

**Tennessee Valley Authority  
Regional Resource Stewardship Council  
July 30-31, 2018  
Meeting Minutes**

The Tennessee Valley Authority (TVA) Regional Resource Stewardship Council (RRSC or Council) convened for the first meeting of the tenth term at 8:30 a.m. ET on Monday, July 30, 2018 at the Westin Hotel, 801 Pine Street, Chattanooga, Tennessee 37042.

Council members attending:

Mark Iverson, Chair	RaeLynn Butler	Keith Carnahan
Robert Englert	Ray Hardin*	Brock Hill
Donny Holland	Richard Holland	Avis Kennedy
Kim Klinker	Tom Littlepage	Gary Myers
Will Nelson*	Senator Clay Scofield	Catherine Via
Randy Wiggins*		

\* Non-voting

Designated Federal Officer: Dr. Joseph Hoagland  
Designated Alternate Federal Officer: Amy Henry  
Facilitator: JoAnne Lavender

Appendix A identifies the TVA employees, members of the public, and others who attended.  
Appendix B is the agenda for the meeting.  
Appendix C is the Formal Council Advice provided by the Council.

Copies of the presentations given at the meeting can be found at <http://www.tva.gov/rrsc/>.

The majority of the meeting was devoted to presentations by TVA staff about TVA's Natural Resource Plan. The 2020 Natural Resource Plan approach and updates about Natural Resources and River Management/Dam Safety activities. Council members asked clarifying questions and offered individual suggestions to the information sought by TVA. Formal Council advice was also provided by the Council at this meeting.

**1. Welcome and Introductions**

**A.** JoAnne Lavender, Facilitator, welcomed the Council and reviewed meeting protocols and provided a safety moment. Ms. Lavender asked the Council to introduce themselves.

**B.** Amy Henry, Alternate Designated Federal Official (DFO), welcomed the Council and summarized the purpose of the meeting which was to provide updates on TVA's River Management/Dam Safety activities, Natural Resources Stewardship, and the Natural Resource Plan, and to seek advice about 2020 Natural Resource Plan approach. Ms. Henry thanked the 9th term members for their participation and noted several members have completed their terms: Lee Brown, Gerald Taylor and Russ Townsend. Ms. Henry thanked Mr. Townsend for his tenure, advice and service as chair of the Council in prior terms. Ms. Henry also thanked Avis Kennedy,

former chair of the Council for the last two terms, for her hard work and dedication, and TVA looks forward to her continued participation in the 10th term.

C. Mark Iverson, Chair, welcomed the Council and introduced new Council members present at today's meeting: RaeLynn Butler, Keith Carnahan, and Ray Hardin. He also welcomed Donny Holland to his first meeting of the Council.

## **2. Designated Federal Officer's Report and FACA Briefing**

### **A. Alternate DFO Report**

Ms. Henry thanked the Council for its prior advice and reiterated that TVA will be providing updates on TVA Natural Resources and River Management/Dam Safety activities, and TVA is seeking advice on the 2020 Natural Resource Plan approach. Ms. Henry discussed a few key elements from the last RRSC meeting at Lake Guntersville, which focused on TVA's Public Land Protection Policy. Also, Ms. Henry noted that TVA began an update of TVA's Integrated Resource Plan (IRP). There will be a 2019 IRP, and it is a 20-year, long-range plan for how TVA will provide electricity to meet the demands of the future. The most recent IRP was completed in 2015. The IRP will be presented to the Regional Energy Resource Council (TVA's other Federal Advisory Council) for its advice. For more information, please go to <https://www.tva.com/Environment/Environmental-Stewardship/Integrated-Resource-Plan> and <https://www.tva.com/rerc>. Ms. Henry explained that another exciting piece of information is that Facebook has decided to build a new data center near Huntsville, Alabama, which demonstrates success on the economic development front for TVA and the Valley. See <https://www.tva.gov/Newsroom/Press-Releases/TVA-Announces-Largest-Valley-Solar-InstallationsBuilt-for-Facebook>. Google has also announced its plan to develop two new data centers in North Alabama and Tennessee.

