



Welcome! Regional Resource Stewardship Council Meeting

The meeting will begin at
8:30 am Eastern



Regional Resource Stewardship Council

September 20-21, 2022

1st Meeting – Term 12

Welcome

RRSC Live and Virtual Meeting

- **This is the first meeting of the 12th term of the RRSC.**
- **This meeting is being recorded.** A link will be provided on the TVA RRSC Website (tva.gov/rrsc).
- **We welcome members of the public attending virtually and who are in listen only mode.** For those that pre-registered to make public comments, the meeting host will give you instructions for speaking to the Council at that time. Written comments are always welcomed (tva.gov/rrsc).
- **RRSC Members attending in person**, when you want to speak, please turn your name plate vertically and I will call on you. I will identify the person I call on so that those attending virtually will be able to identify the speaker. Please speak loudly so that those in the room and those attending virtually can hear your comments.

Safety First!

- **In case of fire or other building emergency**, exit the doors you entered at the back of the room. Exit the building via the front doors. Turn right, go down the stairs, go across the street, and gather in the mall area.
- **In case of severe weather**, exit the doors you entered in the back of the room. Turn right. Go down the stairs to the sublevel. Stay in the interior hallway.
- **We will provide a guide to direct you.**

Introductions

Name

Position, Organization, Location

What are you looking forward to this Fall?

RRSC Term 12 Members

Introductions:

Name

Position, Organization, Location

Looking Forward to this Fall

Ryan Brown

Commonwealth of Virginia

Ron Lambert

Nature Conservatory

Sen. Clay Schofield

Alabama Senate, District 9

RaeLynn Butler

Muscoge (Creek) Nation

Whitney Lipscomb

State of Mississippi

Danette Scudder

TN Valley Public Power Association

Keith Carnahan

Meriwether Lewis Electric
Cooperative

Tom Littlepage*

ADECA Office of Water Resources

Robert Sneed

Retired, Army Corps of Engineers

Alan Gates

Pennyrile Electric

John McConnell

McConnell Insurance
Commonwealth of Kentucky

Catherine Via

TN Farm Bureau Federation

Richard Holland

Packaging Corp of America

Will Nelson

Nelson Tractor Co.
State of Georgia

Stacey White

Arab Electric Cooperative, AL

Cline Jones

Tennessee River Valley Association

Ron Robertson

TN Farmer

Randy Wiggins

Cherokee County, NC

Kim Klinker

Klinker Management

*** Council Chair**

Greg Young

State of Tennessee

Agenda

Agenda

RRSC Meeting – Day 1 September 20, 2022 Knoxville, TN

All times are ET

| | |
|---------|---|
| 8:30 am | Welcome – Designated Federal Officer Melanie Farrell Chair Tom Littlepage VP River & Resources Stewardship Allen Clare |
| 8:45 | Safety, Introductions, and Agenda |
| 9:00 | FACA Briefing |
| 9:10 | DFO Briefing |
| 9:30 | Break |
| 9:45 | TVA River Operations Policy |
| 11:45 | Break |
| 2:00 pm | Begin Afternoon Session Council Responds to Advice Questions |
| 3:30 | Summary Adjourn RRSC Day 1 Meeting Meeting |

Agenda

RRSC Meeting – Day 2 September 21, 2022 Knoxville, TN

All times are ET

| | |
|----------|---|
| 8:30 am | Welcome Day 1 Review |
| 9:00 | Public Listening Session |
| 10:00 | Break |
| 10:15 | Finalize Advice Statement |
| 11:15 | River Management Update |
| 11:45 | Natural Resources Update |
| 12:15 pm | Summary Adjourn RRSC Meeting |

The Federal Advisory Committee Act and The Regional Resource Stewardship Council (RRSC)

FACA Briefing, First Meeting of the 12th term

Kendra Mansur, Attorney, Office of the General Counsel; kjmansur@tva.gov

September 20, 2022

Historical Background on Advisory Committees

President George Washington sought the advice during the Whiskey Rebellion in 1794

- Growth in advisory committees occurred after WWII
- Congressional concerns:

Proliferation of committees

Domination by special interest groups

Lack of transparency and accountability

Waste of federal funds

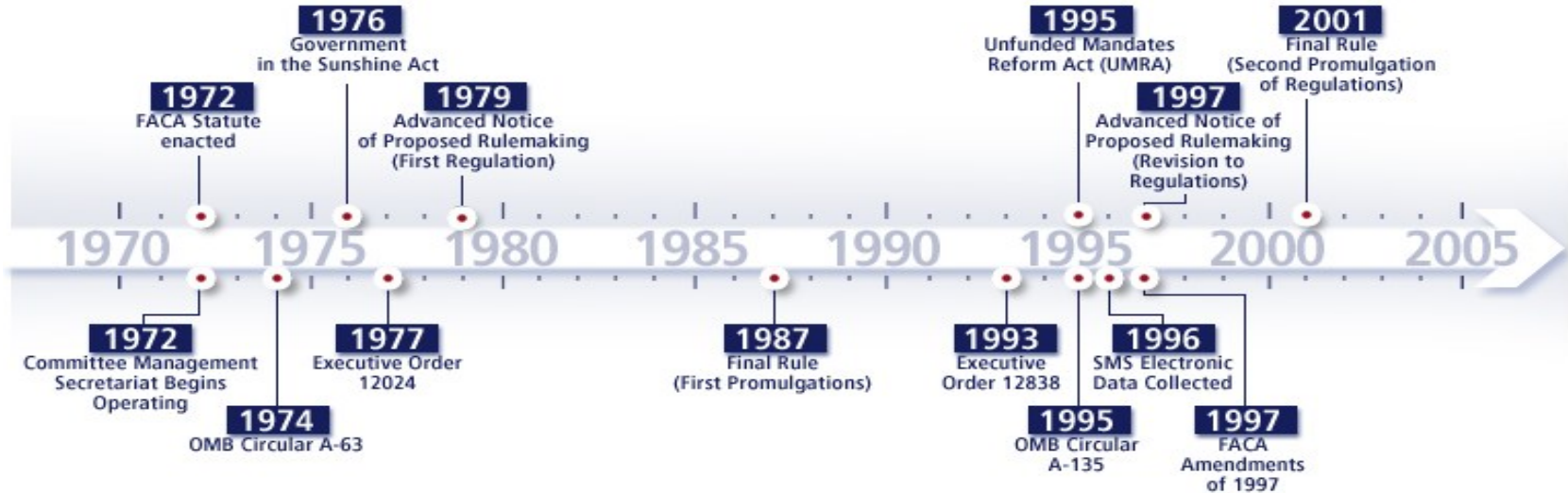
Federal Advisory Committee Act of 1972

- U.S. Congress formally recognized the merits of seeking advice and assistance
- The Act assures that advisory committees provide advice that is relevant, objective and open to the public, and complies with record keeping requirements

Charter of the Regional Resource Stewardship Council

1. **Committee's Official Designation.** Regional Resource Stewardship Council (RRSC).
2. **Authority.** The RRSC is a discretionary advisory committee established under the authority of the Tennessee Valley Authority (TVA) in accordance with the provisions of the Federal Advisory Committee Act (FACA), as amended, 5 U.S.C., App. 2.
3. **Objective and Scope.** Under the TVA Act, TVA has been charged with the wise use and conservation of the natural resources of the Tennessee River drainage basin and adjoining territory for the general purpose of fostering the orderly and proper physical, economic, and social development of the Tennessee Valley region. As the region has developed and the population grown, the stewardship of its natural resources has become both more complex and more important. TVA has always cooperated and worked closely with other public agencies and private entities that have responsibilities for and interest in the use and conservation of the region's natural resources. As competition for finite resources grows, fulfilling TVA's integrated resource stewardship mission will require increased cooperation with these other public agencies and private entities. It is in TVA's interest, and the interest of the public it serves, to establish a mechanism for routinely obtaining the views and advice of the public agencies and private entities involved in and affecting natural resources stewardship. Accordingly, TVA establishes the Regional Resource Stewardship Council to provide TVA advice on its stewardship activities and the priorities among competing objectives and values. TVA's stewardship activities include the operation of its dams and reservoirs, its responsibilities for navigation and flood control, the management of the lands in its custody, water quality, wildlife and recreation.

FACA Timeline



Timeline Courtesy of GSA

[Increasing the Transparency of Federal Advisory Committee Act \(FACA\) Information | GSA](#)

Key Elements of the Federal Advisory Committee Act

- Public access
- Meetings (reasonably accessible and timely notice required—generally open to the public)
- Records (available for public inspection, subject to the Freedom of Information Act, etc.)
- Structured management
- Filed charters
- Expiration after two years
- Attendance of a federal officer
- Balanced Membership

Key Provisions of RRSC Council Charter



Council Provides Advice

- On TVA's stewardship activities and the priorities among competing objectives and values
- Advice reported to the TVA Board's External Stakeholders and Regulation Committee
- Term of Council is two years with two meetings per year typically

Balanced Membership

Members include:

- Nominations from the Governors within the Tennessee Valley states
- Three representatives of local power companies of TVA power
- One representative each of TVA's direct-served customers, TVA's navigation program, TVA's flood control program, a Federally Recognized Tribe with an interest in the TN Valley, a recreation interest, and an environmental interest
- Four TVA appointees to ensure a broad range of views

TVA's stewardship activities include:

- Management of lands in TVA custody and control
- Operation of its dams and reservoirs
- Navigation and flood control
- Water quality
- Wildlife
- Recreation
- 26a permitting
- Pollinator habitat
- Eco-tourism
- Biodiversity
- Water Supply
- Sustainability
- Environmental Justice



RRSC Meeting Requirements

Agenda

- Agenda prepared and approved by the DFO, or alternate DFO, in consultation with Council Chair
- Agenda distributed to Council and an outline is published in the Federal Register prior to each meeting
- Topics may be submitted to the DFO by any member of the Council, or non-members, including members of the public

Meeting Minutes

- DFO will ensure that minutes are prepared for each meeting, approved by the Chair, and made available to Council members and the public

