map Guide is one of 12 globally. So we
9 feel very fortunate to have this in the Tennessee
10 region.

11 Basically what it is is it's an
12 interactive map. It's on-line. Folks can go to the
13 site. It kind of works a little like Google maps or
14 a lot of the other like on-line mapping you may be
15 familiar with.

16 Hopefully you guys can see. If you
17 can't see the screen, you can see in your books. The
18 larger photo kind of gives you a screen capture of
19 what the site would look like. It has icons where
20 you can look at natural areas or maybe bed and
21 breakfasts. You can look at events at cultural
22 sites.

23 You can choose to kind of filter the
24 site, sorry, and then you can pull out cultural areas
25 happening within the Chattanooga area and it will

1 pull up a bunch of icons and you can click on that.
2 Then like over to the left, this highlights Raccoon
3 Mountain, and it will show you a little more detail
4 on kind of what that particular site is.

5 The whole idea of the --

6 MR. RUSSELL TOWNSEND: Tiffany, who
7 would have access to this?

8 MS. TIFFANY FOSTER: I'm sorry. This
9 is on-line. It's available to anyone in the public.
10 I think you guys may have a little postcard in your
11 notebook that gives you kind of the web address, but
12 if you Google or you use a web browser and you do
13 just Tennessee River Geotourism it will pop up. This
14 is just a public site. It's hosted on the National
15 Geographic website.

16 MR. RUSSELL TOWNSEND: Did you mention
17 cultural sites?

18 MS. TIFFANY FOSTER: There are
19 cultural heritage sites. They have got something
20 like the Quilt Trail. They have some things where
21 they have some of the Civil War Battle sites. They
22 have some of the areas where they are talking about
23 the -- I'm trying -- sorry, off the top of my head
24 what all is listed on there.

25 It's not archeological sites, nothing

1 that is -- we don't pull out threatened and
2 endangered species or these like that. These are
3 things or places that are public.

4 MR. RUSSELL TOWNSEND: Okay.

5 MS. TIFFANY FOSTER: It may be like
6 state parks. It may be local city parks. It may be
7 national monuments or state monuments. Some of them
8 are also -- if people are having heritage festivals,
9 those will also be on there.

10 There are also some of the geological
11 features like waterfalls or some of the blue ways,
12 the canoe trails, and things like that.

13 I'm sorry. I do need to be careful
14 with my wording because that's a little confusing.

15 MR. RUSSELL TOWNSEND: Thank you.

16 MS. TIFFANY FOSTER: So it is on the
17 National Geographic web site. The reason why TVA got
18 involved and a lot of other partners got involved is
19 it's a lot of state agencies. It's some local
20 municipalities. It's some local businesses.

21 The whole idea of the geotourism
22 program is to support sustainable tourism and to find
23 a way to make people aware of the natural resources
24 and the other resources within the area and have them
25 kind of come to the area and enjoy it but not love it

1 to death.

2 So find a way to protect the area and
3 enjoy it and visit here in a sustainable manner. So
4 we thought that aligns with TVA's goals as well. So
5 we thought it was a really great program to get
6 involved in.

7 And an additional program that's along
8 the lines of the strategic partnerships but a
9 slightly different flavor is the climate change
10 monitoring collaborative.

11 This is a multi-agency collaborative
12 to assess and document water quality and aquatic
13 resources in the southeast. It's driven by the
14 Executive Order and also just a concern with a lot of
15 our aquatic biologist who really will be able to
16 start figuring out and looking at trends on what's
17 happening in the southeast as far as reactions to
18 climate change.

19 When a lot of the agencies got
20 together and they started realizing this would be a
21 great idea to have this great database and have all
22 of this information, but it's a large undertaking and
23 it's very expensive. It's pretty much cost
24 prohibitive for any one agency to be able to tackle
25 all of this by themselves.

1 So this is a great example where
2 agencies were able to come together and determine a
3 common protocol that everyone will take data this way
4 and everyone will share their data resources and then
5 develop this really impressive large data set that
6 will be available for use.

7 So it's a great example of a strategic
8 partnership where we work on not having overlapping
9 and not having duplicative efforts but really having
10 complimentary efforts. So I just wanted to highlight
11 you-all.

12 This is still a pretty new program.
13 They've only had two meetings, but they are moving
14 forward with this. So we look for a lot of good
15 things to come out of this.

16 The next program on our list, sorry,
17 is the volunteer program, and currently TVA does have
18 a volunteer program. We're implementing it, but like
19 some of the others, we're looking for ways to expand
20 it and ways to kind of pull in a wider pool of people
21 to participate with us and maybe a way to enhance
22 some of the appeal of this.

23 We approach our volunteer program in a
24 two-pronged approach where we have event-based
25 programs, such as our participation with National

1 Trails Day and Public Lands Day where TVA will set up
2 events on public and managed lands and we will ask
3 the public to come and join us through work days,
4 whether it's trail maintenance, whether it's helping
5 to install signage or mark trails. Sometimes it may
6 just be picking up litter. We have done that for the
7 last several years and had a lot of success.

8 One advantage of doing our event
9 volunteer days is it helps the community to really
10 know what resources are out there. A lot of times we
11 get school kids or we get local citizens coming to
12 work with us on trails or on parcels of TVA land and
13 people didn't even know that this existed that was
14 close to them. So it's kind of a fun way to get help
15 to take care of the resources but also really help
16 folks know that this land is out there for them to
17 enjoy.

18 And the second approach of this is
19 kind of the adopt-a-parcel approach. This is similar
20 to like, you know, adopt a stream, adopt a river
21 mile, adopt a highway, you guys have seen the signs
22 up. This idea is TVA works with other organizations,
23 sometimes individuals, sometimes corporations to kind
24 of adopt a parcel, adopt a chunk of publicly managed
25 land, and TVA will work with that person or work with

1 that group to kind of determine kind of what -- what
2 does that area need?

3 It may just be they want to adopt a
4 trail. So they will come and help -- help us take
5 care of the trail, and it's just a way that citizens
6 or organizations can get involved with TVA.

7 So there's been a lot of successful
8 volunteer programs that TVA is learning from. This
9 just lists a few of them here. The National Park
10 Service and Bureau of Land Management, U.S. Fish &
11 Wildlife, also the U.S. Corps of Army Engineers has a
12 great volunteer program as well.

13 In looking on-line and in talking to a
14 few of these people, the scope of work that the
15 volunteers do at some of these agencies is just
16 really staggering. The numbers I have listed here
17 are just for one year's data. So they are
18 consistently getting more and more volunteers.

19 It's a really interesting trend that
20 is happening as people are really desiring to give
21 back to their community and to give back to public
22 lands and try to get outdoors. So I think we're
23 primed to take advantage of folks' interest and folks
24 wanting to come and work with us.

25 A lot of the activities really vary

1 depending on, you know, what kind of land they have
2 and what the needs are for the area. The recruitment
3 in talking to some of these folks, they say it's
4 largely from their on-line web site. They use like
5 the volunteer.gov and then word of mouth. It seems
6 like they get one person that will come and then they
7 bring friends and it kind of keeps feeding on itself.
8 So I think that's a really nice, organic way of
9 building this program.

10 Specifically the Bureau of Land
11 Management has had a long running program, and they
12 say right on their web site that they have such a
13 huge land base that they would not be able to carry
14 out their duties without volunteers. They make no
15 bones about that that is an essential part of their
16 program is being able to have these people to help
17 them.

18 For them they said most of their
19 people are returning volunteers. They have people
20 that have been volunteering with them for years and
21 years, and I think that really speaks a lot to how
22 well their program is managed and to their community
23 members.

24 I am hoping that's something that we
25 can learn from the Bureau of Land Management and some

1 of these other agencies, that some of their keys to
2 success is having a well organized program, you know,
3 highly visible opportunities, and then making sure
4 that the people that are working with us feel
5 appreciated and they feel value. They feel like they
6 are getting something out of it. It goes back to
7 that mutual beneficial relationship.

8 One additional type of service
9 organization is they call them sponsored volunteers,
10 which I think is interesting if any of you guys have
11 worked with AmeriCorps or the Student Conservation
12 Association.

13 In theory, the AmeriCorps staff are
14 paid but they are paid pretty small amounts. They
15 usually end up calling them volunteers or service
16 volunteers. These are large organizations where
17 individuals may apply to become an AmeriCorps member
18 and then the AmeriCorps team, based on, you know, the
19 person's application, will kind of decide where they
20 need to work in the region.

21 There's been a few federal agencies,
22 such as the Forest Service, who has hooked up with
23 the AmeriCorps and the Student Conservation Service
24 and found a way to sponsor these volunteers where
25 they pay them a small stipend and then these service

1 volunteers will come and work on the federal lands.
2 They have a really good relationship. So we thought
3 that might be something worth exploring and see how
4 that works.

5 It also gives the person that's
6 participating as a sponsored volunteer great job
7 experience and also helps them -- a lot of times you
8 will see people fresh out of college who are doing a
9 career change that will get involved in this. So it
10 could be a way to be beneficial to both of us.

11 One of the other programs is the
12 Corporate Stewardship Program, and this is similar in
13 some aspects to just our volunteer program. It does
14 look to provide opportunities for folks to get
15 involved in environmental or stewardship activities.

16 The difference in this is the focus or
17 the target is this is more for businesses or
18 corporations. So we would work on setting up this
19 program to meet the needs of businesses or
20 corporations, how they need to have it structured.

21 Obviously, we see some benefits for
22 TVA in this is that we would, you know, get
23 visibility of our stewardship programs and we would
24 get assistance in being able to implement some of our
25 natural resource program activities.

1 We feel that it could be beneficial to
2 the participants because a lot of businesses are
3 working on either developing or have a sustainability
4 plan or have mitigation plans. So as part of that
5 there's a lot of different organizations and
6 businesses that are looking for ways to, you know,
7 either spend their funding or, you know, have their
8 employees get involved in environmentally friendly
9 projects.

10 We feel that TVA could offer a — you
11 know, we have a good reputation for having, you know,
12 scientifically sound projects and programs and we
13 feel like we could work with corporations and be able
14 to offer them an option that if you would like to do
15 something for your sustainability plan we could help
16 you set up something.

17 So this is just an example of kind of
18 what we could do. There's a lot of different things
19 we could do working with corporations, but we could
20 work with a company. If they have a large employee
21 land base that are right here within the area, we
22 could work with them and they could come out and do
23 some — you know, maybe they could do some cleanup or
24 help us build trails on TVA land.

25 A lot of the corporations we have

1 talked to have an interest in their employees being
2 out and having a hands-on activity because they want
3 to feel proud about what their company does, and this
4 is something that would work really well with what
5 TVA is looking at being involved in the community.

6 Some other companies, maybe they don't
7 have a large employee base, but they would still like
8 to do something that impacts positively the local
9 community. So this may be -- an example I gave here
10 was where maybe a company purchases rock to stabilize
11 a shoreline that protects some resources on a TVA
12 resource.

13 So we think there's a whole lot of
14 flexibility in this program. So we're just kind of
15 feeling it out to see what could work, but we're
16 hoping that it would offer some corporations and
17 businesses a way to give back and do some really
18 great environmental resource work in the area.

19 So the last part I am going to touch
20 on is the Stewardship Foundation Program, and this
21 purpose is to create an independent fund that would
22 receive donations that could then support
23 environmentally friendly or natural resource
24 stewardship projects on publicly managed lands.

25 This fund would be managed by a

1 third-party, like a nonprofit group. The benefits to
2 TVA is obviously this would help give us another
3 funding pool to support some of these natural
4 resource programs.

5 I think the benefits to the
6 participants is it would allow everyone, whether
7 you're an individual and, you know, you want to
8 donate a dollar or whether you're a corporation or
9 whether you're a, you know, school group, it would
10 allow everyone to feel like they could make a
11 positive impact, that they could have a -- you know,
12 have some impact on wanting to protect, you know, the
13 public lands within the Tennessee River Valley and
14 they could donate to this fund.

15 One of the really strong examples we
16 have in our region is the Friends of the Great Smoky
17 Mountains National Park. They were established in
18 1993, and they currently have over 4,000 members.
19 They do a lot of things to raise -- they have a web
20 site. They have license plates. These are a lot of
21 different options to take in money to protect the
22 park and to do park service work.

23 One thing that we found attractive
24 about how the Great Smoky Mountains National Park
25 does their work is they -- this third-party entity

1 works very closely with the Park Service, and the
2 Park Service will provide a list of here's -- you
3 know, from our experts here's what we feel needs to
4 be done in the park. They will say we have a lot
5 of -- you know, some trees that need to be protected
6 in this area. We have, you know, a campground that
7 needs help. We may have a trail or some water
8 quality that needs work. So the park will provide a
9 long list to this friend's group and then it's up to
10 the friend's group and their board and voting members
11 to then decide what's appropriate and how they want
12 to use the money. So I think that's a really -- that
13 seems like it's a good structure and that's something
14 I think we will be looking into.

15 Okay. So now I have gone through our
16 partnership programs and I tried to give you guys a
17 little bit of a flavor for what the programs may
18 contain. This slide just shows you kind of our
19 current strategy.

20 So we are evaluating kind of the
21 potential and we would like to get some information
22 on if it's feasible to have a foundation fund
23 something along the lines of the Friends of the Great
24 Smoky Mountains.

25 We also would like to enhance our

1 volunteer program to pull in more participants and
2 make this a more appealing and robust program and
3 then find ways to engage corporate and business
4 partners. We have heard there's a need. We have
5 heard that they would like to be involved. We need
6 to try to find a way to facilitate that involvement.
7 Then also we will continue to build and sustain our
8 existing strategic partners and hopefully expand on
9 that and then work on our education outreach
10 programs.

11 FACILITATOR MR. WILSON TAYLOR: Okay.
12 questions?

13 Paul.

14 MR. PAUL SLOAN: Tiffany, great job.
15 Two things, who is heading from TVA?

16 FACILITATOR MR. WILSON TAYLOR: Mic,
17 please.

18 MR. PAUL SLOAN: Two for two. Who is
19 heading the climate change monitoring collaborative
20 from TVA?

21 MS. TIFFANY FOSTER: It falls under
22 Tina Guinn, who is here, she's our manager. But the
23 on-staff persons are Charlie Saylor and Susan Malone,
24 they are both in our aquatics fisheries department.