### **B. FACA Briefing (Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))**

Kendra Mansur, attorney from TVA's Office of General Counsel, highlighted the importance of this first meeting of the tenth term and she thanked the Council, on behalf of TVA, for its participation in past meetings and in this current term. She welcomed new members and reiterated requirements of the Federal Advisory Committee Act (FACA) and regulations. She remarked that the recommendations of the Council are greatly appreciated by TVA. She discussed voting protocols and quorum requirements, and complemented the Council on its balanced membership and achievements.

## **3. Land and River Management Updates(Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))**

David Bowling, Vice President of Land & River Management, attended the meeting and answered questions from the Council. He remarked that all of the issues that TVA brings to the Council involve a balancing of interests.

### **A. Natural Resources Update (Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))**

Bucky Edmondson, Director of Natural Resources, provided Natural Resources updates. TVA manages 293,000 acres of reservoir lands owned by the United States of America. TVA has reservoir, corporate and power lands, and Natural Resources manages the reservoir lands. Mr. Edmondson stated that about ten years ago, he presented TVA's proposal for comprehensive land planning to the Council. And Mr. Edmondson reiterated that TVA has completed its efforts. Mr. Edmondson stated that TVA can now talk about all reservoirs in terms of zones and being planned. TVA also talked to the RRSC about encroachments and the Council asked TVA about its boundaries and whether those boundaries are clearly marked. Mr. Edmondson stated that Natural Resources carefully listened to your advice and responded by marking some boundaries. In addition, Natural Resources, working with TVA's Office of the General Counsel, developed the Public Land Protection Policy, to be for reviewed by the TVA Board of Directors in August 2018. The Council has provided good advice, and this advice regarding Lands Planning, Public Land Protection and Floating Houses is coming to fruition. Further, TVA has followed a consistent timeline for review for most applications related to Section 26a permits for water-use facilities. TVA also started Realtor Workshops in part due to Council Advice, so that realtors and their clients can be knowledgeable about applying for Section 26a permits. Further, past Council advice has included working with partners. Natural Resources supports partnerships and provides environmental education, as well as a host of other programs throughout the Valley.

Council asked questions about Natural Resources programs and complimented Natural Resources on the work it is doing and for incorporating the RRSC's past advice about lands planning, other activities and partnership and outreach opportunities.

**B. Natural Resource Plan Update** (Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))

Tiffany Foster, Senior Specialist, Policy and Project Management, Public Outreach & Support within Natural Resources, presented on TVA's Natural Resource Plan. She provided a brief overview and some proposed updates. TVA's mission of services is to make our region the best place in the country to live, work and play. To fulfill TVA's mission, TVA's Natural Resources group serves the people of the TVA region by remaining flexible to balance competing demands. Natural Resources presented the Natural Resource Plan (NRP) to the Council in 2009 and in 2010 and listened to Council feedback. Additionally, TVA had numerous meetings with the public and with agencies in the Valley states. The NRP was published in 2011. The NRP is intended to be a twenty-year guidance project with periodic updates. The NRP contains six resource areas: biological, cultural, water, recreation, lands planning and public engagement. In Fiscal year 2017, Natural Resources evaluated the programs in place. The 2020 NRP will contain ten focus areas with three-five year actions plans. The update will include appropriate environmental assessments and engagement of stakeholders. Natural Resources intends to provide further updates to the Council. TVA is on the road to success and is updating the NRP. Over the last couple of years, TVA has made a lot of progress in building partnerships, which is also supported by the Council. And Natural Resources received enhanced stewardship funding. With this enhanced funding, TVA has made great strides in implementing a lot of the NRP efforts including resource protection, recreation and public engagement. Natural Resources decided it needed a few more tools in the toolbox to help us plan the best way to spend the money and make good decisions. Natural Resources will have a good long-term vision for how TVA manages the resources. Natural Resources will 1) use lessons-learned to create updates to

programs and activities, 2) update the text of the Plan to align with TVA's Mission and Natural Resource strategy, 3) enhance strategic guidance and alignment of Natural Resources work, and 4) be better equipped to answer questions about where to utilize funding. TVA will have the opportunity to engage the public and stakeholders more and it could potentially be on an annual basis. TVA is committed to working across the Valley. Ms. Foster discussed TVA's stewardship books, which she remarked are a good communication tool and are provided to the TVA Board, executive management, the Council and others. And Ms. Foster discussed the 2020 NRP schedule.