RRSC Meeting Requirements

Voting

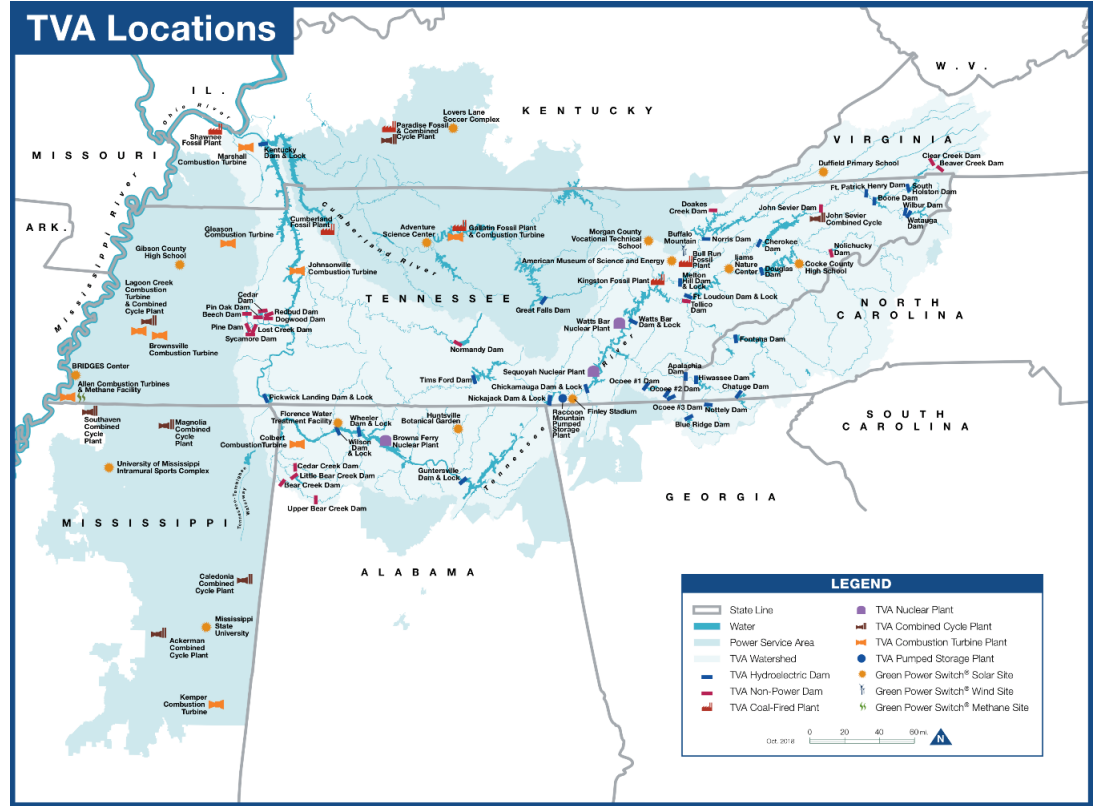
- Any member of the Council may make a motion for a vote
- Quorum is a majority of the seated members of the Council
- Advice requires an affirmative vote of majority of Council members present
- Advice may include minority or dissenting views

Membership

- Balanced Membership
- Professional or personal qualifications to achieve the mission of regional resource stewardship
- Broad range of diverse views and interests, including recreation, environment, utility, industrial, business, government, consumer, education and community leadership

RRSC Advice

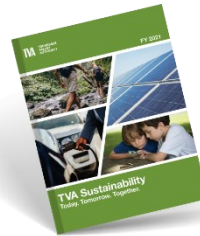
Your advice is important to TVA and for the ten million residents of the Tennessee Valley service territory and beyond.



TVA Update

Melanie Farrell, Designated Federal Officer

- TVA Biodiversity Policy (November 2021)
- FY 2021 Diversity Equity, Inclusion and Accessibility Report
- FY 2021 Sustainability Report
- Executing on TVA's Strategic Intent and Guiding Principles
- Status update on TVA Board Nominees



BREAK

Meeting will resume in 15 minutes

Advice Questions

Advice Questions

- Does the current implementation of the TVA River Operations Policy balance the needs of the Valley and provide quality, equity, and benefits for users?
- Are there any additional objectives that should be prioritized?
- Are there any other recommendations for implementation of the policy?



River Operations Policy

September 20, 2022

Regional Resource Stewardship Council



Topics

Integrated Tennessee River System Overview

River Management Programmatic Areas

Reservoir Operations Study Introduction

Reservoir Operating Policy Successes

Modeling Enhancements

Planning for Climate Change

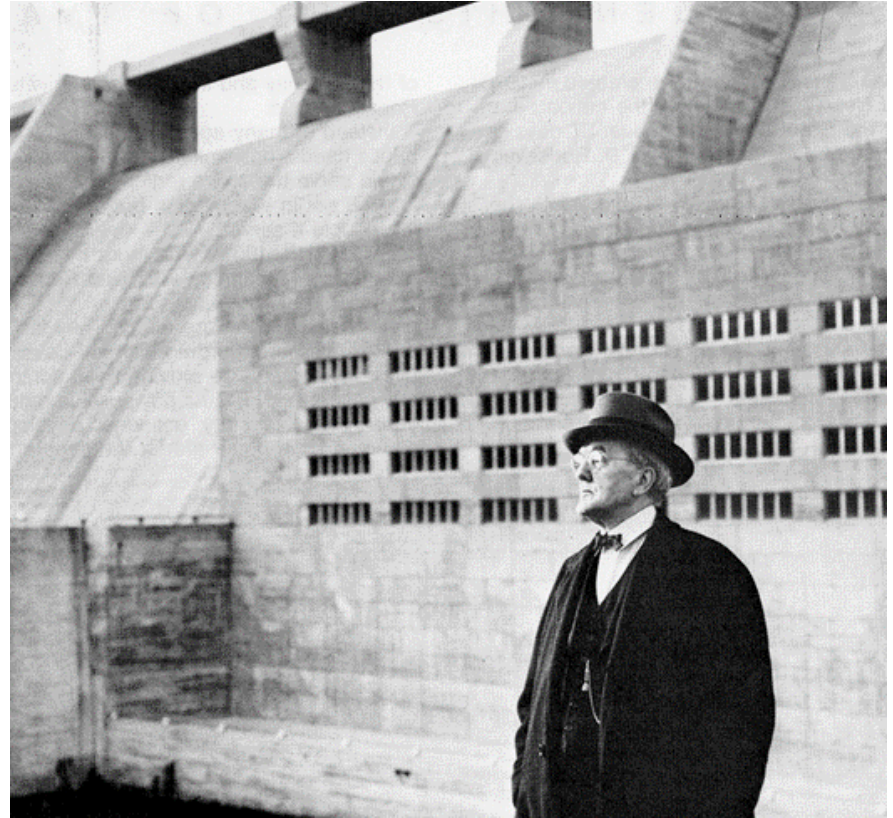
Stakeholder Engagement & Social Media Outreach

Future of Reservoir Operations Study

Integrated Resource Management

River system assigned multipurpose role through TVA Act in 1933.

(section 9a) ...to regulate the stream flow primarily for the purposes of promoting navigation and controlling floods. So far as may be consistent with such purposes, ...for the generation of electric energy...



“Father of TVA,” Senator George Norris

Integrated Tennessee River System Overview



Navigation



Flood Damage Reduction



Power Generation



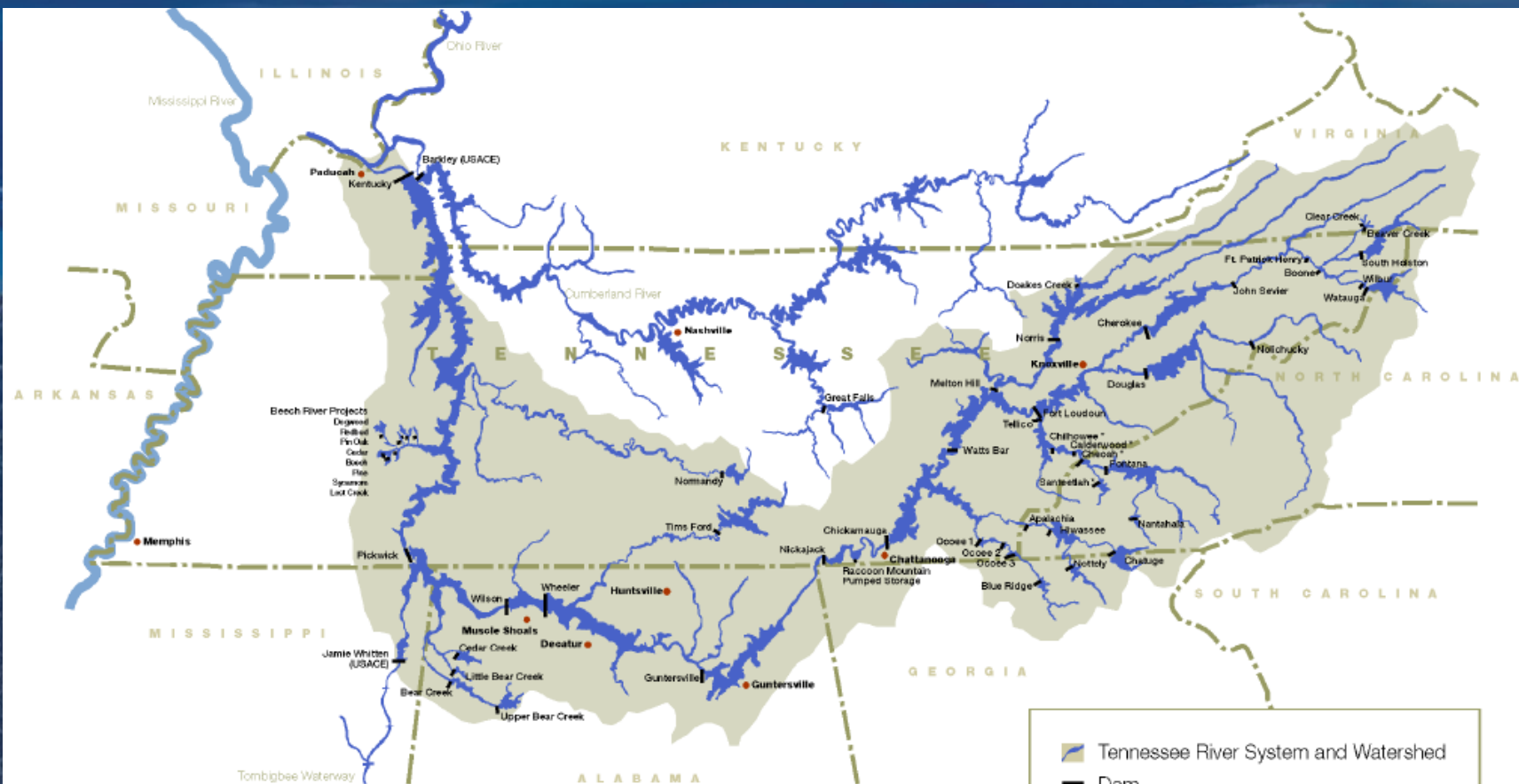
Water Supply



Recreation



Water Quality



Tennessee River Management

- TVA has a long history that began with its river management mission
- Operations are driven by rainfall and runoff as guided by Reservoir Operations Policy
- Integrated operation allows TVA to balance river system benefits:
 - Navigation
 - Flood-damage reduction
 - Affordable and reliable electricity
 - Improved water quality
 - Dependable water supply
 - Recreation opportunities