25 MR. PAUL SLOAN: I'm sorry. Charlie?

1 MS. TIFFANY FOSTER: Charlie Saylor,
2 S-a-y-l-o-r.

3 MR. PAUL SLOAN: And the second
4 question is: What is the -- what's the timetable, to
5 the extent one has yet been developed, and who will
6 sort of be the program spearhead or head for the
7 strategic partnership for developing the parameters
8 and --

9 MS. TIFFANY FOSTER: Are you talking
10 about for the climate change or for the strategic in
11 general?

12 MR. PAUL SLOAN: No. For the
13 strategic partnership similar to the Great Smoky --
14 Friends of the Great Mountains.

15 MS. TIFFANY FOSTER: Okay. So you're
16 talking about the -- the corporate stewardship?

17 MR. PAUL SLOAN: The stewardship,
18 right.

19 MS. TIFFANY FOSTER: There's --
20 stewardship is in everything. So, I'm sorry, I had
21 to clarify.

22 For the -- let's see. That's
23 something that we're hoping to get you -- get the
24 Council's advice on. It's not an active program
25 right now. It is something that we feel could be a

1 viable option for TVA to explore ways to have some of
2 our programs supported, you know, not cost the
3 ratepayers a lot of money, make a nice balance
4 between, you know, shared stewardship, but it's
5 something we're hoping -- I think maybe part of the
6 discussion tomorrow is kind of to get your guys' feel
7 for, one, is it a viable option?

8 If it is, you know, what makes sense?

9 How is the best approach to go about
10 this?

11 You know, the stewardship foundation
12 and corporate stewardship, we're kind of looking to
13 you guys saying, you know, what makes sense?

14 What would make it appealing?

15 We have just done some early-on leg
16 work on talking with our TVA legal staff saying,
17 okay, is there a precedent?

18 Could -- you know, can we move forward
19 with this?

20 I guess our early indications has
21 been, yes, it's -- you know, it's -- we could do it,
22 but obviously, you know, with -- with funds and with
23 a setup like this, it's going to take quite a bit of
24 homework and quite a bit of structure to make this a
25 good, viable program.

1 MR. PAUL SLOAN: Great. Thanks.

2 FACILITATOR MR. WILSON TAYLOR: Okay.
3 Russell.

4 MR. RUSSELL TOWNSEND: I didn't notice
5 in the list of potential partners any mention of
6 tribal government, and I know we had talked about
7 that in other meetings.

8 I think tribal governments are a good
9 source for partners because as semi-sovereign
10 dependent nations we have all of the capabilities
11 that, you know, large municipalities or even states
12 have, and that includes archeologists and law
13 enforcement and natural resource people.

14 I think we have a big stake in
15 protecting the archeological stewardship of the
16 Tennessee Valley. So I think it would be good to
17 reach out to those partners. You know, it's not like
18 it hasn't been done before.

19 And Chattanooga is a good example of
20 this. In preparing to identify a location for the
21 new Moccasin Bend Visitor's Center, the National Park
22 Service reached out to the Eastern Band and we
23 actually provided half of their archeological labor
24 force in doing those surveys.

25 So we have natural resources, law

1 enforcement, and wildlife specialists. So it seems
2 like there's a lot we could do.

3 MS. TIFFANY FOSTER: I'm sorry. That
4 was my omission, and, you're right, that would be
5 a -- definitely one we should add to the list. So
6 thank you. Hopefully someone wrote that down for me
7 because I didn't bring a pen up front.

8 FACILITATOR MR. WILSON TAYLOR: Other
9 questions?

10 Okay. Bruce wanted to provide an
11 update here on a topic that was brought up earlier.

12 DFO MR. BRUCE SCHOFIELD: What I was
13 going to have an opportunity to do was -- we're lucky
14 to have Evan Crews with us, who is a senior manager
15 of the Natural Resource Organization, and he's going
16 to address Paul's question on kind of what we're
17 doing with ATV's. He's -- that's his -- one of his
18 projects is handling those violations and
19 encroachments.

20 MR. EVAN CREWS: That's a great
21 question, Paul, and it is a problem that we're
22 having. As I'm sure you know, and as all public land
23 managers are having across the nation and across the
24 state, is the growing problem of ATV abuse.

25 TVA's land is particularly susceptible

1 to that because of the linear nature of our land
2 along the reservoir system. It's not particularly
3 wide in some places and we have of a lot of interface
4 with private property owners. So there's a lot of
5 places for access for ATV's.

6 We do have a good system in place to
7 assess where those activities are occurring and a
8 comprehensive land condition assessment program. We
9 can see where the ATV abuse is occurring and the
10 impacts it may be having on sensitive resources. We
11 have a database that we can keep that information on
12 a parcel-by-parcel level so that we can develop
13 strategies and plans to address it.

14 As far as addressing it, it really is
15 a site specific problem because every parcel is
16 different. We always try to look at putting signage
17 out first as the first approach to notify people that
18 it is illegal because ATV use on all TVA land is
19 not -- it's not allowed anywhere on TVA land. So we
20 try to put signage in place to notify the public for
21 that.

22 The next step that we would often do
23 is try to engage the users to the best that we can.
24 That's a very big challenge in most cases because
25 they are often there on the weekends or it's hard to

1 catch them to engage them, that's really the nature
2 of the problem.

3 Another option we have is access
4 control. We can try to put up barriers to parking
5 areas or interior roads to try to eliminate some of
6 that access, particularly if it's people that are
7 coming in with the ATV's on trailers, that can be
8 effective in some cases.

9 We try not to do that as the first
10 option because it is public land and we don't want to
11 restrict the public from the public land and we're
12 punishing everyone for the activities of a few. So
13 that is an option that we consider though. If the
14 abuse is substantial enough and the impacts are to
15 that extent, you know, we can do that.

16 However, if we're being accessed from
17 private property we can't fence our entire
18 boundaries. So we're pretty limited in that extent
19 as well.

20 We also can do some targeted
21 enforcement as far as trying to engage the local law
22 enforcement to assist us and to prevent the use from
23 occurring. We can use some of our TVA police force
24 to address it, but that is challenging, again because
25 of the nature of the activity.

1 I think it is a problem that I think
2 would be good to get input on because all agencies
3 are experiencing it. There may be some success
4 stories out there that we can learn from. I think it
5 would be a good dialogue to have, particularly from
6 the State and the Corps and others that may have
7 ideas to help us address the problem, but it is
8 something that we're -- we are focusing on as a
9 growing problem.

10 FACILITATOR MR. WILSON TAYLOR: Okay.
11 Renee.

12 MRS. RENEE HOYOS: Are there any areas
13 on the TVA lands where that kind of activity is
14 allowed?

15 MR. EVAN CREWS: No. ATV use is not
16 allowed on TVA property.

17 MRS. RENEE HOYOS: Is that by
18 regulation?

19 MR. EVAN CREWS: Yes.

20 MRS. RENEE HOYOS: Is there -- is
21 there any thought about maybe making some areas open
22 to this type of activity?

23 I think if you just start closing off
24 the property it would just enrage them.

25 MR. EVAN CREWS: Yes. We have

1 considered if there are areas that are appropriate to
2 focus the use, and that has worked for some agencies.
3 If you can designate an area that does not have
4 sensitive resources to focus that on, then you can
5 direct the use to those type of parcels.

6 That's challenging with TVA just
7 because of the nature of our land. It is near the
8 water and there's not very many places that we feel
9 are appropriate for that use just because of the
10 location of our land. We haven't identified a place
11 like that so far.

12 MRS. RENEE HOYOS: Well, that may be
13 an opportunity to reach out and form a partnership
14 where maybe they can help you restore and you can
15 maybe put time limits on when they can actually use
16 those properties.

17 MR. EVAN CREWS: Yes. Good thought.
18 Does anybody else have any questions or suggestions?

19 FACILITATOR MR. WILSON TAYLOR: So
20 what I would like to do now is permission to go ahead
21 and take a break, and let's take a 15-minute break.
22 So be back in your chairs in 15 minutes.

23 Thank you.

24 (Brief recess.)

25 FACILITATOR MR. WILSON TAYLOR: If we

1 could go ahead and reconvene, we will get started
2 back. If we can go ahead and grab our seats, we will
3 get started back.

4 DFO MR. BRUCE SCHOFIELD: A man that
5 needs no introduction.

6 FACILITATOR MR. WILSON TAYLOR: Chuck,
7 I will turn it over to you.

8 MR. CHUCK BACH: Thank you, Wilson,
9 appreciate it. Chuck Bach, River Scheduling. I see
10 a lot of familiar faces. I was thinking back, and I
11 believe this is the sixth or maybe the seventh time
12 that I have talked to the Stewardship Council. So I
13 am very honored and pleased that you have asked me
14 back and my staff. We're looking forward to
15 providing you an update on the river operation
16 system.

17 A couple of things before I get
18 started. At Raccoon Mountain, when you get up to the
19 Visitor's Center, they have updated that. It's a
20 really neat place. It's got some wonderful
21 electronics that I think you will enjoy very much.

22 You get a wonderful elevator ride.
23 When you go down you will be able to overlook what
24 we're doing down there. Unfortunately, we have three
25 units in outage. So we can't take you down inside

1 the plant, but you can get up to the overview and
2 look down.

3 You will be meeting, I believe, with
4 Tim Gaddis, who is plant manager there, and he will
5 give you a good explanation of all of the stuff
6 that's going on. So it's a really unique view, and a
7 lot of people don't get to see that.

8 Like I said, it's a wonderful elevator
9 ride. So look forward to it. And don't think about
10 that you're a thousand feet underground or anything
11 like that.

12 I had several questions about what's
13 the status of the river system. So before I go into
14 my talk, I thought I'd take a second and give you an
15 update on that.

16 We had a very wet December and January
17 and February and we're above normal. In fact, we had
18 all of our turbines running 24 hours a day, seven
19 days a week, and had to spill so we could create
20 space for flood control purposes.

21 However, the first of March it's
22 turned dry, and now we have gone from operating in a
23 wet mode to a dry mode. We're planning that out.
24 Some of the people have asked me some questions about
25 that.

1 It's on our radar screen. We're
2 thinking very seriously how do we make sure that we
3 have water to meet all of our minimum flows down
4 through the river system if it does turn dry on us
5 and how do we make sure that we have room, water for
6 navigation, to take care of the aquatic habitat, to
7 meet all of our permits and things like that?

8 So we're right on schedule to fill our
9 tributaries right now, but if it doesn't rain we will
10 be struggling towards the first of June to reach our
11 target levels. It doesn't mean there won't be good
12 recreation, it just means that we may not be at our
13 premium, optimum target levels that we like to be at
14 the first of June.

15 We will be doing everything we can, of
16 course, to manage the system, to fill those
17 reservoirs, and provide all the flows down through
18 the system that are needed for industry, for
19 recreation, and all of those kind of things. So
20 that's kind of where we're at on the river system.

21 Questions about that before I go into
22 my presentation?

23 Okay. First I would like to start out
24 before I get going with our title has changed from
25 river operations to, as you see, river operations and

1 renewables. We brought the renewables group over
2 into river operations.

3 It's headed by a lady named Patty
4 Weston. You might want to somewhere down the road
5 think about having Patty come and talk to you about
6 renewables. I think you would find it very
7 interesting.

8 I am going to concentrate on the river
9 operations piece, and my staff will, too. I will
10 talk at a very high level and then my staff will come
11 in behind me and talk about dam safety, navigation,
12 coordination, and communication during flooding. So
13 with that, let's go ahead and get started.

14 The first slide here, you may be
15 familiar with this, this is the Norris Dam. It's one
16 of our tributary dams. We use that to store water in
17 flood control operation as well as provide
18 recreation, water quality, water supply, all of those
19 kind of things in the tributaries. We will talk some
20 more about these.

21 One of the important pieces of this is
22 maintaining and operating that dam, and Jennifer Dodd
23 from my staff will be talking about that and all the
24 things we do to ensure that our dams are safe and
25 what we do to inspect them and monitoring those.

1 Many of you have been to the forecast
2 center in Knoxville. This is a slide of the big
3 screen that we have up there that we watch the river
4 system. We have a very highly trained staff. They
5 are really dedicated to watching this river system.
6 It's a neat way to look at this and gather a bunch of
7 information real quickly.

8 You see a lot of green, that means
9 they are generating. There's one over on the left
10 side. Pickwick that has yellow, that's just a flag
11 that we put in there. It doesn't mean that there's a
12 problem at Pickwick, it just comes up and it says to
13 look at me and make sure everything is okay.

14 You see some that have red underneath
15 them, that tells us we're spilling. So we can look
16 at this real quickly with where are we generating and
17 what's going on. If it's white, we're not
18 generating.

19 So there's a whole bunch of
20 information that you can gather very quickly, and
21 it's all up where everybody can see it. And if
22 something happens, it starts to flash and gather
23 people's attention so we're right on it.

24 We operate, as many of you know, 24
25 hours a day, seven days a week all year long. We

1 have staff there, at least two or three people, maybe
2 more. And if we're in an operation where we have
3 high water, we will have a lot more people on staff
4 and staffing this.

5 So we support this with a couple
6 hundred rain gauges providing data that's collected
7 on an hourly basis and provided to us. We have
8 stream gauges, I believe 70 or 80 of those that TVA
9 has, and then we have access to a bunch of others
10 from the USGS.

11 We have radar and we're incorporating
12 radar into our forecast system so we can get an
13 estimation of rainfall from the radar. Then we have
14 multiple forecasts that come in that we use to try to
15 help us make plans on how to operate that river
16 system. So we're using all of that.

17 And then in addition to that, we look
18 out to the long-term forecasts from people like the
19 National Weather Service and others trying to make
20 plans ahead of time of how we're going to operate
21 that system.

22 The current forecast this year from
23 the National Weather Service is average rainfall and
24 slightly above normal temperatures. So that's kind
25 of what we're planning on right now. Like I said,

1 it's turned dry and so we're factoring that into our
2 plans of operating the system.

3 This is a slide of the -- yes, Bruce.

4 DFO MR. BRUCE SCHOFIELD: Go back a
5 slide, and I may have missed it, did you give a
6 description of kind of what the numbers are inside
7 the boxes?

8 MR. CHUCH BACH: Okay. Sorry. Let's
9 pick one that everybody can read.

10 Jennifer, can you read these?

11 All right. For those of you that are
12 in the book, look at Nottely. You will have four
13 sets of numbers there. Like I said, the bottom one
14 in the red is we're spilling and that's how much we
15 are spilling. The top one is the headwater, how high
16 is the water above the dam. The one in the middle is
17 how much cubic feet per second is going through the
18 dam. And in this case, because we're not generating,
19 it's zero. The next number down is the tailwater,
20 how low is the water below the dam.

21 So we have an estimation of above --
22 not an estimation, an exact reading above and an
23 exact reading below and how much water is actually
24 going through that, and that's another way to see if
25 you have a problem at dam.

1 If suddenly that changes real quickly,
2 that's a great indication that you have got an issue.
3 We have flags that would come up and start flashing
4 at us saying, hey, you need to look at this. Is this
5 real?