Council asked questions about the 2020 NRP focus areas, and Ms. Foster provided responses to address. Council members had questions about Asian Carp. Mr. Bowling, Mr. Edmondson, Ms. Foster and Council discussed issues of concern.

### **C. Natural Resource Plan 2020** (Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))

Anthony Summit, Senior Specialist, Policy and Project Management, Natural Resources Policy & Project Management within Natural Resources, discussed the strategy around the NRP 2020. He reiterated that Ms. Foster discussed some of the history, background and goals for the NRP, and that he appreciated Council's thoughts on the Carp issue. TVA has just finished the public scoping meetings and a popular topic of discussion at the meetings concerned Asian Carp.

Mr. Summit remarked that one of TVA's primary goals of the 2020 NRP update is to utilize lessons learned to improve the guidance and alignment of the work in Natural Resources. Specifically, the 2020 NRP should align with TVA's mission and Natural Resources' stewardship strategy. Mr. Summit stated that the natural resources in the Tennessee Valley are a dynamic environment with ever changing resource user and programmatic needs. He noted that TVA's Natural Resources group has seen a lot of change since the initial NRP was adopted. In 2014, due to stewardship funding, Natural Resources had the opportunity to be more proactive in its stewardship efforts. Through the stewardship strategy, Natural Resources seeks to be agile and balance competing demands for resources, while serving as a catalyst for collaboration. The major difference in the NRP 2011 and 2020 format is the shift in the 2020 NRP to a higher-level strategy document. The change is from tactical to more strategic. To complement the strategic guidance that the 2020 NRP will provide, Natural Resources will develop three to five year actions plans. And these action plans will provide the tactical approach that is necessary for project implementation, business planning, and advanced level public engagement. The two pronged approach involving long-term strategic guidance and short-term implementation plans, and thus will provide TVA with the agility and flexibility necessary to achieve the goals of the NRP 2020. This shift will facilitate the 2020 NRP being an evergreen document and flexible over time.

Instead of six focus areas, the 2020 NRP will have ten focus areas to compliment the stewardship strategy. The four new focus areas are ecotourism, nuisance and invasive species management, public land protection, and Section 26a permitting and land use agreements. Mr. Summit explained the overall description of these areas, as described in the presentation.

Council asked questions about TVA's involvement in the Tennessee water plan, TN H2O, assembled by the Governor of Tennessee. Ms. Foster commented that TVA is significantly involved and will be submitting comments. Council also asked questions around funding and resource concerns. Mr. Summit responded that it is challenging to dictate over a 20 year period what the funding level is going to be, the changing environment with our partners, and programmatic needs, and that the 2020 NRP will be an improvement. Mr. Bowling also responded to questions from the Council about the changes. Mr. Summit advised the Council briefly about the field trip to the Chickamauga Recreational area and the Chickamauga Lock. Ms. Coffey supplemented information about the field trip and logistics.

#### **4. Day 2 Welcome and Discussion of Advice Questions**

Ms. Henry, Ms. Lavender and Chair Iverson welcomed the Council to the second day of the first meeting of the 10th term. TVA stated that it looked forward to hearing from the Council. The Council commented that it really enjoyed the tour of the Chickamauga Lock and repairs and the Chickamauga Recreational area conducted by TVA's Land & River Management. The Council participated in discussions to formulate its advice and asked further clarifying questions about the protection of public land.