River Management Programmatic Areas

River Management Programmatic Areas

Water Quality Support – Lana Bean

- Reservoir Release Improvements (RRI)
- Hydrothermal Program Support (HT)
- Floating Aquatic Vegetation (FAV)

Navigation Program – Nikki Berger

Hydrologic Impacts & Risk Evaluation – Amanda Turk

- Hydraulics and Hydrology
- Flood Risk Program
- Water Supply Program

Reservoir Release Improvements

Objectives

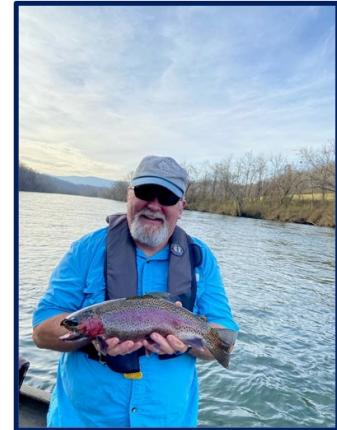
- Meet dissolved oxygen targets to protect aquatic habitats
- Maintain a wetted riverbed

Results

- Increased dissolved-oxygen concentrations in more than 300 miles of river downstream from TVA dams
- Improved water flows in 180 miles of river

Outcomes

- Improvements in tailwater macro invertebrate and fish communities
- Mussel recovery in tailwaters
- Reintroduction of some threatened and endangered species



Hydrothermal Program Focus Areas

- Forecasting Water temperature
- Conducting Field Studies
- Performing calculations to assist nuclear and coal plants with permit renewals
- Evaluating new projects or emerging problems in the river system that affect our thermal plants or hydro plants
- Providing environmental protection of sensitive species in the Valley affected by water temperature issues
- Developing partnerships and modeling to decrease the impacts of invasive species in the region
- Evaluating climate change impacts on the power system
- Ensuring no surprise thermal derates for any TVA thermal plant
- Ensuring advance warning of aquatic plant issues at Browns Ferry Nuclear Plant



Floating Aquatic Vegetation Mitigation

- Floating aquatic vegetation (FAV) has increased on Wheeler and Guntersville Reservoirs over the past several years. Four major plant species of concern have been identified (eelgrass, hydrilla, stargrass, and coon-tail.)
- Browns Ferry Nuclear Plant and Guntersville and Wheeler Dams have all seen threats to generation and forced outages due to excessive aquatic vegetation
- Natural Resources has been performing regular observations of the reservoirs by helicopter and airboat. River Management has been sending out a daily update report.
- River Management is working to deploy additional monitoring instruments and to develop a forecasting system
- Provide advanced warning to Browns Ferry Nuclear of pending incursions of floating aquatic vegetation



Navigation Program

Operations

- Coordinate with U.S. Army Corps of Engineers, U.S. Coast Guard, and Navigation Industry
- Respond to internal and external stakeholder requests
- Comply with the Tennessee River Waterway Management Plan

Maintenance

- Regulatory reviews (Section 26a's, Environmental Assessments, Environmental Impact Statements)
- Navigation projects at the Locks
- Maintain 374 miles of secondary channel navigation aids

Benefits

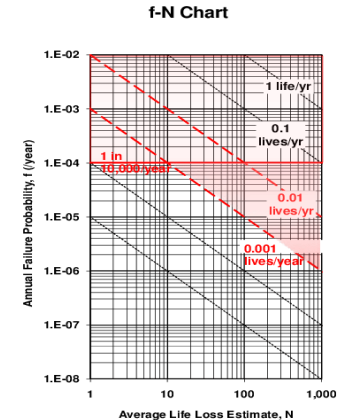
- \$8 billion annually in economic development to the Valley
- \$1 billion annually in shipper savings
- Passage for 20,000 recreation boats annually thru locks



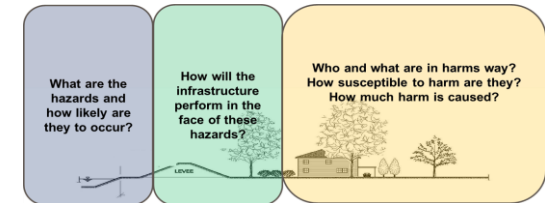
Hydrologic Impacts and Risk Evaluation

Hydrology and Hydraulics Program

- River Management and Dam Safety's technical support system for all things Hydraulics and Hydrology.
- Probabilistic Hazard Flood Analysis (PFHA) Program – Estimates the probability that an extreme storm will hit a given dam, by running hundreds of thousand of rainfall events, yielding frequencies of critical hydrologic variables.
- Consequences – Assessment for Dam Safety Risk which quantifies life-loss and economic damages resultant from a dam-breach and non dam-breach event.
- Coordinates hydrologic topics/responses (Integrated Hydrology Advisory Committee) between Nuclear Power Group and Dam Safety regarding Probable Maximum Precipitation, Probable Maximum Flood, and risk evaluations.
- Leading climate changes impacts on River Management study.
- Contributes to River Forecast Center system updates and modeling capabilities.



$$\text{Dam Risk} = f(\text{Hazard}, \text{Performance}, \text{Consequences})$$



Hydrologic Impacts and Risk Evaluation Flood Risk Program

- Programmatic (flood-control) reviews of Section 26a permits and TVA Reservoir Land Use studies.
- Reviews Categorial Exclusion Checklists, Environmental Assessments, and Environmental Impact Statements for floodplains impacts.
- Responsible for flood damages averted dollar amounts for internal/external distribution.
- Represents TVA on the Federal Interagency Floodplain Management Task Force (FIFM-TF), Flood Resilience Interagency Working Group, and the Tennessee Silver Jackets.
- Fulfills flood data requests from internal and external stakeholders.
- Stands up and manages River Forecast Center Phone Bank during a flood or high-flow event.



Hydrologic Impacts and Risk Evaluation Water Supply Program

- The program goal is to ensure adequate, sustainable supplies of water for the region's continued growth, while protecting the integrity of TVA's integrated operation of the river system.
- Publishes the Water Use Analyses every five years and validates Reservoir Operating Study forecasted data
 - Quantifies Valley-wide use for thermoelectric, municipal, industrial, and irrigation needs.
- Participates in and guides Water Supply partnerships with Federal/State/Municipal partners/stakeholders for coordination, tracking regional trends, and droughts. Maintains contacts with local water supply utilities.
- Contributes to Water Supply Environmental Assessments and National Environmental Policy Act reviews.



Reservoir Operating Policy History & Overview



History of Reservoir Operation Policies

- Based on sections of:
 - TVA Act of 1933
 - Unified Development of the Tennessee River System (1936)
 - Flood Control Act of 1944
- TVA has periodically made changes and adjustments to its reservoir operations policy in order to achieve greater overall value for the public.



History of Reservoir Operation Policies

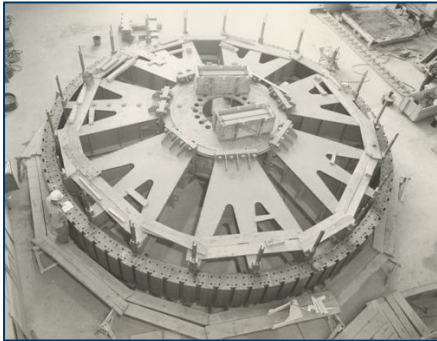
1933

1930's - 1960's

2022

Momentous Economic Growth

- 1940's – Peak Construction
- 1950's – TVA becomes self-financing
- 1960's – TVA begins constructing nuclear plants



History of Reservoir Operation Policies



Improved Reservoir System Benefits

- Began looking for ways to improve system benefits without adversely impacting objectives and considering:
 - Operational experience
 - Changes in the power industry
 - Environmental requirements
 - TVA's own mission and planning needs
- Increasing importance of benefits beyond navigation, flood control, and power production
- TVA specialists reviewed operations and evaluated suggested changes
- It was the beginning of a more formal evaluation process that involved public input and provided a forum for external groups

History of Reservoir Operation Policies



Reservoir Operations Study

- Initiated in 2001; approved in 2003
 - Recommendations by the 1st term RRSC's *Integrated River Management Subcommittee* became the foundation for a comprehensive reservoir operations study
- Goal: Prepare an operating policy to provide the greatest public value through the year 2030
- Involved extensive public review and input, and alternative evaluation
 - 5,400 members of the public commented
 - 3,600 residents responded to telephone survey
 - Almost 7,000 individuals commented on Draft Environmental Impact Statement (EIS) and 2,100 on Final EIS

Reservoir Operations Study - 2004

- Included a Draft Programmatic Environmental Impact Statement (DEIS)
- Called on two stakeholder review groups
 - 17-member Interagency Team
 - 13-member Public Review Group
- Included TVA response to comments and development of a Preferred Alternative
- Developed Final Programmatic Environmental Impact Statement (FEIS)
- Presented for approval to TVA Board of Directors
- Filed Record of Decision in 2004



PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

Tennessee Valley Authority Reservoir Operations Study

Record of Decision

May 2004

Lead Agency: Tennessee Valley Authority

In cooperation with U.S. Army Corps of Engineers
and U.S. Fish and Wildlife Service.