6 And so, Bruce, did I answer your
7 question?

8 DFO MR. BRUCE SCHOFIELD: Yes.

9 FACILITATOR MR. WILSON TAYLOR: Paul.

10 MR. PAUL SLOAN: The Notely.

11 MR. CHUCH BACH: Nottely.

12 MR. PAUL SLOAN: Nottely?

13 MR. CHUCH BACH: Yes.

14 MR. PAUL SLOAN: The middle number is
15 zero but you're releasing 380 CFS.

16 MR. CHUCK BACH: That's because it was
17 in an outage and we couldn't run water through the
18 unit.

19 MR. PAUL SLOAN: Oh, I got you.

20 MR. CHUCK BACH: That's a good
21 question though. Thank you, Paul.

22 MR. PAUL SLOAN: It shows I am paying
23 attention.

24 MR. CHUCK BACH: That is a very good
25 question.

1 Tom.

2 MR. TOM LITTLEPAGE: What is the
3 release number units, the middle number? CFS or
4 megawatts?

5 MR. CHUCK BACH: Cubic feet per
6 second. Let's pick one that's operating. If you
7 would look in your book at Hiwassee, it's on the
8 right side, has everybody got Hiwassee? You will see
9 8.1. So that would be 8,100 cubic feet per second
10 going through Hiwassee. And then based on headwater,
11 how high it is and all of that, we would have a
12 megawatt number that you could calculate from that.

13 Have I lost anybody?

14 Yes.

15 MRS. RENEE HOYOS: So can you explain
16 the tailwater? Is tailwater what's coming out of
17 the —

18 MR. CHUCK BACH: Tailwater is the
19 level of the water below the dam.

20 Bruce.

21 DFO MR. BRUCE SCHOFIELD: The units on
22 the levels?

23 MR. CHUCK BACH: Sea level. Sorry. I
24 will be very careful as I go through my presentation.
25 We — I am guilty, and I see my people in the back

1 smiling at me, of talking in acronyms and knowing
2 everything we say. So if I say something that you
3 don't understand, please raise your hand quickly.

4 Did I get your -- did I answer your
5 question?

6 So the first number is the elevation
7 in mean feet above sea level. The second number is
8 the cubic feet per second coming out of the dam. The
9 third number would be the tailwater, the level below
10 the dam.

11 So if you go back to your picture of
12 Norris, the second slide, the headwater would be
13 above the dam and the tailwater is down below the
14 dam. The headwater is above where the marina is.

15 For example, on this picture up here,
16 that's the headwater, the water above the dam. And
17 then down below where you see the air being stirred
18 up or the water being stirred up from the air from
19 the units, that would be the tailwater elevation.

20 All right. So I have confused several
21 people. All right. We will talk more about that as
22 we go along, and I will let my staff talk about it as
23 they go.

24 All right. Let's go forward to this
25 one. This is -- I am trying to make up this extra

1 half hour, see, that's all.

2 MR. GEORGE KITCHENS: You're doing
3 good.

4 MR. CHUCK BACH: Thank you. This is a
5 picture that you will see several times a day from
6 the staff, and it shows the power service area,
7 that's the color that goes down into the Mississippi
8 and up into Kentucky.

9 Then the lighter color is the
10 watershed area, about 40,000 square miles, and has
11 the Tennessee River system in it. Jennifer Dodd will
12 be talking more about this when she talks about the
13 dams. We have 49 dams.

14 If I can go to the next slide. We
15 operate and maintain 49 dams. Starting with the one
16 on the left top, Norris that we have just talked
17 about, that's a tributary dam. When the system was
18 designed the tributary dams were designed to be able
19 to hold water back, and then as we let the flood
20 waters go out we would let the water from the
21 tributaries release behind those.

22 We pull those down real low in the
23 wintertime. There's a big brown ring that people
24 complain about. So that's where we have plenty of
25 space to store water if we get large rain events.

1 The next one to the right, the main
2 river, Fort Loudoun, there's a navigation component
3 to it, as well as recreation and other things, hydro
4 generation. Kelie Hammond from my staff will be
5 talking more about the navigation as we go through.

6 Going down below Fort Loudoun you see
7 the tributary non-power, and in this case it's the
8 Upper Bear. They are down in Alabama. The Bear
9 system was mainly developed for water quality,
10 recreation, water supply type issues. We have five
11 dams, I believe, in that area.

12 As you move over to the left you will
13 see one called tributary run of the river. In this
14 case it's Melton Hill. Melton Hill also has a
15 navigation component, but it's a small reservoir. So
16 whatever is released out of Norris just runs through
17 Melton Hill. So that's why we call it a run of the
18 river. There's not a lot of storage in the Melton
19 Hill system, and we will talk some more about that as
20 we go forward. So we have multiple kinds of dams
21 that we have out there, and we have to operate on
22 those.

23 This is a really neat slide that I
24 like to show on the Tennessee River profile and point
25 out three or four things to you. First of all, when

1 you start up at Fort Loudoun you see the elevation is
2 813 on the right. If you go down to the bottom on
3 the left of Kentucky and now we're down to an
4 elevation of 300. So we're dropping 500 feet across
5 the Tennessee River system from Fort Loudoun down to
6 Kentucky.

7 That's not taking into account all of
8 the tributary reservoirs that we have in Tennessee,
9 North Carolina, and Georgia, which are much higher,
10 but that's just on the main system. So running the
11 navigation system allows boats to go up and down
12 500 feet.

13 Some other neat things you see, look
14 at the size of reservoir of Kentucky. It's our
15 largest reservoir so we can store a lot of water
16 there. The Corps of Engineers uses that when they
17 get in flood control operations. Susan Jacks will be
18 talking more about that when she talks about
19 communication and coordination efforts that we have.

20 Look at Wilson kind of in the middle
21 and notice how small of a reservoir Wilson is. It's
22 basically a run of the river. Whatever comes out of
23 Wheeler Reservoir we have to release out of Wilson.
24 There's just no room to store a lot of water.

25 One last thing I would like to point

1 out is look at Guntersville. It's kind of in the
2 middle. It's really small. Well, there's not a lot
3 of storage there. So we have to run units and any
4 water that comes through we have to run through and
5 we end up spilling a lot there. When I say spilling
6 it's releasing water over the gates, and we're doing
7 that on purpose.

8 We try to maximize the hydro
9 generation by running all of our units first, but
10 because it's such a small reservoir sometimes we just
11 can't hold the water back and we have to spill some
12 there. So just some neat facts that I like to point
13 out as we look at the river system. All of those go
14 into making decisions on how we operate the river
15 system.

16 When do you release water?

17 When do you hold it back.

18 How much do you release?

19 All of those factors are added in
20 there.

21 Next slide, please.

22 What I would like to do is talk a
23 little bit about the history of TVA. You've got an
24 employee here that's just hit his 35th year mark at
25 TVA, which I'm very proud of, and I like to talk

1 about the history of TVA a little bit.

2 What drives our system from rainfall
3 and runoff and operating guides is the multiple
4 benefits, and I'm just going to lightly touch on this
5 and then pass them off to my staff to talk in more
6 detail and touch on dam safety and then any other
7 questions you might have. So that's where I plan to
8 go.

9 Starting out at TVA in the early years
10 per capita income was about \$100, not a lot of per
11 capita income. There were a lot of problems. When
12 electricity came, it was a big thing.

13 If I can go to the next slide, you
14 will see you're looking at some of the issues that we
15 had. From an earth standpoint, we had deforestation.
16 Soil erosion was terrible in the Tennessee Valley.
17 Agricultural productivity was very low.

18 On the energy side, poverty, huge
19 transportation costs, water, frequent flooding,
20 droughts, uncertain navigation, diseases, all of
21 those led into forming TVA.

22 Going to the next slide, the father of
23 TVA is actually a Senator from Nebraska named George
24 Norris. We named Norris Dam after him. He actually
25 came to the TVA system in the '20s and went through

1 the area and kind of formulated a plan to form a
2 TVA-type system and tried to get it passed.

3 In fact, he went to Calvin Coolidge,
4 who was two Presidents before FDR, and couldn't get
5 Calvin -- no, that's -- you're right, go back to --
6 yeah, that one. No, that one. You got it.

7 He tried to get Calvin Coolidge to
8 approve it and Calvin wouldn't sign it. Four years
9 later he went to Herbert Hoover and tried the same
10 thing, and he just pocket vetoed it. He put it his
11 pocket and didn't sign it. Of course, until FDR came
12 along and his new deal did it get passed.

13 Our father of TVA is George Norris.
14 FDR gets a lot of credit for it, and he deserves it,
15 but the father is George Norris.

16 We have our multipurpose role through
17 the TVA Act. You can see it's in Section 9(a), and
18 it talks about navigation, controlling floods, and
19 generation of electricity.

20 I would like to talk in terms of flood
21 damage reduction. I don't believe anybody can
22 control a flood, but we can do lots of things to
23 minimize flood damage.

24 So you will hear me talk in terms of
25 flood damage. Occasionally we say flood control, but

1 we — I can't stop a flood. I can do a lot to
2 minimize it, and that's what our staff does is try to
3 get up front and minimize the impacts of any kind of
4 floods that might happen.

5 Next slide, please.

6 One of the first things we got into is
7 land use management. The people in Muscle Shoals
8 developed a lot of fertilizers. We had people go out
9 and talk to farmers and what can you do to prevent
10 erosion and how can you increase crop yields and all
11 of those kinds of things, and that was the key thing.

12 Moving on to the next slide, we got
13 into building dams. I mentioned I have been here 35
14 years. Our dams have been in operation 70 years.
15 And using 35, it's a neat way for me to think that
16 dams have been operating for twice as long as I have
17 been working at TVA. It just gives me a feel for all
18 the stuff that's gone on for all of those years and
19 all the operations and all the things that we have
20 had to do to operate those dams and they have been
21 out there and doing great work and controlling floods
22 and things like that. So in the '30s and '40s we
23 built dams. We damned everything up. We were very
24 successful. Then there was a need for more
25 electricity.

1 So going to the next slide, we're in
2 the '50s and '60s and we started to build fossil
3 plants at that time to provide electricity. So in
4 the '50s and '60s there was a big push to build our
5 fossil plants and provide electricity.

6 Going on to the next slide, in the
7 '70's and '80s then came the nuclear, and we have
8 been through many iterations on the nuclear side.

9 When I came to TVA we were building
10 dams at our nuclear plants up in Phipps Bend, Watts
11 Bar, Sequoyah, Bellefonte, Hartsville, Yellow Creek,
12 and probably three or four others that I don't
13 remember. There was a lot going on. Then we get out
14 of that and had three operating plants going and now
15 we're looking at getting Watts Bar Unit Two back
16 on-line.

17 So then after that comes renewable
18 energy. We did some renewable stuff back in the
19 '80s. Then in the '90s we got into wind energy and
20 solar and all of those pieces and parts.

21 And again, I am focusing on the river
22 operations side. It's a good opportunity to bring
23 our director from the renewables in here to give you
24 an update on what's going on in the renewable side,
25 particularly on the solar side. That's been very

1 successful. We buy a lot of contracted wind energy
2 from the Midwest and bring it in and we're using that
3 into our system.

4 So that's a little bit of history from
5 Chuck's side, Chuck's view.

6 So what drives our system?

7 Seasonal storm patterns, we have
8 summer thunderstorms that we have to deal with. We
9 don't get a lot of rainfall and runoff out of these
10 summer thunderstorms, but we still have to deal with
11 them. We're always looking out in the horizon for a
12 potential hurricane.

13 What really drives my system is the
14 winter and spring fronts. We probably get 60 percent
15 of our rainfall out of these, and it's the time of
16 the year that we have very little vegetation and so
17 we get a lot of runoff.

18 On the next slide you will see a graph
19 of average monthly rainfall and runoff where we have
20 inches of rain on the Y axis and time on the X axis.
21 You see two bar charts in here. The blue one is the
22 rainfall and the green is the runoff.

23 What I want you to do is concentrate
24 on the runoff, the green ones. Now, remember I said
25 I get most of my rainfall in the wintertime,

1 springtime. Well, that's when I get most of the
2 runoff.

3 All right. So to be ready for that,
4 we pull the reservoirs down after Labor Day to the
5 lowest level and hold them there so we have this
6 storage space available. So that's our system in
7 this very simplistic sense.

8 Then you throw all of the other
9 stipulations on top of that to operate. But in a
10 very simplistic stance, we pull it down after Labor
11 Day so we create space to hold this water. Then if
12 we get a large event, we can hold water in our
13 tributaries, move it through the main system, and
14 then bring that water out of the tributaries and
15 regain that space.

16 Then starting in March and April we
17 start to fill the system back up for recreation, and
18 that's what we're doing right now. We're right on
19 schedule, unless it quits raining on me.

20 So with that in mind, if we go to the
21 next slide you will see a typical operating guide.
22 This one is for Fort Loudoun. We have elevation on
23 the X axis. Time of the year -- elevation on the Y
24 axis and time of year on X axis. We try to operate
25 in that gray zone in there.

1 And again, notice that after Labor
2 Day, if you go over into the October/November time
3 frame we start to pull the reservoir down, get it
4 down low in December, and hold it there January and
5 February so if we get large rain events we have a
6 place to store that water.

7 Then comes April and May and we will
8 fill it back up, and then we have recreation from
9 June, July, August through the summertime. So that's
10 the pattern that we try to follow over and over and
11 over again.

12 Now, just to give you a flavor of
13 where we store the most water, go to the next slide.
14 And again, I have the same charts, one for Fort
15 Loudoun and one for Douglas. Elevation on the Y axis
16 and time of year on the X axis. I have highlighted
17 how much these typically go up and down.

18 The Fort Loudoun on the Tennessee
19 River only goes up 5 feet. So we can't store as much
20 water there, but we also have navigation
21 responsibilities there. So we have to balance those.

22 On the tributary, and this is Douglas,
23 we go up and down 40 feet. So the people that live
24 on the main river don't see those big fluctuations
25 that the people on the tributaries do. Again, it's

1 for flood control purposes to be able to store water.

2 We go up and down 70 feet at Fontana.
3 So if you live on Fontana you're looking at 70 feet
4 from summer to winter pools. We get a lot of
5 questions about that.

6 Again, our charge is flood control,
7 and I have to look at our system as a total system to
8 make sure we have all of those spaces to control that
9 water.

10 Next slide, please. So we're doing
11 navigation, flood control, flood damage reduction,
12 power generation, but we also try to manage for a
13 whole bunch of other things, water supply,
14 recreation, water quality.

15 We try to make sure that all of the
16 people that have water supply intakes have plenty of
17 water that they are under, have good water.

18 Recreation, we try to provide for good
19 summer recreation. We work with the outfitters on
20 the Ocoee, for example, so they can have water to
21 raft.

22 And of course, water quality is very
23 important from aquatic habitat, from meeting all of
24 our permits.

25 So we're balancing all of these things

1 on top of each other. Sometimes some of them
2 dominate. If I have a large rain event, obviously
3 we're in the flood control operation and that will
4 dominate.