Ms. Lavender reviewed the advice questions with the Council, and the Council asked many questions. Anthony Summit addressed questions by the Council about the Natural Resources 2020 NRP. David Bowling, Bucky Edmondson and TVA staff provided additional responses to the Council and thoughtful discussion ensued.

#### **5. River Management Highlights and Water Use Report** (Presentation can be found at [www.tva.gov/rrsc](http://www.tva.gov/rrsc))

A. James Everett, Senior Manager, TVA's River Forecast System in River Management, confirmed that TVA runs the river system and TVA operations in an integrated manner. Mr. Everett stated that TVA has six objectives when operating the river: flood damage reduction, navigation, power generation, water quality, water supply and recreation. He stated that flood damage reduction, navigation, and power production were set forth in the TVA Act of 1933.

Mr. Everett provided further information about the river system. The Tennessee River system and watershed is a 41,000 square mile drainage area, and TVA operates one of the largest river systems in the country. It operates 49 dams in the Tennessee Valley in a seven state region, and all of those are in the Tennessee River watershed except the Cumberland River basin to the north. The Great Falls project is the one outside of the watershed. and 29 of the dams produce power. Mr. Everett remarked that Guntersville Dam is a little more than halfway down the river system. Mr. Everett suggested that two operating objectives that could be overlooked by the public are flood control and navigation, and those two objectives are the most challenging situations TVA has to face on a day-to-day basis. On average, damages averted by TVA each year are about 260 million dollars. To date, that number close to 7 billion dollars of averted damages. The majority of damages averted is at Chattanooga. Chattanooga is a low-lying area,

and one of the major objectives in creating the tributary river system upstream was to help prevent flooding in Chattanooga.

This year, TVA has been very busy according to Mr. Everett. TVA had record rainfall in February that continued through the entire Spring. TVA had high flow and a lot of spilling. In western North Carolina, many of our gauges recorded greater than 30 inches of rainfall for the month, which is a five to six time increase.

Mr. Everett provided updates on Navigation. The Chickamauga Lock is under construction, and the RRSC was able to see that on its tour. Another big project is Kentucky Lock. It is on track to be completed in the mid 2020s. Some people are not aware that nearly a billion dollars a year occurs in shipper savings through the commercial waterways that TV maintains. There are 652 miles of commercially navigable waters on the Tennessee River main stem. There is also 150 miles of secondary channels.

Mr. Everett stated that TVA has been charged with providing the lowest feasible cost power to the 9 million customers throughout the Tennessee Valley. Hydropower is a major piece of TVA's generation portfolio, and in a given year, hydropower is about 9 to 10 percent of the generation. Hydropower constitutes about 3500 megawatts of generating capacity. It is TVA's least expensive option. Mr. Everett also remarked that the river is very important for hydrothermal activities. TVA utilizes the river system to help cool TVA's plants, particularly the nuclear plants: Browns Ferry, Sequoyah, and Watts Bar. By keeping these plants online by through TVA's use of the river system, this helps TVA lower power costs. In terms of water quality and supply, TVA has to make sure that there is sufficient water quality to meet intended needs. TVA has about 11,000 commitments each year for minimum flows and recreation releases, and TVA achieve greater than 99% of those commitments every year. Recreation is also an important aspect of water supply. TVA maintains the reservoir levels throughout the summer months when recreation is at its peak.

Mr. Everett also provided a brief update on Dam Safety. Mr. Everett explained some significant components of TVA's Dam Safety program include inspection, maintenance and repairs, health checks, and construction for dam safety improvements. Mr. Everett discussed issues related to the Boone Dam Remediation Project and Pickwick Landing Dam South. For more information about River Management, please go to <https://www.tva.gov/Environment/Managing-the-River>. For more information about specific dams, please go to <https://www.tva.gov/Newsroom/Boone-Dam-Project>, <https://www.tva.gov/Energy/Our-Power-System/Hydroelectric/Little-Bear-Creek-Dam-Seepage-Statement> and <https://www.tva.gov/Environment/Environmental-Stewardship/Environmental-Reviews/Pickwick-Landing-Dam-South-Embankment-Seismic-Upgrade>.