Reservoir Operations Study – Primary Outcomes

- Created balancing guides for tributary storage reservoirs
- Increased minimum depth of the Tennessee River navigation channel at two locations
- Restricted drawdown of 10 tributary reservoirs from June 1 – Labor Day
- Raised flood guides and operating ranges on several tributary reservoirs
- Provided for scheduled recreation releases
- Maintained and affirmed tailwater minimum flows and dissolved oxygen targets
- Provided for system-wide flow requirements that support reservoir health amongst other benefits

Reservoir Operations Policy – Key Considerations

- Established a **balance** of operating objectives
- Responsive to **values** expressed by the public
- Guides system-wide decisions about how much water is stored in specific reservoirs, how the water is released, and the timing of those releases
- Composed of **guidelines** that describe how the reservoirs should be operated given the rainfall and runoff, and the operating objectives.
- Provides **flexibility** to be effective over the wide range of rainfall and runoff patterns
- Allows for temporary deviations from normal operating guidelines to meet critical power system situations, to meet other reservoir system needs, or due to floods or droughts, etc.
- Established pool level parameters for daily operations

Reservoir Operations Policy Flexibility - Examples

Reservoir Operations Policy allows for operational flexibility to balance reservoir objectives during abnormal periods

Examples of Policy Flexibility:

- Foregoing minimum/recreation flows to meet flood control objectives
- Adjusting reservoir balancing due to abnormal regional hydrology
- Shifting recreation releases to meet stakeholder special requests (Ocoee contract)
- Addressing U.S. Fish and Wildlife Service (USFWS) consultation requirements through adaptive management policies (Tims Ford, Bear Creeks, Pickwick, Wilson)
- Providing increased hydropower to meet extreme summer power demand and flow increases to protect downstream thermal limits at Nuclear sites
- Abnormal conditions at Blue Ridge and Boone – prolonged deep drawdowns

2014 RRSC Review of the Reservoir Operations Policy

The RRSC reviewed the policy and unanimously affirmed and/or recommended....*summarized*

1. The Reservoir Operations Study “allows for flexible operation that has managed the effects of weather extremes while accommodating different demands”.
2. Continue to use social media to show the positive value.
3. Communicate that the Reservoir Operations Study is no longer a study, but an on-going decision management process
4. Provide greater public education about the overall river system
5. Work with federal, state and local partners to communicate operations and impacts
6. Continue to engage with local Emergency First Responders especially in safety analysis discussions
7. Underscore Aquatic Ecology as a major component of TVA’s water quality objective – TVA as an environmental steward
8. Continue to mitigate impacts to cultural resources

Reservoir Operating Policy Successes: 2004 to Current

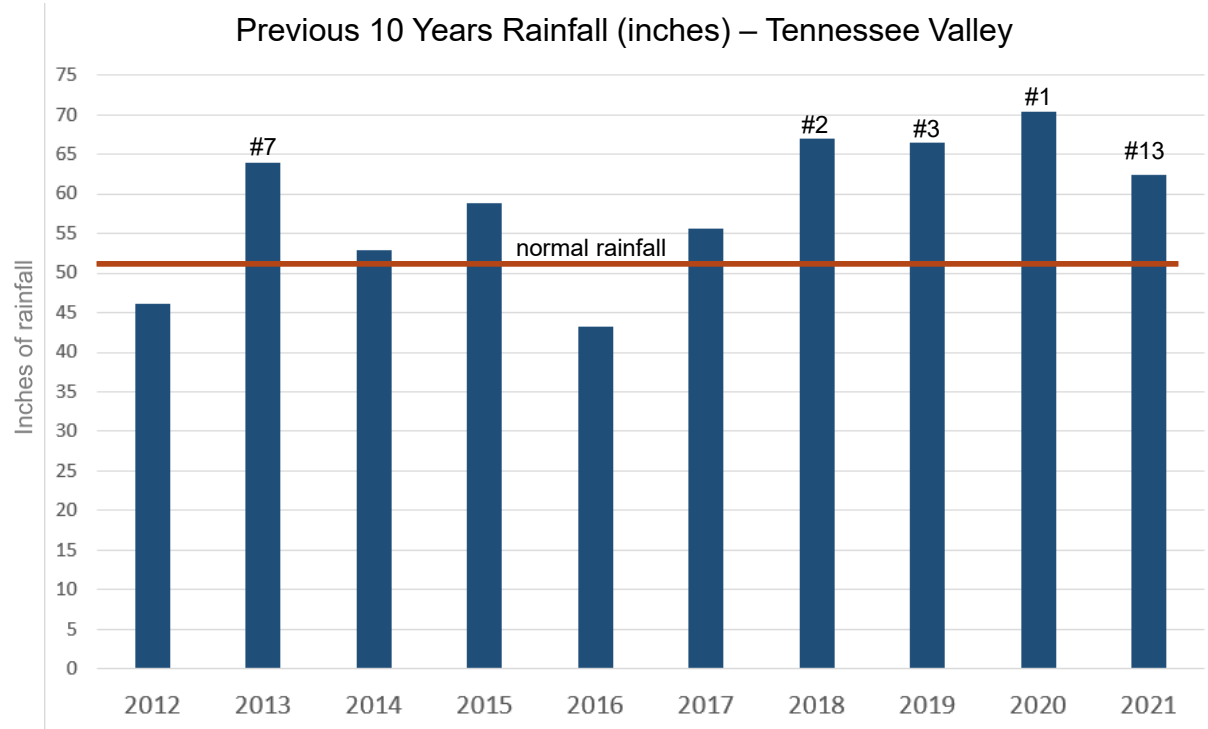


Reservoir Operating Policy Successes – Flood Control

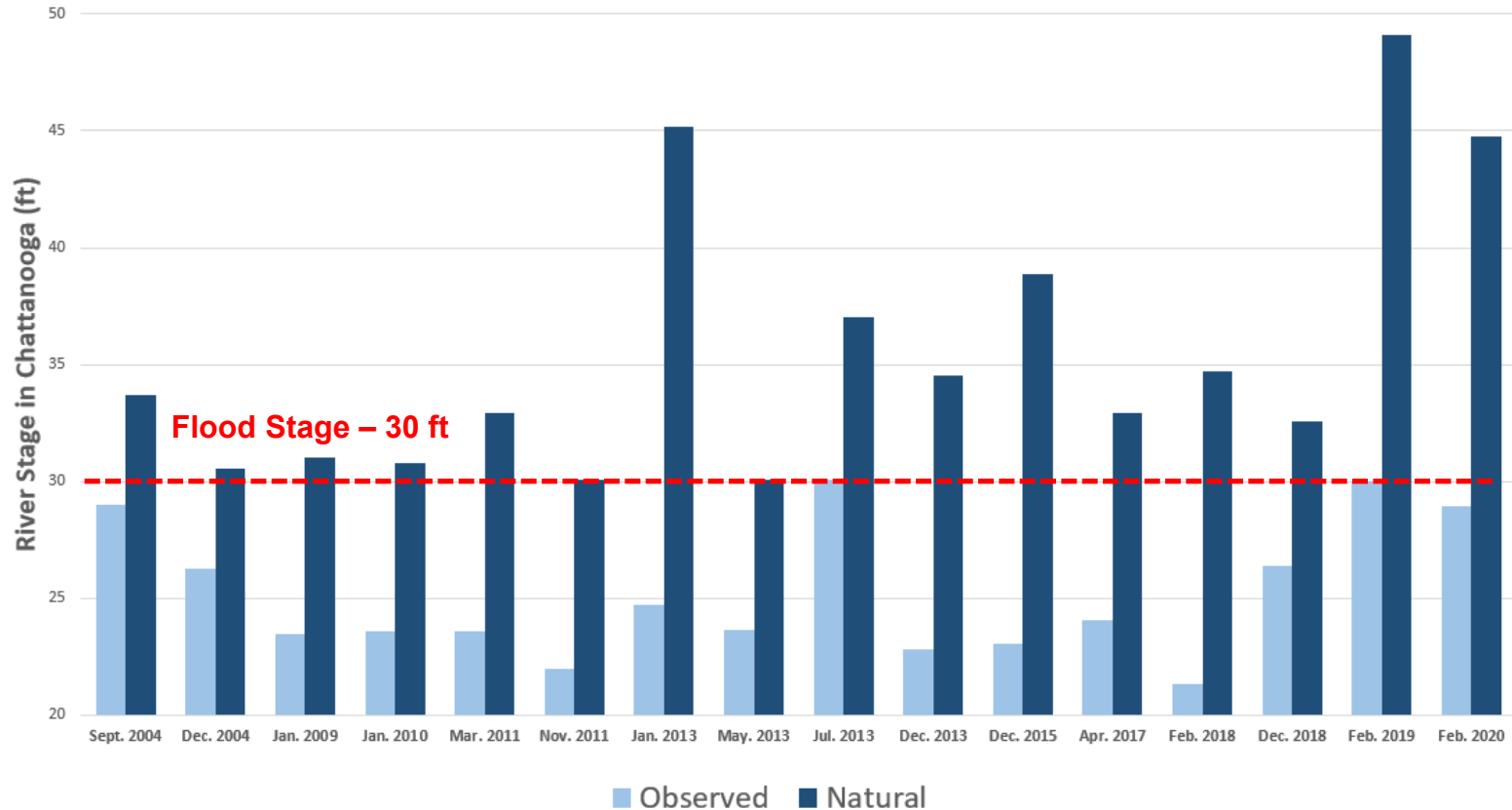
- Reducing flood damage is one of the most valuable benefits of the system
 - \$320 million in averted damages on average annually in the Valley
 - \$20 million in averted damages on average annually on Ohio & Mississippi Rivers
 - \$2.6 billion in damages averted in the Valley in 2019 and 2020
- Record reservoir storage on Kentucky during flood of record on the Ohio and Mississippi Rivers (May 2011)
- Only two instances at, but no higher than flood stage in Chattanooga in past 18 years
- Trade-off: Slightly less flood control storage for higher reservoir levels, but still successfully reducing flood damages