5 In the summertime if it gets very dry,
6 water supply and water quality will become real
7 important, and you may have to sacrifice recreation a
8 little bit and some other things. So it's a constant
9 balancing act that we're going through, but we try to
10 make sure that we do all we can to touch all of these
11 different multiple benefits that the people of the
12 Valley would like.

13 With that, I am just going to quickly
14 touch on a couple of things of the multiple benefits,
15 and my staff will touch on them in much more detail.

16 The first one is navigation. We have
17 an 800-mile waterway, and Kelie will talk a whole lot
18 more about that.

19 In the next slide I just wanted to
20 emphasize that one key point is we have 17 to maybe
21 20,000 recreational boats that go through our locks
22 every year. So we're -- that's a lot of boats. So
23 there's another thing we're trying to balance for.

24 And Kelie will show you that the
25 Chickamauga lock here in Chattanooga is probably the

1 highest use for recreation. I'm not sure if she has
2 that slide or not, but she will talk more about that.

3 Going on to flood damage reduction,
4 there's two ways to prevent flood damage reduction.
5 There's a structural approach where you keep water
6 away from people, build dams, for example. The other
7 one is floodplain management where you keep people
8 away from the water. So to manage flood damage
9 reduction, you can do it basically in two ways. We
10 have done both at TVA over the years.

11 Going on to the next page, the point I
12 would like to emphasize is the last one. Our average
13 annual flood damage reduction is \$240 million a year
14 by operating our system. Now, some years will be
15 more and some will be less, but on average we're
16 reducing damages to people, industry, and whatever by
17 240 million a year, a significant amount of savings
18 that we generate by running a system for the benefit
19 of everybody.

20 Next page, power generation,
21 hydropower is 29 hydro plants, 109 units, 3,600
22 megawatts of capacity. We are 6 to 10 percent of the
23 total generating capacity, depending on whether it's
24 a dry or a wet year.

25 Then on top of that, you're going to

1 see Raccoon Mountain when it's running that has the
2 capability of 1,600 megawatts, which is just a little
3 bit larger than one of our nuclear units, which is
4 1,100 megawatts. So we can generate a lot of
5 electricity real quickly at Raccoon if we need it.

6 One of biggest benefits of Raccoon
7 might be at night by running it in a pumping mode we
8 don't have to turn off the fossil plant or something
9 like that, which is very expensive to turn off and
10 turn back on. So it provides benefits both
11 generating and pumping.

12 The next one is recreation.
13 Obviously, the benefits include quality of life,
14 boost the local economies as you can read down
15 through there, fishing, swimming, et cetera. So
16 recreation is on our radar screen and we think very
17 seriously of making sure we can provide that
18 recreation for all of the people.

19 On the next page down at the bottom
20 the biggest thing I have to deal with is the
21 competing demands. Recreation is one of the ones
22 that people like very much. We try to do everything
23 we can, but sometimes we have to sacrifice a little
24 bit there.

25 We have all sorts of things going on

1 in terms of recreation. In spawning season,
2 fishermen like us to hold the lakes steady so the
3 fish will spawn. That's the time of the year we're
4 trying to fill the pools for recreation. So here we
5 are trying to balance all of those kinds of things.

6 Water quality, the next slide. We
7 have permits at all of our coal fired and nuclear
8 plants and we have state permit limits that we try to
9 operate to make sure we meet all of those. We have a
10 group that in the summertime in particular is looking
11 at those limits and monitoring that, modeling that,
12 and making predictions so we can decide what we need
13 to do, turn on cooling tower lift pumps, run cooling
14 towers, cut back on generation to make sure we don't
15 exceed those state permit limits.

16 We have reservoir specific and
17 system-wide minimum flows that drive our system.
18 Sometimes they are driven by Chickamauga. Sometimes
19 they are driven by Kentucky. It just depends on the
20 time of year and what's going on, but we have minimum
21 flow limits all across the system that we're trying
22 to meet.

23 Another one that we have worked on
24 over the last decade and a half is dissolved oxygen,
25 and we try to provide oxygen into the river system in

1 the summertime when the lakes stratify so the aquatic
2 habitat downstream has plenty of oxygen to maintain
3 and grow and succeed so people can fish and whatever
4 and we have lots of vegetation growing forward or
5 whatever.

6 The next page is water quality. If
7 we're successful you catch fish like this guy. We
8 all -- all fishermen wish we could catch big ones
9 like that. So we're watching the water quality.
10 Like I said, we look at minimum flows.

11 We look at aeration and provide that,
12 dissolved oxygen. And as much as we can, we provide
13 stabilized reservoir for spawning. Crappie fishermen
14 are very interested in that, for example.

15 Another benefit is water supply. This
16 was very, very high on our agenda in 2007 and 2008.
17 And if you were here, you remember we came and we
18 talked about the drought. We worked very closely
19 with all of our people that have water supplies to
20 make sure they had water.

21 In some cases we had to help them move
22 their water supply intakes further out in the
23 reservoir, but nobody had problems providing water.
24 So that's one of the things that we were very
25 successful with and we always watch that.

1 If you go to the next page, look at
2 the second bullet and you will see we have over 700
3 water intakes that we're making sure we have water
4 for across the system.

5 Last, I would like to touch on dam
6 safety, and Jennifer Dodd will be talking next and
7 providing a lot more detail about this, but it's
8 something we take very seriously.

9 We have a large group that goes out
10 and does monitoring and does inspections. We have
11 people at the plants doing inspections and making
12 sure nothing is changing. If they see something, we
13 do lots of training, provide forums, mechanisms to
14 call us and say that we might have an issue here,
15 please come and check this out. We will get
16 engineers out there and whatever it takes.

17 We also do emergency action planning
18 with the emergency action folks where we practice and
19 provide them a notebook every year with all sorts of
20 updates and information on, if there is something
21 that goes on, here's the process and the procedure to
22 follow. So they have all of that information. We
23 update that on an annual basis. So Jennifer will
24 touch on that a lot more as we go forward.

25 So going back to running the river

1 system. This is a neat slide showing runoff. You
2 have on the Y axis percent of change from normal,
3 from minus 60 to plus 60, and along the X axis about
4 135 years. So these are annual deviations from the
5 mean for runoff.

6 So if I get 50 inches a year and it
7 all comes 1 inch every week it's real easy to operate
8 the river system, but as you see I don't get that
9 very often here. So that just throws another level
10 of complexity on how we operate the river system.

11 We try to factor all of these in and
12 make sure that we provide all of those benefits with
13 a non-normal system going on. This is just to give
14 you a flavor of how complex it is to run the river
15 system and manage all of those benefits.

16 So in summary, we have a long history,
17 of course, at TVA. Our operations are driven by
18 rainfall and runoff. We operate in a very integrated
19 manner, and we try to balance for all of those things
20 listed there, from navigation, flood damage
21 reduction, generation, water quality, water supply,
22 and recreation.

23 The next page is just a promotional
24 for us here at TVA. You can go to www.tva.com and
25 get all sorts of information.

1 The last bullet, we have a SmartPhone
2 app out there that you can download for free that
3 will allow you to go on-line and check recreation
4 levels, guide curves, where we're at, when we plan to
5 release, and all of that good information. So just
6 search for the TVA download. It works really swift.

7 So with that, I will just open it up
8 to questions, if you have any.

9 FACILITATOR MR. WILSON TAYLOR: Avis.

10 MRS. AVIS KENNEDY: Thank you very
11 much for your presentation. I have a specific
12 question.

13 A couple of years ago there was a lot
14 of support in the Western Kentucky region from both
15 local interests there and at the congressional level
16 for a possible change in operation at Kentucky Lake
17 and Lake Barkley to leave the pool up longer through
18 the summer, and I haven't heard anything about that
19 lately and wondered what the status of it is.

20 MR. CHUCK BACH: We're all across TVA
21 being asked to relook at how we operate the river
22 system. One of the frequent things we're asked is
23 can we hold the river system up longer.

24 We sometimes in the future will
25 probably go back and look at that, but we need to

1 look at it in a systematic manner to make sure that
2 we don't increase flood risks for other people by
3 holding this reservoir up longer.

4 Susan Jacks will talk a lot more about
5 the Corps of Engineers. And that's another factor
6 that we have to consider on the Kentucky system is
7 they can actually take over the operation of Kentucky
8 in high flow situations and the Ohio, and Susan will
9 talk more about that.

10 So there's been no progress made on
11 changing when we raise the levels, but all of those
12 things that I am talking about will have to be
13 factored in and looked at as we go forward and see if
14 we can do that and not increase flood risks for other
15 people, try to increase recreation opportunities for
16 people. And one of the frequent ones we get is
17 holding the lake levels up longer, yes.

18 FACILITATOR MR. WILSON TAYLOR: Paul.

19 MR. CHUCK BACH: I answered your
20 question without answering it, I guess.

21 MR. PAUL SLOAN: What is the -- what
22 is the life expectancy of a dam?

23 MR. CHUCK BACH: Well, we have lots of
24 good discussions about that, and it depends on the
25 dam. We have inherited a dam at Blue Ridge that

1 Jennifer will talk about that has some issues. We
2 have other dams that are in really good shape.

3 She will talk a lot more about what we
4 do to monitor them. We have a very active
5 maintenance program to go back and fix things and
6 take care of stuff so that they will last longer.

7 I don't -- there's nothing in the
8 literature in the history that says you can expect it
9 to last 72.3 years or something like that, but by
10 doing all of the things we do, and she will talk a
11 lot more about that, we do everything we can to make
12 that life expectancy go this way as long as we can.

13 MR. PAUL SLOAN: Doing the math on
14 your 30 -- your 35 years, double that for Norris, you
15 have got 70 years.

16 FACILITATOR MR. WILSON TAYLOR: Mic,
17 please.

18 MR. PAUL SLOAN: Three for three. You
19 have got 70 years at Norris.

20 MR. CHUCK BACH: Yeah.

21 MR. PAUL SLOAN: I mean, I didn't even
22 know what the ballpark is.

23 Is it 200 years, 100 years?

24 It seems with 70 years under its belt
25 there is a horizon out there and do -- I'm sure you

1 do, but how do you deal with sort of the amortization
2 of the replacement value of that and when -- I mean,
3 you maintain to a level, but at some point it's got
4 to be replaced, I would assume, due to systemic
5 fatigue at some point.

6 MR. CHUCH BACH: We constantly look at
7 that. We have -- and I am getting into Jennifer's
8 talk, I'm sorry, Jennifer -- inspections. We
9 contract with people to do calculations to make sure
10 our dams are safe and have a factor of safety in them
11 and continuously look at those kinds of things.

12 Now, we're constantly doing repairs,
13 going out and doing inspections and all of that kind
14 of thing. She will talk a lot more about that in
15 detail.

16 So what we do is monitor and maintain.
17 If I need significant dollars, I go to the project
18 process and put in a proposal and go up through the
19 line and explain the risks and all the pieces and
20 parts associated with that to get it funded. And I
21 have been very successful in getting funding for all
22 of our dam issues as we go forward.

23 FACILITATOR MR. WILSON TAYLOR: Mark.

24 MR. MARK IVERSON: Chuck, you had
25 mentioned various intake structures along the river.

1 Does TVA do the permitting for those and the
2 withdrawal limits?

3 MR. CHUCK BACH: Yes. We have a
4 system, it's called the 26(a) that's in the TVA Act.
5 It's called the 26(a) Section on the permitting.

6 We're involved -- anytime there's
7 withdrawals from the system we're involved in that.
8 We look at it from the big picture. We don't just
9 look at one little piece, we bring in all of the
10 pieces. We bring in Evan's land and shore people,
11 navigation, water.

12 All of the pieces are looked at. So
13 we do it in a very comprehensive manner to make sure
14 that we're not impacting anything as we go forward.

15 CHAIR MRS. DEBORAH WOOLLEY: I think
16 in another life you must have been a juggler
17 because -- with keeping all of these things up in the
18 air.

19 When you get into a situation like we
20 had three or four years ago with the drought.

21 MR. CHUCH BACH: Yes.

22 CHAIR MRS. DEBORAH WOOLLEY: And you
23 have got these multiple benefits that you're trying
24 to juggle all of, I mean, we take flood damage off
25 the table at that point.

1 MR. CHUCK BACH: Yeah, I did real well
2 at flood damage that year.

3 CHAIR MRS. DEBORAH WOOLLEY: You got
4 an A for that one. You have got to deal with power
5 generation, navigation, industry needs, municipal
6 water needs, how do you set priorities?

7 I mean, is there a triaging type of
8 thing that says this has to take precedence over this
9 or how does that work?

10 MR. CHUCK BACH: I don't have a
11 cookbook because every situation is different, but
12 what we have done is we have gone back and put
13 ourselves a guides thing to make sure we look and
14 consider all the pieces and parts. Based on the
15 situation we will make decisions for that operation
16 that are needed for that condition, and it will be
17 different every time.

18 So there's no cookbook that you can
19 put on the table and say to follow this step, this
20 step, this step, but it's guidelines, think about
21 this, think about this, consider this.

22 What are the impacts on this?

23 And then you fold all of those
24 together and then make a decision on how to best
25 operate to meet all of those benefits. Sometimes

1 some of the benefits will not be 100 percent because
2 you have to make some trade-offs. So I don't have a
3 cookbook answer. It's just to make sure you touch on
4 all of those pieces and parts.

5 CHAIR MRS. DEBORAH WOOLLEY: Okay.
6 Priorities?

7 MR. CHUCK BACH: Yes. And they change
8 depending on what's going on. Water supply would be
9 a real high priority in a drought and we gave it that
10 and that was constantly being looked at, but at the
11 same time we wanted to make sure we had minimum flows
12 down through the system for aquatic habitats and
13 waste assimilation.

14 Also, we wanted to make sure the
15 navigation industry had channels that they could
16 operate in. Sometimes we had to work with the
17 navigation industry to say, we can use some water
18 here and here we might not be able to and have to
19 work through those kind of things.

20 We have those communications going on
21 all the time. The people understand. It doesn't
22 mean they like it, but they understand, and they work
23 with us very closely so we're able to manage those
24 the best we can for everybody.

25 FACILITATOR MR. WILSON TAYLOR: Avis.

1 MRS. AVIS KENNEDY: I'm sorry.

2 FACILITATOR MR. WILSON TAYLOR: Okay.

3 Tom.

4 MR. TOM LITTLEPAGE: Yeah. I kind of
5 wanted to follow up on Avis' question, and I guess I
6 hadn't thought about this and I am just curious.

7 In looking at a strategic assessment
8 of the operations and an ROS kind of analysis, I
9 guess I have thought that we sort of evolved and that
10 TVA was not intentionally going to plan on an
11 ROS-type process and it was more an evolutionary
12 on-the-fly updating of that.

13 Is there a plan to look at the concept
14 of whether there needs to be strategic reassessment
15 of the ROS with that kind of focused analysis or how
16 will that be accomplished?