**B. Amanda Turk** (formerly Bowen), Civil Engineer, from TVA's River Management, presented on TVA's Water Use Report for 2015. Ms. Turk recently completed a five-year water use study. Mr. Turk remarked that the National Research Council has indicated that the principle water problem for the 21st Century is going to be one of inadequate and/or uncertain water supply. The Tennessee River System is the fifth largest in the United States based upon of the

volume of flow in the river system. The Tennessee River System provides drinking water to 5.1 million people, and this does not include ground water or other sources, which interact with each other. There are over 700 surface water intakes that rely on TVA's reservoirs. Further, there is thermoelectric cooling to fossil, nuclear and combined cycle plants. Municipal and industrial supply utilizes water from the river system. Agriculture uses water for irrigation.

In 1995, the USGS reported that on average, 292,000 gallons were take out of the Tennessee River per square mile. And per square mile, the Tennessee River basin was the most intensely used In 2003, TVA developed its reservoir operating policy (Reservoir Operations Study) . TVA's balances the six objectives from the policy and considers if there are competing demands. TVA has decided to relook at assumptions every five years. TVA's first assumptions were completed in 2000 and TVA partnered with USGS, and TVA has updated every five years.

In 2004, TVA decided it would start 26a permitting for water withdrawals. For any intakes in the Tennessee Valley, TVA decided to permit those, and TVA adds those to the water use report to better track water use in the Valley. TVA also keeps track of water intakes for dam safety reasons. If TVA needs to conduct a quick drawn-down, TVA knows where those intakes are located so that it doesn't accidentally dewater an intake inadvertently.

The results of the 2015 water study are that 10 billion gallons were withdrawn per day in the Tennessee River system. The large majority are for thermoelectric cooling, which is about 82 percent of the total. 10 percent is for industrial supply and seven percent for municipal supply. Irrigation is less than one percent of the total. Ms. Turk stated that even though the Tennessee River system has about 10 billion gallons of water withdrawn per day, 99.6 percent of that is returned. Ms. Turk stated that the Tennessee Valley is a water rich region and TVA capitalizes on that through thermoelectric cooling and operations consistent with the Reservoir Operations Study. TVA has higher water-use, but has less expensive end-cost power. Ms. Turk stated that consumption rates will decrease about 20 percent in 2040 down to about 8.1 billion gallons per day. This change is as a result of less thermoelectric cooling as plants go offline. However, public consumption is expected to increase by 24 percent, due to a growing population.

Council was supportive of TVA's efforts and asked questions. Ms. Turk responded that the states collect data from municipalities and industries. Council member Tom Littlepage participates on the Tennessee Valley Water Partnership. TVA works with the states to ensure the data is accurate. Council also asked questions about irrigation numbers. Ms. Turk responded that agricultural use is about one percent across the Valley and is underestimated. TVA uses engineering studies based upon what is reported by irrigated acreages. Mr. Bowling also responded to Council questions about the continuous dialogue with fisheries management across the Valley. Several members indicated appreciation for the work of TVA for its Dam Safety and River Management programs.

## **6. Public Comment Period**

No public comments.

## **7. Council Formal Advice Questions**

The Council deliberated and finalized its advice. The Council formally moved to adopt the Formal Advice attached herein as Exhibit C. The Council unanimously approved the Formal Advice at approximately 12:30 pm ET.

## **8. Closing Comments**

Mr. Bowling, Ms. Henry, Ms. Lavender and Chair Iverson thanked the Council for its efforts and advice. They reiterated that the meeting was very productive and generated great ideas. TVA will finalize the minutes for the meeting and submit it for Chair approval. The meeting adjourned at approximately 12:36 pm ET.

**Minutes Approved:** \_\_\_\_\_  
**Mark Iverson, RRSC Chair**



**Appendix A  
Non-Council Meeting Attendees**

**TVA**

Amy Henry, Alternate DFO	Facilitator, JoAnn Lavender
David Bowling, Vice President, Land & River Management	Brenda Brickhouse, Vice President, Environment & Energy Policy
Bucky Edmondson, Director of Natural Resources	Cathy Coffey
Kendra Mansur	Barbie Perdue
Liz Upchurch	TVAP staff names?