Rainfall Highlights

- Normal annual rainfall is about 51 inches.
- 2018 - 2020 are the top 3 wettest years on record.
- Eight of the last 10 years have been above normal rainfall.
- 5 of the last 10 years have been in top 13 wettest



Flood Crest Reduction - Chattanooga, TN



Reservoir Operating Policy Successes – Navigation

- Allowed for slightly deeper draft barges on the lower Tennessee River; fewer navigation disruptions
 - Increased Wheeler Reservoir minimum pool elevation by 0.5 feet
 - Releases of up to 25,000 cubic feet per second from Kentucky to maintain tailwater elevation of 301 feet
 - Special releases provided from Pickwick during periods of zero discharge and low tailwater elevations
- Flexibility of ROS allows for windows of opportunity for lockage during prolonged lock or river closures
- Supported continued navigation during the 2012 significant drought on the Mississippi River
 - The Tennessee and Cumberland Rivers provided more than one-third of the flow down the Mississippi River with only 5% of the drainage area
- Numerous instances of operational flexibility to support major lock construction and maintenance activities

Reservoir Operating Policy Successes – Hydropower

- Hydropower is about 10% of the total generation mix annually
- Represents replacement value of approximately \$500 million annually
 - 2022 is on pace to recover nearly \$800 million in realized hydro value
- Peaking resources to meet TVA's daily fluctuations in demand
- Ancillary services such as voltage regulation and reserve capacity
- 2013 - TVA record for Gross Conventional Hydro Generation (18,470 GWh)
- 2014 Polar Vortex: 108/109 units online, policy flexibility allowed for sustained releases to meet demand
- Proven to be a valuable and flexible asset for TVA as energy prices and fuel are affected by market volatility
- Hydro flexibility called upon routinely to meet system demand and curtailments



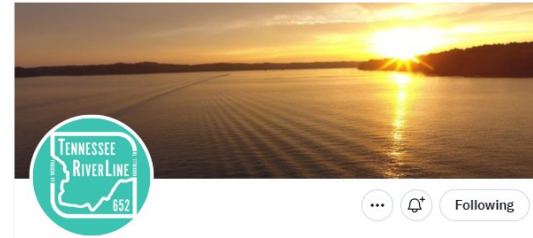
Reservoir Operating Policy Successes – Water Quality and Supply

- National Pollutant Discharge Elimination System (NPDES) thermal limits managed – only 1 Notice of Violation (2010, Browns Ferry Nuclear plant)
- Improved flows and enhanced dissolved oxygen (DO) levels to support world class fisheries
 - Hatchery supported trout fisheries: \$20 million/year retail activity in Tennessee¹
- Threatened & Endangered species recovery from adaptive management policies
 - Ex. Modified operations at Tims Ford Dam for Boulder Darter, de-listing of Snail Darter
- Water Supply projections still valid into the future
- Focus shifted to flow-driven policy vs. elevation-driven
- Higher reservoir elevations in winter provide more water in storage and operational flexibility

¹Economic Effects of Rainbow Trout Production by the National Fish Hatchery System (USFWS, 2006)

Reservoir Operating Policy Successes – Recreation

- Tributary winter pools raised at Boone, Chatuge, Cherokee, Douglas, Fontana, Hiwassee, Norris, Nottely, South Holston & Watauga
- Drawdown restrictions in place June 1 through Labor Day to preserve water levels as high as possible
- University of Tennessee study estimated value of the system at \$12 billion annually
- Provided increased recreation flows at Apalachia, Norris, Ocoee #1, Watauga and Wilbur and renegotiated Ocoee releases
- Partnership with Tennessee RiverLine Program
- Continued enhancement of TVA Lake Info app
- Recreation releases are scheduled in advance



Reservoir Operating Policy Successes – Fish Habitat

2021 BASSMASTER – Top 10 Best Bass Lakes of 2021

- #10 – Pickwick Lake

2021 BASSMASTER – Top 25 Best Lakes in the Southeast

- #3 – Pickwick Lake
- #7 – Guntersville Lake
- #11 – Chickamauga Lake
- #15 – Wilson Lake
- #24 – Fort Loudoun Lake

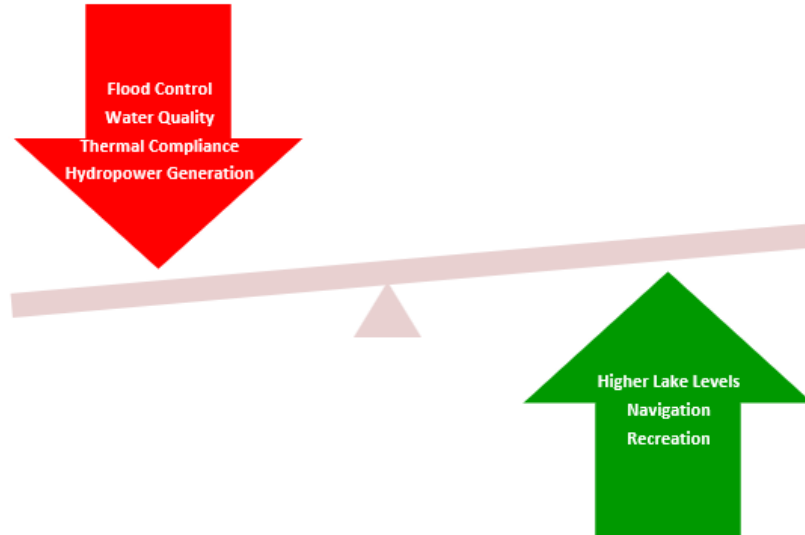
2021 BASSMASTER – Top 25 Best Lakes in the Northeast

- #23 – Kentucky Lake

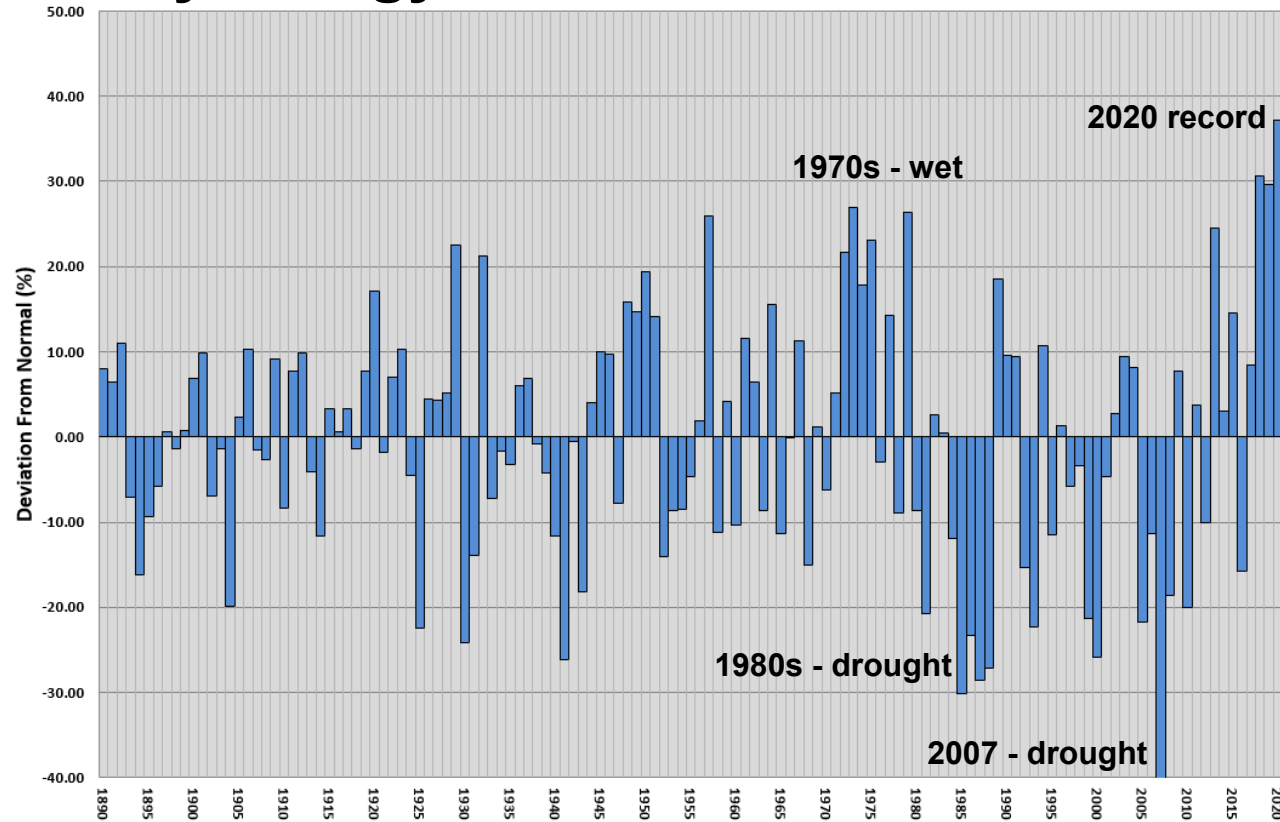


Reservoir Operating Policy Challenges

- Balancing the competing demands on the system and the overall value to the public
- Communicating the balance and trade-offs associated with stakeholder specific values
- Examples: Can you keep my reservoir higher, longer? Can you provide more flow for cooling water? Can you not generate power during the day so I can wade the river?