17 MR. CHUCK BACH: I am not aware of a
18 plan right now, Tom, but we are constantly thinking
19 and talking about how can we best operate the system
20 with the conditions and stipulations that I have
21 right now.

22 We don't have any big plans right now
23 to go in and re-look at it and change everything, but
24 we're constantly looking at it, monitoring it, trying
25 to adjust, trying to factor in because things are

1 dynamic on the river and they are changing all the
2 time and we like to try to accommodate those the best
3 we can.

4 But at the same time, my job is to
5 look at it from a systematic standpoint and make sure
6 that something I do at Kentucky doesn't impact
7 something that's going on at Douglas, for example, or
8 vice versa.

9 And along the way we have got all of
10 our nuclear and fossil plants and we want to make
11 sure we -- and all the people that live below the
12 dams, we want to make sure that they are safe. So
13 we're trying to factor all of those pieces in as we
14 go forward, Tom.

15 MR. TOM LITTLEPAGE: It may be
16 something to think about in terms of -- not
17 necessarily today or tomorrow or next year, but begin
18 to build in a process to do a study and obviously
19 given the states' role with water quantity that they
20 have in this process and to look at things like how
21 growth and development is affecting runoff patterns
22 and what are the potential implications of long-term
23 climate change and what are the state's roles or
24 expectations relative to the future water demands.

25 And it's just something I think for

1 the staff is maybe worthwhile to think about at some
2 point in the future and begin to reserve some staff
3 resources and dollars to help facilitate that
4 because, again, I think TVA has the capability and
5 the benefit of being a leader in this area to take
6 the seven states and provide a leadership role in
7 looking at this.

8 MR. CHUCK BACH: That may be something
9 you could pass out and tell us as a recommendation
10 and give us some guidelines and suggestions and
11 things like that that we could take forward and think
12 about.

13 MR. TOM LITTLEPAGE: Okay.

14 FACILITATOR MR. WILSON TAYLOR: Mark.

15 MR. MARK HOMMICH: Chuck, as you
16 know, the Chickamauga lock has some serious
17 structural problems and very well could be shut down
18 shutting off 200 miles of navigation on the Tennessee
19 River in the very near future. So, you know, there's
20 a replacement project that was started that's
21 probably going to be shut down next year.

22 So where does TVA stand on that issue?

23 You have an obligation to provide
24 navigation for that stretch of the river and, you
25 know, from our viewpoint and the commercial

1 navigation industry, you know, it's tied up with the
2 problems with the Inland Waterways Trust Fund and the
3 lack of funding there.

4 So where do y'all see that going?

5 MR. CHUCK BACH: What Mark is talking
6 about is at Chickamauga Dam we have a concrete growth
7 problem, and Kelie is going to talk a lot more about
8 that later and give you some nice slides and show you
9 where we're at.

10 The Corps has taken the lead on
11 funding the project and TVA is supporting the Corps
12 as we go forward. And since the Corps is taking the
13 lead, we're trying to follow the Corps and support
14 them in any way, shape or form that we can, but we
15 don't want to get out in front of the Corps because
16 they are the ones taking the lead and talking to
17 Congress and the appropriate people to try to get
18 funding so we can finish that. So we're working
19 closely with the Corps, but the Corps has the lead on
20 that.

21 MR. MARK HOMMICH: You know, it looks
22 like the process that the Corps has in place to
23 evaluate some of these projects and appropriate
24 funding is, you know, based on usage. And the
25 Chickamauga lock being a low usage lock, you know,

1 it's very far down the totem pole and with the
2 limited funding and the needs throughout the whole
3 system it's hard to understand.

4 MR. CHUCK BACH: From a tonnage
5 standpoint, you're correct, Mark. I know the Corps
6 is working really closely with Congressmen and their
7 staffers trying to get some changes implemented that
8 would allow funding to come to the Kentucky and the
9 Chickamauga locks and not be used by other locks.

10 So they are working very closely with
11 those staffers and Senators and Congressmen, and they
12 have had several up to Chickamauga to see it so that
13 they know firsthand what the issues are. They are
14 trying to work through that with those staffers and
15 Congressmen to provide funding that would get down to
16 Chickamauga and Kentucky.

17 FACILITATOR MR. WILSON TAYLOR: Any
18 more questions?

19 All right. Bruce.

20 DFO MR. BRUCE SCHOFIELD: Thanks,
21 Chuck. And before we move on to Jennifer, I wanted
22 to introduce Joe Hoagland who has joined us, Senior
23 Vice President of Policy and Oversight for TVA.

24 Welcome.

25 MR. HOAGLAND: Thank you.

1 MR. CHUCK BACH: And dam safety
2 officer.

3 FACILITATOR MR. WILSON TAYLOR: Is
4 that a compliment the way you said that?

5 MR. CHUCK BACH: I use that as a segue
6 into our next talk. Jennifer Dodd, who is in charge
7 of our non-power assets program, which includes dam
8 safety, is going to talk about that next.

9 So, Jennifer.

10 MS. JENNIFER DODD: Thank you, Chuck.
11 Chuck is a pretty tough act to follow.

12 Don't you think?

13 Yes. But I hope you will find this
14 interesting as well. My name is Jennifer Dodd. I am
15 the Senior Program Manager for non-power assets in
16 River Operations and Renewables, and that includes
17 our dam safety program. I am excited to be able to
18 come and talk to you today about it because it's
19 something I am very passionate about and I hope you
20 will see why.

21 All right. Some of the purposes for
22 our dam safety program are to keep the dams, the
23 communities, and citizens at large safe. We also
24 ensure operational and structural integrity of these
25 water barriers and ensure compliance with the federal

1 guidelines for dam safety.

2 You have seen this slide before, you
3 will see it again, but we do have a large service
4 territory. We have 49 dams across seven states, 29
5 of them are conventional hydro electric dams, we have
6 19 non-power dams, one pump storage facility, which
7 you have got the luck to go see today at Raccoon
8 Mountain. I think, like Chuck said, you should find
9 that very interesting.

10 So there's several key components to a
11 good dam safety program. You have got inspections,
12 instrumentation, maintenance and repair. You have
13 got design and rehabilitation. You have got -- in
14 the unlikely event of an emergency, you need to have
15 emergency action plans.

16 Today I am just going to talk to you
17 about the monitoring and maintenance programs, as
18 well as some of the efforts we have got to ensure
19 that our dams are up to current industry standards.

20 So part of a good monitoring program
21 is understanding the performance of your dam. One
22 way we do that is by installing instruments within
23 the dam. The reason we do that is you can't always
24 see how your dam is performing. You know, a dam may
25 have internal -- an embankment may have internal

1 water pressures, and that's fine, but can you see if
2 those internal water pressures are increasing or not,
3 you know, no, you can't.

4 We need to have instruments within our
5 dams so that we can tell what's happening inside
6 those dams to make sure that we can gather that
7 information. We trend it. We graph it. We evaluate
8 it and analyze it to make sure that everything is as
9 it should be.

10 We have about 2,500 automated
11 instruments and about 1,200 manually run instruments.
12 Those automated instruments, they take readings at
13 frequent basis and they either store the information
14 or they provide the -- or they may transmit that
15 information back to our central offices. Of course,
16 those manual instruments we have staff that go out
17 and take those readings.

18 We do have information or
19 instrumentation information going back to the
20 construction of those dams, in many cases all the way
21 back to the 1930's and 1940's. So I was going to --
22 I pulled a few pictures of some instruments I thought
23 that might show some of the work that we do.

24 So you can see -- as you can see here,
25 we have got some automated instruments. This

1 inverted pendulum, this one happens to be at
2 Chickamauga lock. It is used to tell if there is any
3 tilting of any of the concrete structures.

4 And Chuck mentioned concrete growth,
5 which is -- Chickamauga has a chemical reaction
6 that's happening within the concrete that is causing
7 it to expand. So instruments like this are very
8 helpful in understanding. Even very slight movements
9 we can keep track of.

10 We also have a total station, which is
11 this one here, and that instrument takes continual
12 surveys. That one is also at Chickamauga. Although,
13 these pictures are from Chickamauga we have got, like
14 I said, 2,500 automated instruments. These are just
15 some of the most interesting ones. The total
16 station, you know, taking those surveys, we can see
17 any kind of movements in the lock and the dams.

18 On the manual side we have got uplift
19 gauges, and that's just one type of instrument out of
20 many. The uplift gauges you can kind of see that it
21 looks a little bit like a tire pressure gauge there
22 at the top, and that's kind of what you're doing.

23 You have got these uplift gauges that
24 measure the pressure underneath the dam of the water
25 pushing up on the dam. So what you're trying to do

1 is make sure it's not trying to push it over.

2 The groundwater well, which is next to
3 that picture, is just a well and you can see how high
4 the water is within the embankment. That's just for,
5 you know, earth embankments. And you expect water to
6 be within your dam, but we make sure that we don't
7 have too much water in our dam which could cause some
8 stability issues.

9 Then the last picture here, this V
10 notch weir, and it may be a little dark, but you can
11 see the -- here it is. It's a partition with a V
12 notch out of it and water flows through it and we can
13 tell, using some calculations, how much flow we're
14 getting out of whatever we're measuring. So it could
15 be at a drain. It could be in a known seepage, a
16 seep on a dam. And you expect those things to
17 happen, but we can monitor those to make sure they
18 are not increasing.

19 The next part of a good monitoring
20 program are the -- is the inspections program, and we
21 have a series of inspections that we perform to make
22 sure that our dams are safe. These inspections are
23 visually looking or visually operating equipment so
24 that you can make sure everything is in order.

25 We have got -- the formal inspections

1 you can see on this little graphic have the most
2 detail in them, and what I mean by that is we take --
3 we do a formal inspection every five years. During
4 that inspection we go through everything about the
5 dam. We look at the historical information. We look
6 at the instrumentation. We look at the design basis
7 and make sure that the dam is performing as the
8 design basis wants it to. We look at all of the old
9 inspection reports. You go out and you make sure
10 that you look at your dam in a very detailed way, and
11 we do that every five years.

12 We also have an intermediate or an
13 informal inspection that's done every 15 months, and
14 it's got a lot of the same components but we don't go
15 into quite as much detail on it. It's still pretty
16 intensive.

17 A lot of people ask why -- why not
18 annually, why 15 months?

19 Well, the reason why we do that is
20 because if you get that extra three months in there
21 you will get the seasonal effects over the years as
22 you're doing these inspections, and sometimes your
23 dam behaves a little bit differently in the cold than
24 it does in the hot or in the heat of summer.

25 We also have monthly inspections, and

1 those are typically done by plant personnel or some
2 of our field technicians who are taking those manual
3 instrument readings. Those are an especially
4 effective inspection as well because while they are
5 not as in-depth, we have got people who are so
6 familiar with those dams. They see them every day or
7 they see them all the time. So they walk down those
8 dams and if they see any changes, you know, they
9 notify us immediately about it.

10 Then sometimes we have what we call
11 special inspections, and those special inspections
12 are when we have some usual event happen, such as an
13 earthquake or a flood event, we will send out
14 inspectors to take a look at our dams and make sure
15 they are okay.

16 As a matter of fact, does everyone
17 remember the earthquake in August of last year in
18 Virginia?

19 It was a 5.8 magnitude earthquake.
20 Well, we deployed inspectors to 15 of our dams to
21 make sure that no -- nothing adverse had happened to
22 them.

23 And then every now and again you have
24 an emergency or something that you're -- you know,
25 you want to make sure isn't an emergency. So you

1 would send out an inspector right away to go look at
2 that.

3 An example of that, some of you may
4 have remembered the rock slide that took out the
5 Ocoee flume. Well, you get some inspectors out there
6 to make sure what the damage is and what we need to
7 do. So we have got those inspections, too.

8 We have got what I think are very
9 interesting pictures, I hope you will think they are
10 interesting too, of some of our routine inspections
11 and -- but they are a little more than what I think
12 the general public would think we do when we're
13 inspecting our dams.

14 In the first picture here in the
15 bottom left corner you can see -- can you see this
16 little red dot right there?

17 Not my red dot but the little guy
18 right there, that's a man and he is hanging from a
19 rope. He is doing a rope access inspection of our
20 spillway gates. So he is looking at the -- he's
21 looking at the trunnion arm and making sure there's
22 no corrosion on our gates.

23 The next picture, this one right here,
24 it looks like a guy in a moon suit. Well, he's doing
25 a diving inspection, but he is -- it's a special dive

1 because this one is at Fontana Dam, which is our
2 tallest dam, and so it is a deep dive. So he has to
3 have a special -- you know, special diving rig.

4 And we make sure that we do -- we're
5 not just inspecting what you can see on top of the
6 dam, you know, we're looking at everything that we
7 need to underwater as well. We use those diving
8 inspections to do some of that work, which is this
9 next picture. That's just a normal diving
10 inspection. We have got those going on all the time.

11 Then the final picture in the
12 right-hand corner you see a little gizmo there, it's
13 a remote operated vehicle. That remote operated
14 vehicle has a camera on it and we send those up
15 drains and different components that you can't get
16 into and take a look at them. We watch the film as
17 we're doing it so that you can look at those
18 features.

19 All right. The next aspect of a good
20 dam safety program is having an active maintenance
21 program. We have got a couple of components to a
22 maintenance program. One of them is having
23 preventative maintenance. And by doing routine
24 maintenance, you can avoid unwanted and costly
25 repairs.

1 And you can see a couple of pictures
2 here. In this top one here you can see -- look at
3 how this guy's head is about the same size as one of
4 these links on those chains. I just like to point
5 out the scale of the things that we work on.

6 On those chains you need to make sure
7 that they are in good condition and that they are --
8 that the gate guides are greased and that everything
9 has been maintained so that when you need to operate
10 those gates to spill water that they are available
11 when you call upon them.

12 The next preventative maintenance
13 example I have got is here at Pickwick Dam. You can
14 see they are replacing what we call riprap, but you
15 might call it large stone. They take large stone and
16 they place it all along the embankment to assure that
17 we don't erode the embankment or the fluctuations of
18 the reservoir.

19 Now, sometimes things break. So when
20 they break we have corrective maintenance. And we
21 budget a certain amount of money every single year
22 and it is treasured by me to allow for correcting
23 those things that do break each year.

24 Here's a nice example of one of the
25 things that has broken. This here is a trash rack.

1 What a track rack is is down below the water there's
2 an intake gate and this trash rack sits in front of
3 it. So when -- as that intake pulls in water, you
4 know, it will try to pull in debris as well, and that
5 trash rack keeps trash from going into and damaging
6 the intake unit, I mean, the intake gate or the
7 generating unit.

8 Here you can see a big hole in it. It
9 should look more like a jail cell, but here's a big
10 hole. So probably a log or something has broken out
11 bars on it. So they pulled this trash rack out and
12 they would weld in some more bars.