<b>Members of the Public</b>	
None	

<b>Others</b>	
TVA Office of the Inspector General	
Jennifer Short, Elite Reporting	

**Appendix A - Agenda**  
**10<sup>th</sup> Term Regional Resource Stewardship Council (RRSC)**  
**July 30-31, 2018**  
**Westin Hotel, 801 Pine St, Chattanooga, TN**

**Day 1 – July 30**

<b>8:30</b>	<b>TVA Welcome</b>	Amy Henry, Enterprise Relations and Innovation and Designated Federal Officer- Alternate
<b>8:40</b>	<b>RRSC Welcome</b>	Mark Iverson, Council Chair – Introduce new members
<b>8:50</b>	<b>Introductions and Agenda Review</b>	Jo Anne Lavender, Facilitator
<b>9:00</b>	<b>FACA Briefing</b>	Kendra Mansur
<b>9:10</b>	<b>DFO Briefing</b>	Henry
<b>9:20</b>	<b>Natural Resources Update</b>	Bucky Edmondson
<b>9:40</b>	<b>Break</b>	
<b>9:55</b>	<b>TVA Natural Resource Plan and Environmental Impact Statement Refresh</b>	Tiffany Foster
<b>10:30</b>	<b>TVA NRP Focus Area Review</b>	Anthony Summitt
<b>11:20</b>	<b>Break</b>	
<b>11:30</b>	<b>Review Advice Q</b>	Jo Anne
<b>11:40</b>	<b>Housekeeping - envelopes</b>	Cathy
<b>11:45</b>	<b>Wrap up and adjourn</b>	Jo Anne
<b>Noon</b>	<b>Lunch – for Council members</b>	Q&A

**Day 2 - July 31, 2018**

<b>8:30</b>	<b>Recap</b>	<b>Jo Anne, Facilitator</b>
<b>8:40</b>	<b>River Management Update and Water Use Report</b>	<b>Amanda Turk</b>
<b>9:20</b>	<b>Prepare for Comment Period/ Break</b>	
<b>9:30</b>	<b>Public Comment Period</b>	<b>Jo Anne</b>
<b>10:30</b>	<b>Break</b>	
<b>10:45</b>	<b>Council Discussion / Form Advice</b>	<b>Jo Anne and Council</b>
<b>12:00</b>	<b>Wrap Up and Adjourn (lunch available for Council Members)</b>	<b>Mark/ Amy</b>

**Appendix C**  
**Formal Council Advice**  
**Regional Resource Stewardship Council**  
**Advice Statement, November July 31, 2018**  
**Approved unanimously by RRSC**

Question 1:

Natural Resources is proposing changes in the approach to the 2020 Natural Resource Plan (NRP) from heavily tactical to strategic. Do you see advantages in this approach? Are there considerations TVA needs to remain aware of?

**Advice: The RRSC supports the proposed approach to clarify the strategic priorities for Natural Resources stewardship in the NRP. Further the RRSC supports developing tactical action plans with input from the public that aligns to the strategy. The strategic plan should clearly outline long-term goals.**

Question 2:

As resources and funding are allocated, do you have suggestions on balancing the focus areas and competing demands?

**Advice: The NRP should keep the valley-wide view with sensitivity to the different regional and community needs. Develop a defined process within the business planning initiative to define how TVA will allocate resources to balance competing demands. Priorities should be given to areas or programs with the best potential to improve performance measures with the widest impact.**

Question 3:

You've heard how we are enhancing our communications and public involvement program. Have you suggestions for additional public engagement opportunities that should be incorporated into the 2020 NRP proposal?

**Advice: The RRSC agrees that providing maximum practical public and stakeholders input into NR activities on a timely basis provides the most value to public. We support the proposed actions being put forward that include traditional and emerging communication techniques.**