Reservoir Operating Policy Challenge and Success – Variable Hydrology



Reservoir Operating Policy and Extreme Weather

- 2004 – Hurricanes Frances and Ivan
- 2007-2008 – Record Drought
- 2010 – Record Heat and Hydrothermal Implications
- 2013 – Extreme rainfall events in January and July (unprecedented summer flooding)
- 2018-2021 – Record-breaking rainfall and extreme rain events
- 2019 Flood



Guntersville, AL April 2011 Tornadoes



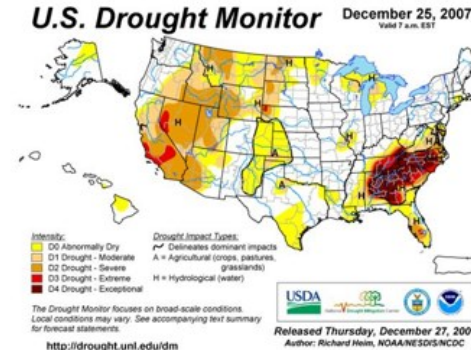
South Holston Marina 2008



NOAA Image – Hurricane Francis

Climate Extremes – 2007 & 2008

- Record-setting drought impacts the Valley – 2007 becomes the driest year on modern record
- Many streams in the Valley hit new record lows, no water supply impacts on TVA regulated waterbodies
- Reservoir Operating Policy minimum flow and pulse requirements ensured wetted streams below all tributary dams, despite record low natural inflow
- Storage utilization from tributaries ensured minimum operating levels for navigation are sustained
- 8/10 of TVA's all-time peak energy days occurred in August 2007
- Development of Drought Management Plan



Rainfall Highlights – 2018 through 2020

TVA rainfall records go back 132 years and the 2018 - 2020 were truly remarkable and record-breaking

2020 was the wettest in 132 years



Persistent - 13 straight months of above normal rainfall

TVA Tennessee Valley Authority @TVAnews · Feb 2 ...
After 13 straight months, Oct. 2019 - Oct. 2020, with above normal rainfall and 2020 as the wettest year on record, rainfall in the Tennessee River Basin has been below normal for the past three months. January rainfall was only 67% of normal.



February 2019 Flood

We Had the Rainiest February Ever

Indeed, February skies would remain gray all month long, raining for all but six of its 28 days, depositing a regional average of 11.6 inches of rain—a staggering 169% above what is normal for the month in the Tennessee Valley.

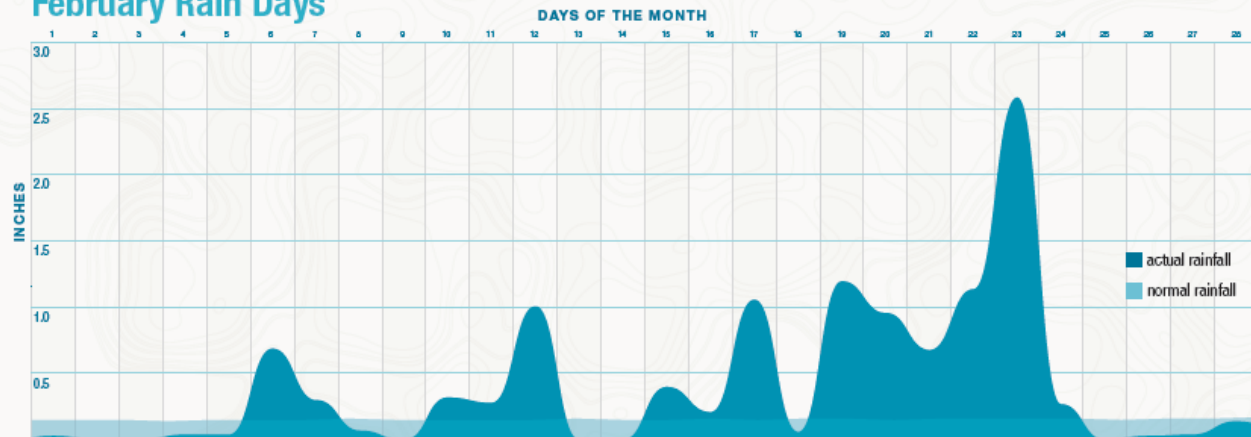
22 DAYS OUT OF **28**
MEASURABLE RAINFALL

11.6
INCHES OF RAIN
IN THE MONTH OF FEBRUARY

269%
OF NORMAL

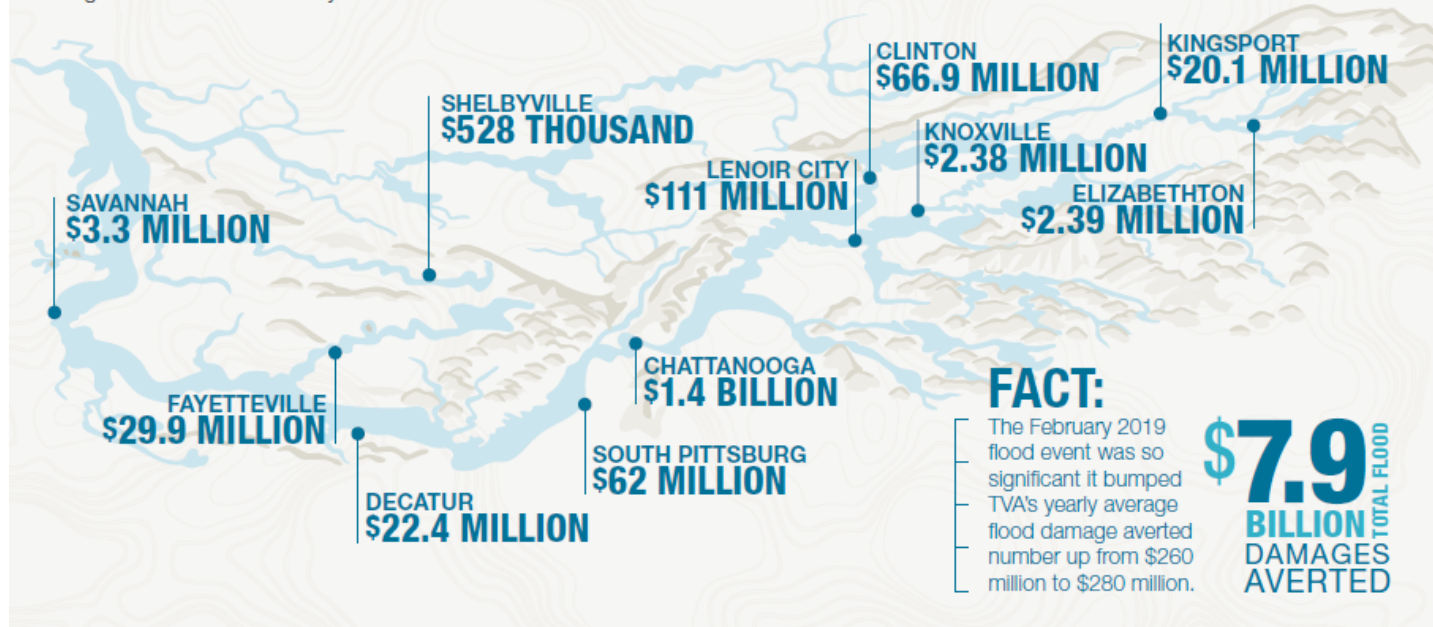
FACT:
2019 WAS THE
WETTEST
FEBRUARY
EVER RECORDED
IN THE TENNESSEE VALLEY

February Rain Days



Over \$1.6 Billion in Damages Were Averted in the Tennessee Valley

When the clouds parted and the rain finally stopped, it was clear that TVA had spared many towns along the river from millions of dollars in flood damage. In fact, TVA averted damages everywhere below the dams—even in towns that experienced significant flooding. Altogether, TVA averted at least \$1.6 billion dollars in structural flood damage throughout the Tennessee Valley.



Ecological Successes

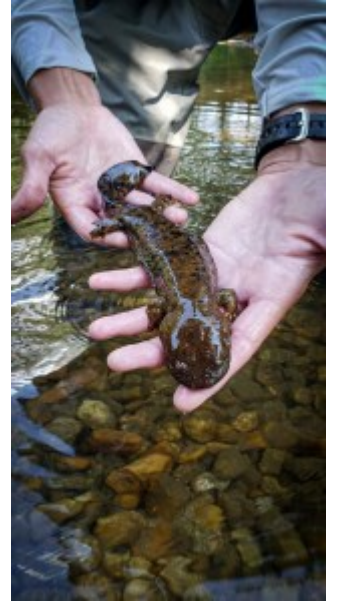
Ecological Benefits



- Reservoir Ecological Health Program
 - Monitor and assess biological conditions in streams and tailwaters to maintain an in-depth knowledge of the changing conditions of water quality throughout the Tennessee Valley
 - Help TVA and stakeholders identify and track water quality protection and improvement opportunities
- U.S. Fish and Wildlife Service Consultation Compliance
 - Private/Public partnerships to propagate and reintroduce federally listed Boulder Darters in the Elk River watershed
- The Snail Darter makes its big comeback!
 - Water quality improvements targeted dissolved oxygen and minimum flow conditions at TVA dams
 - Partnerships and collaboration with numerous federal, state, non-profit, educational and other organizations catalyzed into shared resources and programs
 - Officially delisted in Federal Register on September 1, 2021

Biodiversity in the Southeast

- The Southeastern U.S. is a global hotspot of freshwater biodiversity and is home to:
 - 2/3 of U.S. fish species
 - 90% of U.S. mussel species
 - ~50% of U.S. crayfish species
- More than ¼ of the species in the region are found nowhere else on earth
- Water Quality improvements in TVA lakes and rivers and management of the Tennessee River System contribute to the Biodiversity in the Valley



State of the Art Modeling



Decision Horizons and Tools

Historic

Observed Values
(- 14 Days) ← Today

Real-time data, Hourly Models, radar

2 Days

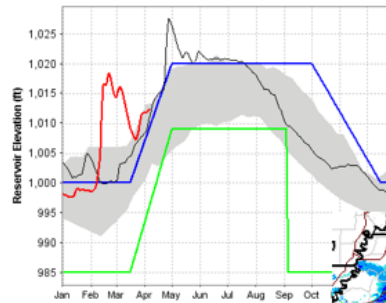
Hourly Economic Modeling, Hourly Reservoir Simulation, 6-hour Reservoir Simulation