13 All right. Another thing that we're
14 currently working on, and I think Joe can appreciate,
15 is that we are -- you need to have continuous
16 improvement in your dam safety program. As the
17 industry understands more about their dams and the
18 things that impact the dams, you know, as a dam owner
19 you need to look at those things and make sure that
20 your dams are -- that they can withstand what they
21 need to based on the current knowledge.

22 Like I said, these dams were built,
23 most of them, in the '40s, and what we know now is
24 very different than what we knew then. So what they
25 did back then wasn't wrong, it's just they didn't

1 know as much as we do today.

2 So there's a couple of efforts that we
3 have got going on. One of them is we're re-analyzing
4 some extreme events, and one of those is floods and
5 the other one are seismic events, earthquakes,
6 looking at those very large events.

7 And using the National Weather Service
8 data, we calculated the largest flood that could
9 occur in our area, we're actually going through the
10 process, but we have already calculated it for some
11 of the areas. In this left-hand picture, some of you
12 may have seen these if you're in the area of
13 Cherokee, Tellico, Fort Loudoun or Watts Bar, but
14 those sand baskets.

15 Each one of those is a basket and it's
16 filled with sand. They are using them in New Orleans
17 as part of their levies too, but we have calculated
18 that the -- this extreme flood event is higher than
19 the dam is. So in order to hold back that flood, we
20 have put these temporary sand baskets up.

21 We're in the middle of the NEPA
22 process right now to see what we're going to do as a
23 permanent solution for those, but you will see these
24 sand baskets lining some of our dams.

25 Another thing that we did, which some

1 of you may know about, I think it may have been
2 talked about at one of the other meetings, but Bear
3 Creek Dam had a seepage issue and we did install a
4 concrete reinforcing structure right downstream of
5 that dam.

6 What's interesting about this photo on
7 the right is you can see this man and he is in the
8 middle of that rock and that rock is what is
9 underneath those -- that dam. You can see there's no
10 soil or anything in those cavities.

11 Well, there was. It was filled with
12 clay and soil and that's common, and this is called
13 carst. It's very common in the Tennessee Valley and
14 where you have got rock like this and soils packed in
15 it, the water will find its way. It will find its
16 way from upstream to downstream.

17 As it tries to go through these holes
18 that are like swiss cheese it will take out the
19 material, and that's where you will see maybe some
20 seepage downstream of it. That's if your cutoff wall
21 isn't good enough or they didn't clean out the
22 foundation when they built it well enough to fill
23 these holes back in a cement mix.

24 So we have fixed Bear Creek Dam, and I
25 am proud to say that the seepage there is minimal.

1 It's in much better shape than it was before.
2 Actually, our independent review board is very happy
3 with the results of it and has asked us to do a paper
4 on it.

5 The next slide I have got, we are in
6 the final stages of completing a rehabilitation at
7 Blue Ridge Dam. Blue Ridge Dam was built in 1931,
8 purchased by TVA in 1939. Blue Ridge isn't
9 considered to have been built using the best
10 construction techniques today. They used some
11 techniques back then that were economical but not the
12 best way to build a dam.

13 So we've -- and the dam doesn't meet
14 our current seismic criteria. So we have had a
15 variety of repairs going on at Blue Ridge, and we are
16 in the middle of placing rock on the downstream side
17 of the dam. You can see here the difference between
18 those photos.

19 Upstream that's headwater, tailwater,
20 to go back to Chuck, but we have got the -- all of
21 this stone has been placed on the dam on the
22 downstream side. There's also some on the upstream
23 side, too. That helps improve the seismic stability.

24 However, this project is on hold right
25 now due to some slight movement that was a little bit

1 more than was expected in the new retaining wall.
2 That retaining wall is right here and right here.
3 There was some slight movement in the little concrete
4 block near the small unit.

5 So we took some precautionary measures
6 to ensure that there is no threat to the public. We
7 have held the reservoir and we have stopped the work
8 and we installed additional instrumentation so that
9 we can ensure that there's no additional movement of
10 the dam, and we have seen that the movement has
11 stopped.

12 Just so everyone knows, there is no
13 change in the ability of this dam to hold water. We
14 still consider it safe, but we are taking
15 precautionary measures to make sure that it is safe
16 before we continue on that project and raise the
17 reservoir. We are working to minimize the impact on
18 the summer water levels.

19 So in summary, keeping the dam safe is
20 our number one priority. The next time you go
21 fishing or take your boat out on the lake or the next
22 time you flip on that light switch that might have
23 some hydro generation electricity running through it,
24 I just want you to feel confident that our team is
25 working behind the scenes doing all this work with

1 all of these tools to ensure that the dam is safe.

2 Any questions?

3 FACILITATOR MR. WILSON TAYLOR: Renee.

4 MRS. RENEE HOYOS: Are other
5 impoundments included in this program?

6 MS. JENNIFER DODD: We are going to
7 look at all of the impoundments to current --
8 evaluating them to current industry standards.

9 MRS. RENEE HOYOS: Is there a schedule
10 for that?

11 MS. JENNIFER DODD: There is a
12 schedule for it. The schedule is long, but what
13 we're doing is by the second quarter, which would be
14 the end of March 2015, we plan to have new stability
15 analyses done for all of the river operations dams.

16 Now, if you're asking me about
17 modifications, I mean, we wouldn't know if there are
18 any modifications until we do the analysis.

19 MRS. RENEE HOYOS: I'm actually
20 talking about other kinds of impoundments like, for
21 example, the coal based impoundments. I'm sorry I
22 wasn't clear.

23 MS. JENNIFER DODD: Okay. Well, now,
24 the coal is not part of -- the ash ponds and gypsum
25 ponds are not part of the river operations suite of

1 dams.

2 However, the ash ponds and gypsum
3 ponds, any of the backwater levies and some other
4 things, are part of our TVA dam safety governance
5 program. We all have the same requirements to review
6 our dams to the latest industry standards.

7 They said before, you know, Joe is our
8 dam safety officer, and the Dam Safety Governance
9 Group belongs in his organization. So they are held
10 to the same standards that I am.

11 FACILITATOR MR. WILSON TAYLOR: Joe.

12 MR. JOE HOAGLAND: Yeah. I was just
13 going to say that the program we have got now around
14 dam safety governance encompasses all of our
15 impoundments.

16 So the ones we're focusing on today
17 are around the hydro areas, but we're applying the
18 same standards and the same criteria to all of the
19 fossil impoundments associated with all of our coal
20 ash, as well as all of our impoundments at the
21 nuclear plants associated with the intakes and
22 outtakes of the waters.

23 So everything that TVA has that holds
24 something is now under that program. And there is a
25 schedule that will take several years for us to get

1 completely through, but we have gone through and
2 prioritized, particularly in the fossil area, those
3 ones that are considered a high hazard. So they are
4 at the top of the priority list and then we're
5 working our way down.

6 FACILITATOR MR. WILSON TAYLOR: More
7 questions or comments?

8 Before we have our next speaker let's
9 take a five-minute stretch break. So if you can be
10 back in five minutes.

11 (Brief recess.)

12 FACILITATOR MR. WILSON TAYLOR: If we
13 can go ahead and grab our seats, we will be ready for
14 our next speaker.

15 Okay. Kelie, it's all yours.

16 MS. KELIE HAMMOND: Okay. Thank you.

17 FACILITATOR MR. WILSON TAYLOR: Thank
18 you.

19 MS. KELIE HAMMOND: Well, good morning
20 everybody. My name is Kelie Hammond, and I am the
21 Manager of Operations Evaluation, which is a group
22 within River Scheduling in River Operations and
23 Renewables.

24 I appreciate the opportunity to be
25 here today to give a navigation update. Listening to

1 Mark's questions just a few minutes ago, I thought he
2 could probably just come up here and help me with my
3 presentation. He knows an awful lot about what I
4 will be talking about today.

5 MR. MARK HOMMICH: I have sat through
6 a lot of your talks and learned well.

7 MS. KELIE HAMMOND: Okay. So I wanted
8 to start off from the very beginning, of course,
9 improving and promoting navigation has been one of
10 the primary missions of TVA. Over the years we have
11 built a system of locks and dams, operated the system
12 to provide a 9-foot navigation channel from
13 Knoxville, Tennessee to Paducah, Kentucky.

14 We have worked together with our
15 federal partners at the Army Corps of Engineers and
16 the U.S. Coast Guard to provide a safe and reliable
17 passage for commercial and recreational vessels along
18 the river.

19 Moving forward a few years, on
20 August 29th of 2001 the navigation infrastructure
21 subcommittee of the Regional Resource Stewardship
22 Council had made some recommendations to TVA, and TVA
23 agreed that we would continue to manage an integrated
24 river system, maintain and improve the navigation
25 infrastructure, continue to strengthen our

1 partnerships with other federal agencies, and support
2 the new lock construction at Chickamauga and Kentucky
3 dams.

4 And today, despite the loss of federal
5 appropriations, competing demands for funds and other
6 numerous challenges that we face, TVA's navigation
7 program remains focused on upholding that original
8 mission and our responsibilities.

9 This is just a snapshot of the 12,000
10 mile inland waterway system and to show you where the
11 Tennessee River is located in relation to the
12 Cumberland River, the Ohio River, Mississippi Rivers.

13 It's important to note that while the
14 Tennessee River may be a small part of the inland
15 waterway system, on average around 75 different
16 congressional districts and 19 different states are
17 impacted by Tennessee River commerce, commerce either
18 originating on the Tennessee River or that is
19 destined for the Tennessee River as it comes here.
20 So we have impacts all across the inland waterway
21 system area.

22 This graphic here just indicates where
23 our navigation assets are along the river. We have
24 13 locks at nine dams on the main stem of the river
25 and then we have one lock that's located on the

1 Clinch River, which is Melton Hill.

2 Of course, this is the Cumberland
3 River. So these locks here are owned and operated by
4 the Corps of Engineers. We have about, as Chuck
5 mentioned earlier, 800 miles of commercially
6 navigable waterway, navigable channel on Tennessee
7 River and its tributaries.

8 Additionally, TVA is responsible for
9 the placement of about 2,500 aids to navigation, such
10 as buoys, wayboards, and those kinds of things along
11 the secondary channels of the Tennessee River. By
12 secondary I mean those are typically shallower
13 channels and primarily recreational boaters are using
14 those channels.

15 We do mark those channels. We have a
16 towboat and a barge actually that maintains those.
17 And I don't know if you have ever seen one of the
18 Coast Guard buoy tender boats, but it's very similar
19 to that. They are located or based out of Muscle
20 Shoals, Alabama right adjacent to Wilson lock.

21 This is the chart that Chuck mentioned
22 actually in his presentation, but I wanted to just
23 give you -- while the numbers I realize are a little
24 dated here, the main point is to show you the
25 different types of lockages and the number of

1 lockages along the waterway.

2 I guess the key takeaway would be -- I
3 don't know if these colors are hard to see, but the
4 key takeaway being that on the lower end of the
5 rivers, such as Kentucky, the commercial lockages, we
6 have a lot more commercial traffic on the lower end
7 than we do on the upper end.

8 And then as you go up river our
9 recreational traffic gets a lot greater. And as he
10 mentioned as well, Chickamauga lock being one of
11 the -- having the highest number of recreational
12 vessels that lock through on the Tennessee River and
13 probably one of the highest, if not the highest, on
14 the inland waterway system itself.

15 MR. TOM LITTLEPAGE: I'm sorry to
16 interrupt. What is the threshold for low usage based
17 on OMB criteria, do you know?

18 Haven't they issued a numerical value?

19 MS. KELIE HAMMOND: I do not know the
20 number for that.

21 MR. TOM LITTLEPAGE: Okay. Thank you.

22 MS. KELIE HAMMOND: Sorry. I can get
23 it for you if you need me to. I will be happy to do
24 that.

25 Okay. Just to talk about some

1 responsibilities on the inland waterway. In general,
2 the Corps of Engineers is responsible for
3 maintaining, building, operating locks on the inland
4 waterway. They also have a regulatory permitting
5 role for structures built along the waterway.

6 You have got the U.S. Coast Guard.
7 They install and maintain the commercial navigation
8 aids on the channel. They also have a law
9 enforcement role and the safety and the port
10 security.

11 Then you have got the private sector
12 along the waterway, of course, developing the
13 terminals and the ports and operating the shipping
14 and towing lines and fleeting companies.

15 Then you have got on the Tennessee
16 River this third agency thrown in the mix, which is
17 TVA, and we manage the Tennessee River and its
18 tributaries. We actually own the lock and dam
19 infrastructure. That is confusing to people
20 sometimes that TVA actually does own the locks here,
21 which is a little different than on some of the
22 other -- on other rivers.

23 Similar to the Corps, we also have a
24 regulatory component to our function as far as for
25 permitting under Section 26(a) of the TVA Act and for

1 permitting for structures built in or over along the
2 waterway.

3 Then we also have a joint role with
4 the Corps of Engineers and the Coast Guard when it
5 comes to navigation safety during high water or other
6 extreme emergency-type events.

7 And with the input of the commercial
8 towing industry, we actually all put together what's
9 called the Tennessee River Waterway Management Plan,
10 and we use that as a tool for communication during
11 those types of events.

12 It prescribes threshold values at
13 which locks may close due to high flows or high
14 tailwater elevations or if segments of the river
15 might need to be closed. So it's a tool that we use
16 to communicate and get the message out to everybody.
17 It's worked really well for many years.

18 Next I wanted to highlight our
19 partnership with the Corps of Engineers. We have a
20 Memorandum of Agreement with them for construction,
21 operation, and maintenance of the navigation
22 facilities. We entered into this agreement back in
23 1946 to formalize our respective responsibilities on
24 the river and to prevent duplication of efforts and
25 to provide more fully for navigation.

1 In 1962 we revised the agreement to
2 give us a little more flexibility in the performance
3 of the maintenance and rehabilitation work and allow
4 for the interchange of responsibilities so we can
5 increase efficiencies and use our resources at each
6 agency in a more cost-effective way.

7 Today, over 65 years later, we
8 continue to operate effectively under that MOA in
9 fulfilling those joint responsibilities. We have
10 tremendous partnership with the Corps.

11 Some of the benefits provided by the
12 Tennessee River, of course, those benefits are in
13 this region, as well as national benefits, and that
14 keeps our transportation costs lower. It saves
15 shippers and consumers up to \$500 million a year in
16 transportation costs.

17 Just simply having the waterway
18 available as a viable option provides another
19 \$500 million or so in transportation savings to rail
20 shippers, and we call that water compelled rates. So
21 it's just -- excuse me. Having that an option helps
22 keep those rail rates low and provides that
23 additional savings.

24 Then as Chuck mentioned earlier, there
25 are over 17,000 recreational boats that are coming

1 through each year. And as I mentioned, Chickamauga
2 lock being one of the largest number of recreational
3 boats for lockages.

4 The navigation system removes the
5 equivalent of about two million truckloads from the
6 nation's highway each year and it also provides
7 additional environmental and public safety benefits,
8 such as less energy, fuel consumption, fewer air
9 pollutants, and it's safer, lower injury and fatality
10 rates.

11 This image, simple as it is, it's
12 always one of our favorite ones, but this just
13 demonstrates the efficiencies and safety benefits of
14 the waterway in that one barge is equivalent to the
15 cargo of 15 railcars or 60 trucks.

16 So to give you a quick example, if a
17 tow had ten barges in it, then you're talking 600
18 trucks off of our roadway, and that's just with one
19 tow. I was looking at some numbers from the Corps of
20 Engineers for Kentucky lock for this year, and they
21 say up to -- up-to-date there's been over 2,000
22 barges that have locked through at Kentucky lock. So
23 that's already over 120,000 truckloads off the
24 roadways at Kentucky lock alone. So there's a lot of
25 benefit to navigation from the waterway commerce.

1 Of course, we face our share of
2 challenges on the Tennessee River. The biggest
3 challenge right now being our aging infrastructure.
4 The average age of our locks is about 61 years old
5 with the planned ones being around 50 years. So, of
6 course, the maintenance costs are — continue to rise
7 and funding is always an issue for TVA and the Corps
8 of Engineers.

9 Another issue is the status of the
10 Inland Waterway Trust Fund. And I won't go into too
11 much detail, but for new lock construction projects
12 on the inland waterway funding is 50 percent from the
13 trust fund and 50 percent from federal
14 appropriations.

15 And the revenues into that trust fund
16 just aren't at the level they need to be to sustain
17 construction projects, and it's causing a lot of
18 delays and increased costs for projects on the inland
19 waterway. Of course, we have got two of those
20 projects here on the Tennessee River, being
21 Chickamauga and Kentucky needs locks.

22 So Chickamauga lock, as was mentioned
23 already, has the structural problem called concrete
24 growth. It causes an expansion of the concrete. It
25 causes problems with machinery and gates of the

1 existing lock.

2 As Jennifer mentioned, we have got
3 numerous instrumentation and monitors going on over
4 at Chickamauga lock to make sure that the existing
5 lock is safe to operate as we and the -- well, the
6 Corps of Engineers and we work together and get
7 through and get this new lock completed. Keep your
8 fingers crossed.

9 In 2003 Congress did authorize the
10 Corps to construct the new 102 foot by 600 foot lock.
11 I put this illustration up here just to give you an
12 idea of the efficiencies that would be gained with
13 the larger lock.

14 Because the way it is now at
15 Chickamauga, it's a 60 foot by 360 foot lock Chamber.
16 So it can only process one barge at a time, and it
17 typically takes about an hour to process a single
18 barge. So if we get 110 by 600 foot lock, as you can
19 see, that's going to cut down dramatically on the
20 amount of time it takes to process lock barges
21 through the lock there. So it will be great.

22 This next slide I just wanted to put
23 up to -- if you haven't seen it, a lot of you
24 probably have already, but as far as what the
25 construction area would look like where the new lock

1 would be, this is the existing lock here. This would
2 be where the new lock would go and this dashed line
3 here being the temporary cofferdam.

4 Of course, if you have been in the
5 area and driven over the dam I'm sure that you have
6 seen something going on over there. It's quite a
7 sight to see.

8 And then I will put up a slide here of
9 the cofferdam itself. And again, if you have been
10 over the dam this is sort of what it looks like today
11 with cofferdam in place and nearly complete.

12 The second major construction project
13 on the Tennessee River, of course, is at Kentucky
14 lock, and the existing lock there is also too small
15 and inefficient to handle the current and projected
16 traffic on the river.

17 Like if you will recall from my slide
18 before, on the lower end of Kentucky we have got a
19 much larger number of commercial vessels locking
20 through the lock and using that lock on a daily
21 basis. So the delays there have a large impact on
22 shipping rates and delays are increasing.

23 So in 1996 Congress authorized the
24 Corps to construct the new 110 by 1,200 foot lock to
25 replace the smaller lock. And again, I just have the

1 image here for you to see. This is where the
2 existing lock is here and this is where the new lock
3 would be right there.

4 So to summarize, again, our navigation
5 mission remains the same. We continue to fulfill
6 that mission to the best of our ability. We do this
7 in part through our longstanding partnership with the
8 Corps of Engineers, and we work very closely together
9 with them to address maintenance needs on the
10 Tennessee River locks.

11 For example, we meet with them at
12 least quarterly to discuss and prioritize maintenance
13 needs at each facility. We coordinate with them
14 nearly on a daily basis. There's some days I
15 probably talk to more people at the Corps of
16 Engineers than I do folks at TVA. We work with them
17 a lot.

18 We continue to provide design and
19 technical support for Chickamauga and Kentucky locks
20 and a multitude of other activities, all to support a
21 safe and viable prosperous navigation system as best
22 as we can.

23 So with that, I will open it up to
24 questions if anybody has them. I will let Mark
25 answer them all for you.

1 FACILITATOR MR. WILSON TAYLOR: Tom.

2 MR. TOM LITTLEPAGE: Yeah. To what
3 degree is TVA allowed to voice an opinion on the
4 resolution of the trust fund between fuel taxes and
5 lockage fees?

6 MS. KELIE HAMMOND: Well, that's a
7 good question. I don't know all of the details. I
8 am looking back at Chuck, he might know more of a --
9 the right answer there, but I know that we --

10 FACILITATOR MR. WILSON TAYLOR: Chuck,
11 could you come to the mic, please, so we can make
12 sure that everybody can hear.

13 MR. TOM LITTLEPAGE: Or a mic.

14 MR. CHUCK BACH: Your question, Tom?

15 MR. TOM LITTLEPAGE: Well, looking at
16 the resolution of the Inland Trust Fund I think
17 basically two concepts have been thrown out there, a
18 lockage fee or a fuel tax.

19 Lockage fee tends to penalize those
20 systems that aren't on the Mississippi River. The
21 Mississippi River has fewer locks. So the fuel tax
22 is one that I think a lot of states in this region
23 and institutes are supporting, but I just didn't know
24 if TVA had looked at how to begin to fix the Inland
25 Waterway Trust Fund or what options existed.

1 MR. CHUCK BACH: We're working very
2 closely with the Corps of Engineers. They have taken
3 the lead on working with congressional staffers and
4 congressmen and looking into the process of funding
5 locks.

6 At the same time, they are looking at
7 the Inland Waterway Trust Fund and can they change
8 the way that it's funded or whatever. And what we
9 have chosen to do at TVA is to support the Corps, go
10 to meetings with them, back them up. They have asked
11 to take the lead on that, and we're fully supporting
12 them right now.

13 MR. TOM LITTLEPAGE: Thank you.

14 FACILITATOR MR. WILSON TAYLOR: Other
15 questions?

16 MR. TOM LITTLEPAGE: One more. Well,
17 great presentation. You mentioned a navigation
18 management plan that you -- is that a physical
19 document or a communications process?

20 MS. KELIE HAMMOND: It is. It's the
21 Tennessee River Waterway Management Plan, is that
22 what you mean?

23 MR. TOM LITTLEPAGE: Yes.

24 MS. KELIE HAMMOND: It is actually
25 available. We don't have as many hard copies as we

1 used to, but we do have it available on the TVA web
2 site. It's something that we try to maintain and
3 update.

4 It's got areas of responsibility along
5 the river, points of contact for TVA, Corps, Coast
6 Guard, different towing industry representatives.
7 It's got the threshold values listed in there.

8 We discuss it -- actually, we also --
9 and it's funny because we actually don't meet all the
10 time, but it sounds like we do when I mentioned
11 quarterly meetings, annual meetings. We have
12 semi-annual meetings with navigation interests, and
13 the towing companies have a big representation at
14 those meetings, and we try to discuss that plan.

15 There's also a Cumberland River
16 Waterway Management Plan, we try to discuss those and
17 make sure that things are working properly. If we
18 have had to use the plan, if we have had high water
19 events or something we, you know, try to talk about
20 how it went and any issues or any improvements we can
21 make, that sort of thing.

22 So it is available on the web site,
23 and it does kind of step you through whose
24 responsible for what and how we kick off having
25 conference calls and things of that nature.

1 MR. TOM LITTLEPAGE: Thank you.

2 FACILITATOR MR. WILSON TAYLOR: Okay.

3 Susan Jacks.

4 MS. SUSAN JACKS: Thank you, Wilson.
5 Good afternoon. Well, it's not afternoon yet, but I
6 am standing in between you and lunch, I understand.
7 So I will try to be as brief as possible but still
8 hit the highlights of things I think you will be
9 interested in.

10 Like Wilson said, I am Susan Jacks.
11 I'm the Senior Management Advisor in River Scheduling
12 within River Operations and Renewables. I have the
13 privilege of working with Chuck as his advisor. And
14 at the risk of being labeled an engineer by Chuck, I
15 had to do a little math while I was back there.

16 Let's see. Chuck's been here about
17 half as long as Norris Dam has been in operation and
18 I figured that I have been here about half as long as
19 Chuck has been in operation. So that was an
20 interesting little fact.

21 So as Chuck talked about the
22 integrated river system and the challenges that we
23 have in balancing in all of those objectives, you can
24 guess that it's very necessary that we have
25 knowledgeable and talented staff that are managing

1 that.

2 I also want to point out that the
3 operations -- during those operations, coordination
4 and communications are key in addition with our
5 external stakeholders and within the Valley and
6 outside of the Valley.

7 As Chuck highlighted earlier, at any
8 given time any of those objectives may become the
9 primary focus of our operations. In particular,
10 during the flood control operation there is the
11 potential to have some impacts on other objectives.

12 For example, say we got 5 or 6 inches
13 of rain in the Chattanooga area and it became
14 necessary for us to spill water at Chickamauga and we
15 had to move as much water -- too much water to
16 actually navigate safely through the gorge and lock
17 through the locks, we would take that plan and
18 communicate it with the Coast Guard and the Corps of
19 Engineers and the navigation industry, as Kelie was
20 talking about earlier, and sometimes we're able to
21 shift our operational plan and maybe delay going to
22 those heavier discharges so that some barges that are
23 on route can go ahead and pass through the section of
24 the gorge that we're looking at closing down or
25 perhaps we know that there is traffic that's coming

1 later in the week and we can go ahead and move a lot
2 more water ahead of that and provide a window of
3 opportunity later in the week where we reduce those
4 discharges and allow traffic to pass.

5 So as you can see, those
6 communications and coordinations are essential in
7 helping to try and alleviate some of the significant
8 impacts on the other operation objectives. So the
9 communication and coordination is important but not
10 just in and of itself. It's essential that those
11 communications and coordinations are effective.

12 And I would argue that to make -- to
13 have effective communications that you have to have
14 good relationships with those people that you are
15 communicating and coordinating with.

16 And I am going to talk about three
17 different points looking at some of the external
18 partners that we do coordinate with and how we are
19 integrated in the bigger system of the Mississippi
20 River Basin that causes us to really lean on the
21 Corps of Engineers and partner with them a lot as
22 Kelie alluded to and with the navigation interest as
23 well.

24 We will talk about a couple of recent
25 events -- flood events that the Corps had to deal

1 with and how we were involved in helping that
2 situation as well as -- excuse me, as well as
3 learning from their experience, which is another
4 benefit of having good relationships.

5 So hopefully after going through that
6 we will talk about those pieces that will determine
7 results in our operations to be successful.

8 FACILITATOR MR. WILSON TAYLOR: It's
9 in the book.

10 MS. SUSAN JACKS: Okay. So when I'm
11 talking about relationships, I mean, it's key that
12 those relationships are good and that you're
13 comfortable with the people that you're talking with
14 because we're going to be making decisions together
15 and talking about things that can have a real
16 significant impact on the stakeholders of the Valley.

17 So to have a relationship with the
18 Corps of Engineers where we can say, wait a minute, I
19 don't understand what you're talking about, can you
20 explain that a little further or maybe what you're
21 suggesting could be done in a different way or we
22 have another solution. So we have that comfort level
23 with the partners that we deal with so that we can
24 have open and honest communication and share lessons
25 learned and that sort of thing.

1 So I am moving on to the next slide.
2 We have several commitments with external partners.
3 The National Weather Service, for example, we send
4 information to them on a routine basis, observed
5 elevations and discharges from our projects, rainfall
6 amounts that we gather from rain gauges that Chuck
7 talked about, the stream gauges. We also give
8 them -- provide them the forecasted elevations and
9 discharges from our dams.

10 Again, Kelie talked about our
11 navigation partnership with the Corps of Engineers,
12 well, we also partner with the water management
13 groups out of Nashville and Cincinnati as our systems
14 are connected. And I will show you a little bit more
15 about that in just a minute.

16 Yes.

17 MR. RUSSELL TOWNSEND: Are they under
18 the Corps of Engineers?

19 MS. SUSAN JACKS: Yes.

20 MR. RUSSELL TOWNSEND: Okay.

21 MS. SUSAN JACKS: Excuse me. So the
22 U.S. Fish & Wildlife Service, I've got that listed up
23 here. We have a consultation with them to ensure
24 that we are in compliance with the Endangered Species
25 Act at some of our projects.

1 Emergency management agencies, we
2 provide notifications to the local and state
3 emergency management agencies when we're in high flow
4 events so that they can make proper notifications to
5 the citizens in their communities if they need to
6 evacuate, as well as the private and public
7 industries, we have some contacts there as well.

8 So the next slide is that map again.
9 I have put that in there just to draw your attention
10 back to how we are interconnected with the Corps of
11 Engineers. They operate the Cumberland River system,
12 which is just north of the TVA watershed.

13 So if you're looking at your map,
14 TVA's watershed is in here, the Tennessee River
15 watershed, and then the Cumberland watershed is up
16 here, and then we're connected together by a canal at
17 Kentucky and Barkley. Barkley is the last dam on the
18 system of dams for the Cumberland River and Kentucky
19 is the last dam on our system of dams.

20 And then the discharges from Kentucky
21 and Barkley will flow out into the Ohio River which
22 ends up in the Mississippi River and down to the Gulf
23 of Mexico. So the Nashville Corps District Water
24 Management is dealing with the Cumberland River
25 System and the Cincinnati Great Lakes and Ohio River

1 Division is managing those Mississippi and Ohio
2 rivers.

3 FACILITATOR MR. WILSON TAYLOR: Okay.
4 Russell.

5 MR. RUSSELL TOWNSEND: I just noticed
6 that it looks like on that map that area is kind of
7 in between Land Between the Lakes, that area.

8 Do y'all partnership with the Forest
9 Service regularly on any issues at all?

10 MS. SUSAN JACKS: We have agreements
11 in the Ocoees with the Forest Service and the
12 recreation that we provide at the Ocoees. I don't
13 know. Bruce may be able to speak to Land Between the
14 Lakes.

15 DFO MR. BRUCE SCHOFIELD: I will get
16 the answer. I don't know right off the top of my
17 head, but we will find out and get back to you.