14 Days

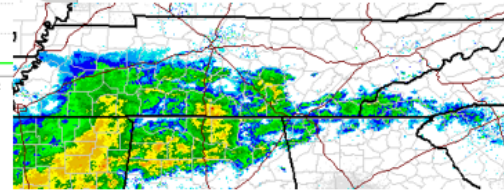
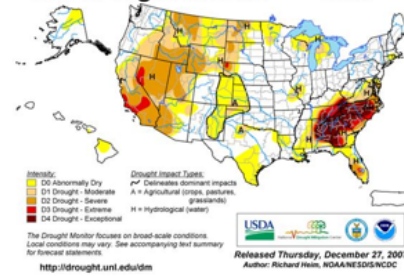
6-hourly Reservoir Simulations & Optimization, Economic Models, Load Forecasts, NWS QPF, Planned Constraints

Planning Models, Long-term power studies, Capacity Constraints, Resource Strategy

Months - Years

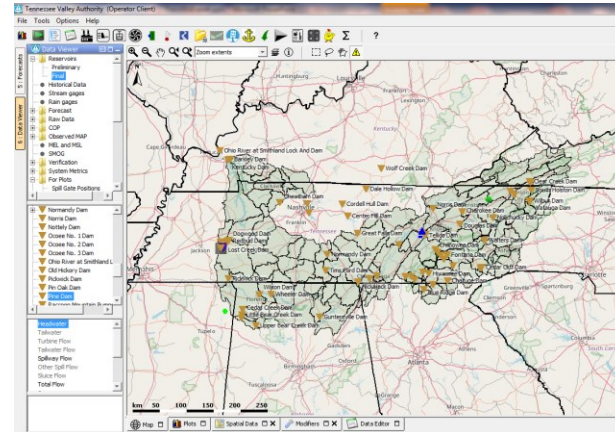


U.S. Drought Monitor December 25, 2007



Flood Early Warning System (FEWS)

- Developed by Deltares – Netherlands
- Used in over 40 countries
- Platform used by the National Weather Service (NWS)
- TVA leveraged partnerships with NWS and others to develop and customize FEWS for our own application over a 3-year development period

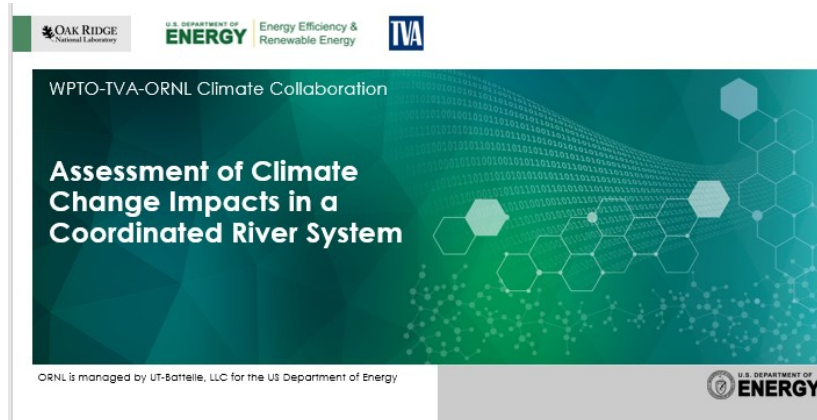


Planning for Climate Change



Planning for Climate Change

- TVA is in year 1 of a 3-year project to assess future climate change projections on our impact to meet key River Management benefits
 - Partnership between TVA, DOE Water Power Technologies Office (WPTO) and Oak Ridge National Lab (ORNL)
 - TVA goal will be to utilize information to better inform future operations
 - ORNL will utilize the project to further provide guidance to other national hydropower stakeholders



Timeline (FY2022 – FY2024)

Year 1 (FY2022)

- Development of detailed research plan (TVA and ORNL)
- Model / data collection and exchange (TVA and ORNL)
- Climate model selection and downscaling (ORNL)
- Execute TVA-specific assessment (TVA)

Year 2 (FY2023)

- Execute TVA-specific assessment on water quantity and quality control (TVA)
- Assess results and draft publication of climate change study (TVA and ORNL)

Year 3 (FY2024)

- Publish TVA-specific climate change assessment results (TVA).
- Publish general practices to support the broader hydropower community (ORNL).

Stakeholder Engagement

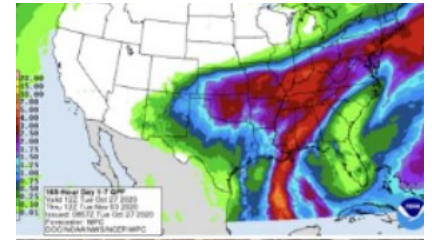
Stakeholder Outreach Highlights

- River Management briefings contributed to over 500 print/media articles in FY21 (over 97% favorable coverage).
- River Management social media content is in TVA top 5 for engagement – reaching millions of users.
- Routine stakeholder outreach occurred despite pandemic challenges – virtual briefings and outside stakeholder engagements continue (farmers, Trout Unlimited, community groups, emergency management partners).
- Once again hosting visits and tours in person at the River Forecast Center



Stakeholder Outreach Examples

- Directly to county emergency management authorities
- Conference calls with state emergency management
- Conference calls with navigation industry
- Updating National Weather Service routinely
- Updates to recreational interests, marinas, rowing venues, campgrounds, etc.
- Updates to major industries near the Tennessee River
- Updates to industries in the lower Tennessee and Ohio Rivers
- Updates daily to Redstone Arsenal
- Dozens of follow up site visits and briefings with elected officials and emergency managers



Communications & Social Media

Traditional and Social Media Outreach

- River Management continues to actively engage the public through various media outlets:
 - Social Media – Facebook/Twitter primarily
 - Print/Radio/Network Media
- Social Media allows for rapid sharing of information directly to the public
- Posts can then be picked up and amplified via other media outlets
- Ability to target audiences and content, host regional conference calls
- River and recreation posts are some of TVA's most popular content
- Social media on pace to reach 50 Million people
- ~2% engagement rate is double the industry average



TVA Tennessee Valley Authority
@TVANews

Summer is winding down, but there is still time to enjoy the great outdoors! Show us what you are up to this weekend by tagging us and using [#TVAFun](#) on Instagram! You could be our next winner! 📢

- 1 : GoPro Hero 10 📷
- 2 : RTIC Hardbody cooler 🧊
- 3 : Solar-powered phone charger 📱



12:00 PM · Aug 19, 2022 · Hootsuite Inc.

Tennessee Valley Authority @TVAnews · Feb 23

Dangerous flooding along the TN River from Pickwick Dam to Perryville, TN. Savannah is above major flood stage & the river continues to rise. We're storing as much water in upstream reservoirs as we can, but with high river flows, releases from Pickwick Dam have increased. (1/2)



Tennessee Valley Authority @TVAnews · Feb 26

River Forecast Center Manager James Everett on the @weatherchannel discussing how we're managing the Tennessee River to reduce downstream impacts all across the Valley after a record-breaking month of rainfall.



TVA SCRAMBLES TO CONTROL FLOODWATERS

Tennessee Valley Authority @TVAnews · Mar 1

Management of the Tenn. River system using our integrated system of 49 dams across the region averted \$1.6 billion in flood damages. After the wettest February and fourth wettest month on record, we continue to manage high river and lake conditions to minimize flood impacts.



1:03 3,199 views

7 37 127

Show this thread

Tennessee Valley Authority @TVAnews · Feb 27

River Update: We are increasing releases out of tributary dams to recover flood storage in preparation for the next rain event, so you can expect to see above normal river flows below those dams. (1-3)



0:16 4,329 views

4 16 52

Tennessee Valley Authority @TVAnews · Feb 20

Incredible site! Wilson Dam near Florence AL is releasing 2 million gallons per second. Heavy rainfall has resulted in high river conditions along the Tennessee River. We are storing water at tributary and main stem reservoirs to help reduce downstream flood levels. #ALWX #TNWX



1:21 12.6K views

9 134 276



Tennessee Valley Authority @TVAnews · Jun 12

During scheduled maintenance work, we snapped some great pictures of the units at Raccoon Mountain. Each unit weighs about 900 tons and the rotating shaft operates at 300 RPM. Together the four units generate more than 1,600 megawatts– enough to power nearly 1 million homes!



1 5 24



Tennessee Valley Authority @TVAnews

Following

A few local rumors are going around about Pickwick Lake levels and the ongoing seismic upgrade project at the dam. We have no plans to lower and will operate Pickwick according to its operating guide. The construction project is also proceeding according to plan with no issues.

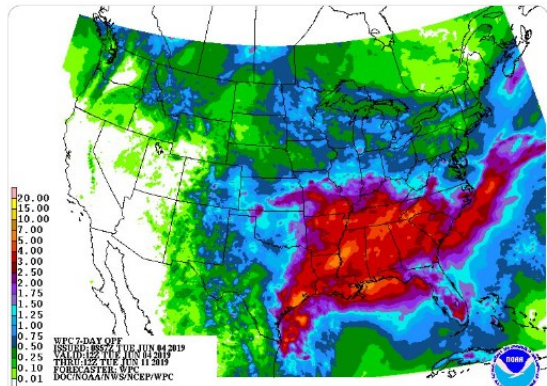


7:15 AM - 14 Jun 2019



Tennessee Valley Authority @TVAnews · Jun 4

To prepare for potentially heavy rainfall later this week, we are increasing releases at our mainstem dams. Lake levels along the Tennessee River are expected to decrease but will remain within normal operating range. Check back here for more updates.