18 MS. SUSAN JACKS: Okay. So this next
19 slide is just an aerial view of Kentucky and Barkley
20 Reservoirs just to show you that canal there. So,
21 you know, we're managing the river system all the way
22 down to Kentucky on Tennessee.

23 The Corps is scheduling the releases
24 out of the dams upstream of Barkley, but since
25 Barkley and Kentucky are connected there we actually

1 schedule the releases out of Barkley Dam as well
2 mainly to keep that canal flow even. You don't want
3 to whole lot of disparaging differential between the
4 headwater at Kentucky and the headwater at Barkley or
5 the canal flow will be too extreme for navigation.
6 So we try to keep those in balance when we can.

7 As I said earlier, the discharges from
8 Kentucky and Barkley will flow out into the Ohio, and
9 this next slide kind of depicts what happens there.
10 You can see Kentucky Lake and Barkley Lake and then
11 their discharges into the Ohio.

12 So there's a couple of points of
13 interests here for the Cincinnati District. They're
14 concerned with flood mitigation at Cairo and Paducah,
15 and the way that we can help to alleviate flood
16 damages on -- at those two cities is by optimizing
17 use of Kentucky and Barkley storage reservoirs.

18 So when there's an event that's going
19 on on the Mississippi or the Ohio, typically what we
20 will be requested to do is evacuate as much storage
21 as practical to go ahead -- ahead of that flood crest
22 that's coming down to those cities. And when the
23 flood crest is scheduled to come in, we will reduce
24 the discharges and hold water back in the reservoir
25 while the flood crest passes. Then after the flood

1 crest passes we will recover that storage space for
2 the next event.

3 This next chart kind of mimics Kelie's
4 chart on the inland waterway system. It just shows
5 the watershed and the basin breakdowns. Typically if
6 you're not familiar with what a watershed is, it's
7 just that any rain that falls in that area that's
8 delineated by that watershed has the potential of
9 running off in that river system and causing extra
10 flow into the river system.

11 You can see there Tennessee -- the
12 Tennessee Valley is a small piece of the overall
13 Mississippi River basin. However, it does have a lot
14 of benefits when it comes to flood control on those
15 areas, and I will get to that in just a few minutes.

16 So the next slide -- back up one,
17 there, one more, there. Okay. So we're back on
18 track.

19 So who's in control?

20 I think Chuck alluded to this earlier.
21 When we are in a flood control operation with the
22 Corps of Engineers, they actually have the authority
23 to regulate the releases from our system. That's
24 mainly just the discharges out of the Kentucky Dam.

25 Upstream of Kentucky we are flexible

1 or we are able to operate our system the way that we
2 see fit to control flooding in that reservoir system,
3 but the discharges out of Kentucky are being
4 coordinated with the Corps.

5 Now, we say they are in control, but I
6 want you to understand, again, that the relationship
7 that we have is such that we work together in a
8 coordinated partnership. So they will -- when the
9 flood stage is predicted to occur -- is forecasted to
10 occur at Paducah they will initiate this flood
11 control operation and begin having increased
12 coordination with us from the Cincinnati District.
13 They will request that we operate in a certain way.

14 We will run computer models to
15 simulate what that will look like and how it will
16 affect the pool levels. Then we might have an
17 alternate suggestion of how we should operate them,
18 and they will take that into consideration and we
19 usually come to a pretty decent consensus that will
20 benefit both parties.

21 Okay. So now I am going to go on to
22 the section talking a little bit about some recent
23 events that you might be familiar with. Back in
24 May 2010 there was a major flood in Nashville. It
25 was an historic event.

1 It was on the magnitude of about a
2 1,000 year event, which means it has the opportunity
3 in any given year of the -- let's see, the likelihood
4 of that kind of flood in any given year is one in
5 1,000. Okay. So it was the greatest flood that they
6 had seen historically.

7 And so we sat back and our system
8 didn't really suffer that much damage or impact from
9 the rain. It kind of skirted around. On the western
10 portion we had some heavy rains in the Kentucky area,
11 some agricultural flooding down below Pickwick that
12 we were dealing with, but primarily it just kind of
13 sat on top of Nashville. Over a couple-of-day period
14 they had 17 inch high spots. It was quite an extreme
15 event.

16 So we sat back and thought, well, what
17 if it happened in Chattanooga?

18 Do we have modeling capability to
19 handle that level of rain event because we haven't
20 seen one that large either?

21 So we took the data from their rain
22 event and ran it through our model and just -- we did
23 identify some issues that we had. We didn't have --
24 the model wasn't robust enough to handle that amount
25 of rain. So we were able to identify those issues,

1 come up with fixes for that, and now we are able to
2 handle that.

3 Some other things that we learned from
4 that event, we were invited to participate with the
5 Corps of Engineers in their after-action review plan.
6 One of the key issues that they highlighted, again
7 coming back to relationship, is -- was communication,
8 communication with the National Weather Service.

9 As you can guess, communication was
10 increased expedientially. I mean, they were talking
11 all the time while this was going on. Come to find
12 out, they were on different wavelengths. The Corps
13 thought they were giving information to the Weather
14 Service and the Weather Service was thinking the
15 Corps was giving them something else. I mean, there
16 was some disconnect there. So we learned a lesson in
17 that.

18 We began changing the way that we
19 conducted our annual coordination meetings with the
20 Weather Service and started thinking how are we --
21 what kind of situations might we see ourselves in
22 that's similar to that?

23 Do we know what information we are
24 giving to them?

25 A lot of this transfer of information

1 was going on behind the scenes in the past. So we
2 would send automated messages and this kind of thing.
3 So we brought all of those to the forefront, sat down
4 in a room together, started looking at what
5 information we're providing.

6 Is it what they needed?

7 Is it when they needed it?

8 So we were able to identify some good
9 changes in the process with the Weather Service.

10 Another thing that we initiated is
11 actually bringing a representative from the Weather
12 Service from the Morristown Weather Service office
13 into the river forecast center when we're in a flood
14 event. So that way if you're face-to-face
15 communicating you have the opportunity to say, do you
16 understand, you know, are we on the same wavelength
17 or are we on the same page. So that's been -- we
18 have had probably about a half dozen events since we
19 initiated that the Weather Service will come and sit
20 in our forecast center.

21 Another thing that we have done since
22 then is partner with Hamilton County. We are looking
23 at updating damage curves for Chattanooga and also
24 working on a project to create inundation maps for
25 Hamilton County as well.

1 So then does anybody remember last
2 spring? There was another big event. Well, actually
3 two back-to-back events on the Mississippi River that
4 the Corps -- this one involved Cincinnati a little
5 bit more.

6 It was another historic event where
7 they ended up activating the Bird's Point New Madrid
8 Floodway. This picture here shows that levy actually
9 being activated or deactivated maybe is the -- I
10 meant to draw your attention on that map that showed
11 Cairo and Paducah, slide seven, to the Bird's Point
12 New Madrid Floodway.

13 Essentially what's going on here is
14 there's a levy that's blocking the water from coming
15 into this floodway, and when the flood stage at Cairo
16 is projected to be, I think, 60 feet they will load
17 barges filled with dynamite and take them over to the
18 levy and they blow up that levy and remove it from
19 obstructing that floodway and allow the water to pass
20 into the floodway and that reduces the crest of the
21 flood wave at Cairo.

22 So this levy was activated for the
23 second time in history. The first time was 1937.
24 I'm sorry. Slide No. 14. So, yeah, 1937 was the
25 first and last time prior to last year that that levy

1 had been activated.

2 The flood stage, again, I don't
3 think -- I didn't mention that the flood stage is
4 40 feet at Cairo. So by the time we get up to 60
5 feet when they are blowing that levy you have got 20
6 feet of water on that city at Cairo. So that's an
7 extreme amount of flooding. This event back in May
8 was 2 feet higher than that event in 1937.

9 We also set another historic record at
10 our pool elevation at Kentucky by another 2 feet
11 there. The previous record was in 1984. And this,
12 of course, was in order to maximize that storage that
13 we had to alleviate some flooding at Cairo.

14 I have got some numbers here that talk
15 about -- these numbers from the Corps of Engineers.
16 They attribute -- and they looked at this as two
17 separate events. So this was a back-to-back event in
18 the spring of 2011. In March there was an event and
19 then another one in April and May time frame.

20 The first -- the March event they
21 attributed 1.82 feet of flood crest reduction at
22 Cairo just to our Kentucky storage operation. During
23 the April/May we have got .8 feet attributed to
24 Kentucky storage, which added up to about \$60 million
25 in flood damage reduction just for that section of

1 flood crest that we were able to help them reduce.

2 We had other coordination during that
3 event, not just with the Corps of Engineers, of
4 course. The National Weather Service liaison was in
5 our office. We had coordination calls with emergency
6 management agencies and the towing industry. Local
7 emergency management agencies were notified when
8 there were high flows in their areas, and we also
9 contacted some industry folks about high flow levels.

10 The farming community as I mentioned
11 in Savannah were also involved in our coordinated
12 efforts, and we also talked with the Fish & Wildlife
13 about the endangered species below Tims Ford Dam.

14 So in summary, I hope that you're able
15 to see how our relationships have been beneficial and
16 they determine results and whether or not we can be
17 successful in our operations. We have seen through
18 after-action reports and the relationship that we
19 have with the Corps of Engineers and other entities
20 improvements in our river forecast center as far as,
21 you know, having that liaison from the Weather
22 Service there, improving our models so that they can
23 handle events in the future, also improving those
24 communications by being involved in after-action
25 reviews and enhancing our annual coordination

1 meetings and such.

2 We also participate in communication
3 drills with the emergency management agencies and
4 National Weather Service where we, you know, simulate
5 a flood event and how would you go through the
6 process of communicating that with the public and
7 other entities.

8 Lastly, we have made some changes to
9 our hydrologic models based on these relationships in
10 order to try to come together on the same platform
11 that the Corps of Engineers is using and the National
12 Weather Service is using as far as our inflow
13 forecasting and our rainfall forecasting using radar.
14 We're trying to all be on the same page so we can
15 communicate with that one voice.

16 So in the future I look forward to
17 continuing those relationships and enhancing those
18 relationships so that we can continue to have success
19 in our operations in the future.

20 FACILITATOR MR. WILSON TAYLOR: Tom.

21 MR. TOM LITTLEPAGE: Yeah. To what
22 extent -- what is Fish & Wildlife's role in a flood
23 event? What are their interests? What are their
24 concerns? What are their actions related to
25 responses?

1 MS. SUSAN JACKS: Well, in this
2 particular case we have an agreement with the Fish &
3 Wildlife and the way that we operate Tims Ford Dam.
4 We are limited in the -- for generation for the snail
5 darter.

6 MR. TOM LITTLEPAGE: Ramping rates and
7 that kind of thing?

8 MS. SUSAN JACKS: Actually, it's a --
9 there's a -- it's not the snail darter. It's the
10 boulder darter, I'm sorry. There's a boulder darter
11 that lives below Tim Ford Dam and it likes its
12 temperature just so, and the water that comes out of
13 the turbine is so cold in the summer that it makes
14 it -- it's not very nice for the boulder darter.

15 So it's a challenge because there's
16 also a trout fishery downstream of Tims Ford. As you
17 can imagine, they like that cold water. So, again,
18 we're juggling and trying to keep a balance of, you
19 know, of what kind of water are we putting out there
20 for those habitat.

21 So we have an agreement with Fish &
22 Wildlife that we won't generate from the turbine
23 certain times of the year so that if we have to move
24 water we're spilling or sluicing where the withdrawal
25 is at a higher elevation and the water is not quite

1 as cold.

2 So when we're in a flood control
3 operation, you know, we're trying to move as much
4 water as possible. So we have to coordinate. In
5 this instance, we were generating to move water
6 within that time frame when we shouldn't -- when we
7 had an agreement not to. So we coordinated with the
8 Fish & Wildlife Service to make sure that was okay.

9 Does that make sense?

10 MR. TOM LITTLEPAGE: Well -- and I
11 guess I'm just kind of -- understanding that in a
12 flood control operation where you're essentially very
13 time sensitive in the decisions that are made and the
14 priority is avoiding impacts, damages or lost life,
15 those kind of things, to what degree are they -- are
16 you just sort of informing them what you're doing
17 versus waiting for them to say it's okay?

18 MR. JACK SIMMONS: Yeah. Essentially
19 we're informing them of what we're doing. We have an
20 understanding that if it comes down to life or even
21 the reliability of our transmission system, then, you
22 know, we're going to take that action over --

23 MR. TOM LITTLEPAGE: Okay. I am aware
24 of those kind of considerations in the drought mode.
25 The context in a flood -- the response to scenarios

1 in flood responses is so quick and so critical I
2 just --

3 MS. SUSAN JACKS: And I will say in
4 that area, we didn't have as severe the event as the
5 Cumberland and the Mississippi did. We had some
6 localized flooding. It was a flood event, but not
7 near the magnitude of what we were looking at on the
8 Corps' systems.

9 MR. TOM LITTLEPAGE: Thank you.

10 FACILITATOR MR. WILSON TAYLOR: Other
11 questions?

12 Okay. No further questions.

13 Beth Keel, would you come to one of
14 the mics and give us some instructions about what
15 happens next?

16 MS. BETH KEEL: Okay. This was a
17 great morning, and I thank you--all for your
18 participation and for your presentations.

19 We are now going to break for lunch.
20 And for the Council and invited guests, we will be
21 eating at the Broad Street Grille right down the
22 hallway here. Immediately following that, we have
23 some passenger vans where we will come -- they will
24 be parked right here by the doors and we will leave
25 for our tour.

1 We do have a separate section for us
2 that's being held. So please free to go that way,
3 just go ahead through the buffet line and get
4 whatever you wish. There should be a whole section
5 for us.

6 FACILITATOR MR. WILSON TAYLOR: What
7 time for the vans?

8 MS. BETH KEEL: The vans will be here
9 when we are ready if we're done. We were targeting
10 about 12:45 to leave, you know, but if -- you know,
11 if we're done ahead of time a couple of minutes we
12 will head over there, but feel free to have a nice
13 lunch.

14 Please leave your name badges, the
15 gold name badges, here for tomorrow morning because
16 we really won't need them on the tour. The notebooks
17 and things we can leave in this room. They will
18 clean up the dishes, but there's no problem with
19 leaving your notebooks here.

20 We do have some handouts and things
21 when we go on the tour. So you will -- some of the
22 things that are in your notebook we can show you
23 again on the tour.

24 MRS. KELLY LOVE: In terms of purses
25 and cell phones, stuff like that, should we feel free

1 to bring all of that with us or should we --

2 MS. BETH KEEL: I'm not sure, unless
3 there's some security situation there. The buses or
4 vans, we will lock the vans. We will lock the vans.

5 Thank you.

6 END OF FIRST DAY

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