Summary

Reservoir Operating Policy Key Features

- Established a **balance** of operating objectives
- Responsive to **values** expressed by the public
- Consistent with the operating priorities established by the TVA Act
- Guides system-wide decisions about how much water is stored in specific reservoirs, how the water is released, and the timing of those releases
- Composed of **guidelines** that describe how the reservoirs should be operated given the rainfall and runoff, and the operating objectives.
- Provides **flexibility** to be effective over the wide range of rainfall and runoff patterns
- Allows for temporary deviations from normal operating guidelines to meet critical power system situations, to meet other reservoir system needs, or due to floods or droughts, etc.
- Established pool level parameters for daily operations

Reservoir Operating Policy – What's Next

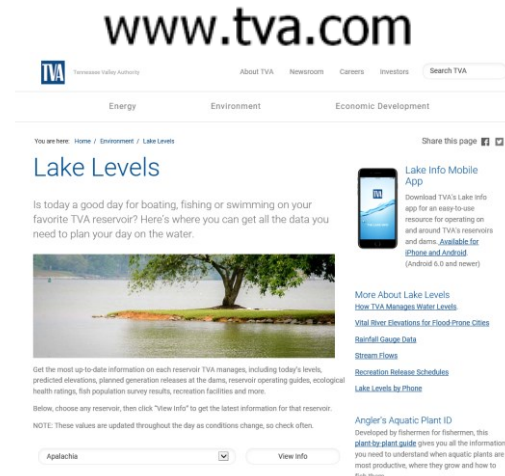
Potential Future Challenges

- Significant value (\$) change in value streams
- Climate change or significant weather extremes impact system resilience (flood, drought, water supply)
- Environmental factors including threatened and endangered (T&E) species or new legislation
- Power system demand changes and grid of the future
- A significant interbasin transfer request
- Major Dam Safety event

Summary

- TVA continues to fulfill our River Management mission – dating back to the TVA Act
- Operations are driven by rainfall and runoff as guided by Reservoir Operations Policy – and the Policy has served the Valley well under hydrologic variability
- Integrated operation allows TVA to balance numerous river system benefits
- The Council's feedback is integral towards advancing TVA's River Management Mission
- More information available:

TVA Lake Info App



Questions?

James Everett

September 20, 2022



BREAK

Meeting will resume at 2:00 pm ET

Advice Questions

Advice Questions

- Does the current implementation of the TVA River Operations Policy balance the needs of the Valley and provide quality, equity, and benefits for users?
- Are there any additional objectives that should be prioritized?
- Are there any other recommendations for implementation of the policy?

Summary

**Meeting begins
at 8:30 am ET
tomorrow**

Welcome!

The Meeting will
begin at
8:30 AM Eastern



Regional Resource Stewardship Council

September 21, 2022

1st Meeting – Term 12

Welcome

Agenda

RRSC Meeting – Day 2 September 21, 2022 Knoxville, TN

All times are ET

| | |
|----------|---|
| 8:30 am | Welcome Day 1 Review |
| 9:00 | Public Listening Session |
| 10:00 | Break |
| 10:15 | Finalize Advice Statement |
| 11:15 | River Management Update |
| 11:45 | Natural Resources Update |
| 12:15 pm | Summary Adjourn RRSC Meeting |

Day 1 Review

Public Comment

**This is a listening
session; responses
are typically not
provided**



Thank You

BREAK

Advice Questions

- Does the current implementation of the TVA River Operations Policy balance the needs of the Valley and provide quality, equity, and benefits for users?
- Are there any additional objectives that should be prioritized?
- Are there any other recommendations for implementation of the policy?

Finalize Advice Statement

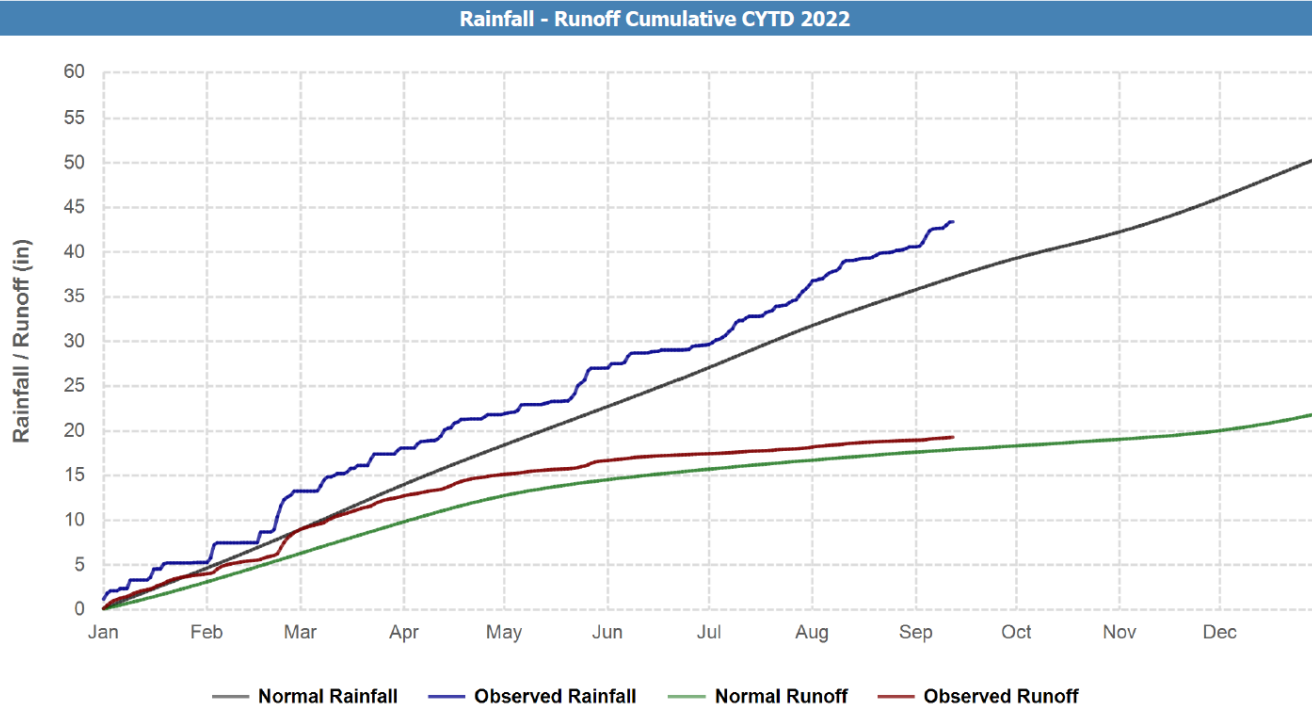
River Management Update

Tom Barnett

September 21, 2022

2022 Rainfall and Runoff

- 117% of normal rainfall and 108% of normal runoff through September 12, 2022



Flood Control

- Managed runoff from heavy rainfall in February by storing water in tributaries to reduce flood levels across the Valley. Reduced the Chattanooga flood crest by over 13 feet and averted \$2.2 million in damages.
- Flood damages averted approaching \$10 billion since TVA inception and averages over \$300 million annually
- Flood Risk
 - Section 26a Permits & National Environmental Policy Act Review
 - Compliance with TVA's Flood and Power Storage Loss Guidelines
 - Compliance with Executive Order 11988
 - Analysis of Executive Order 13690
- Hydrology and Hydraulics
 - Climate Change Study
 - Dam Safety Support
 - Downstream Consequences Analysis (DCA)
 - Semi-Quantitative Risk Analysis (SQRA)
 - Probabilistic Flood Hazard Analysis (PFHA)
 - Nuclear Support



Navigation - Motor Vessel Sideview

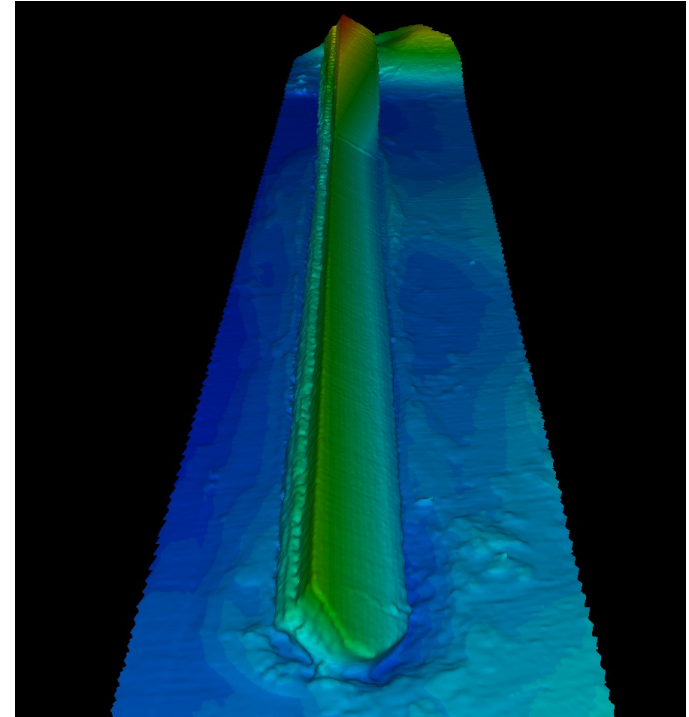
- Makes 2 trips each year up and down the Tennessee River maintaining the secondary channel navigation aids for public safety
- Maintains approximately 2,500 navigation aids
- Operates safely – crew of 4 with a record of zero safety incidents



The Motor Vessel Sideview and Buoy-Tending Barge

Navigation - Wilson Lock Guard Wall

- Exploring temporary solutions based on the USACE Engineer Research and Development Center (ERDC) 2-D model analysis using a system of barges, including the potential for salvaging the existing wall and providing a helper boat to support lock operations
- Exploring permanent options based on the USACE new Kentucky Lock guard wall design, including a cost estimate based on that design
- Communicating with the navigation industry and congressional stakeholders on existing lock restriction impacts and the path forward



Navigation - New Kentucky Lock and Chickamauga Replacement Lock

Kentucky Lock

- Approximately 39% complete
- Total cost estimate is \$1.5 billion
- Total expended: \$607 million
- Completion date: September 2030



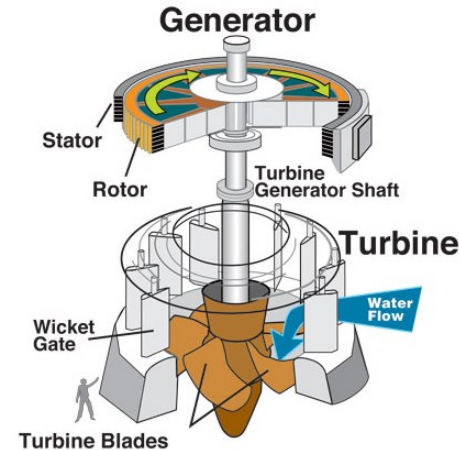
Chickamauga Lock

- Approximately 48% complete
- Total cost estimate is \$756 million
- Total expended: \$360 million
- Completion date: under review

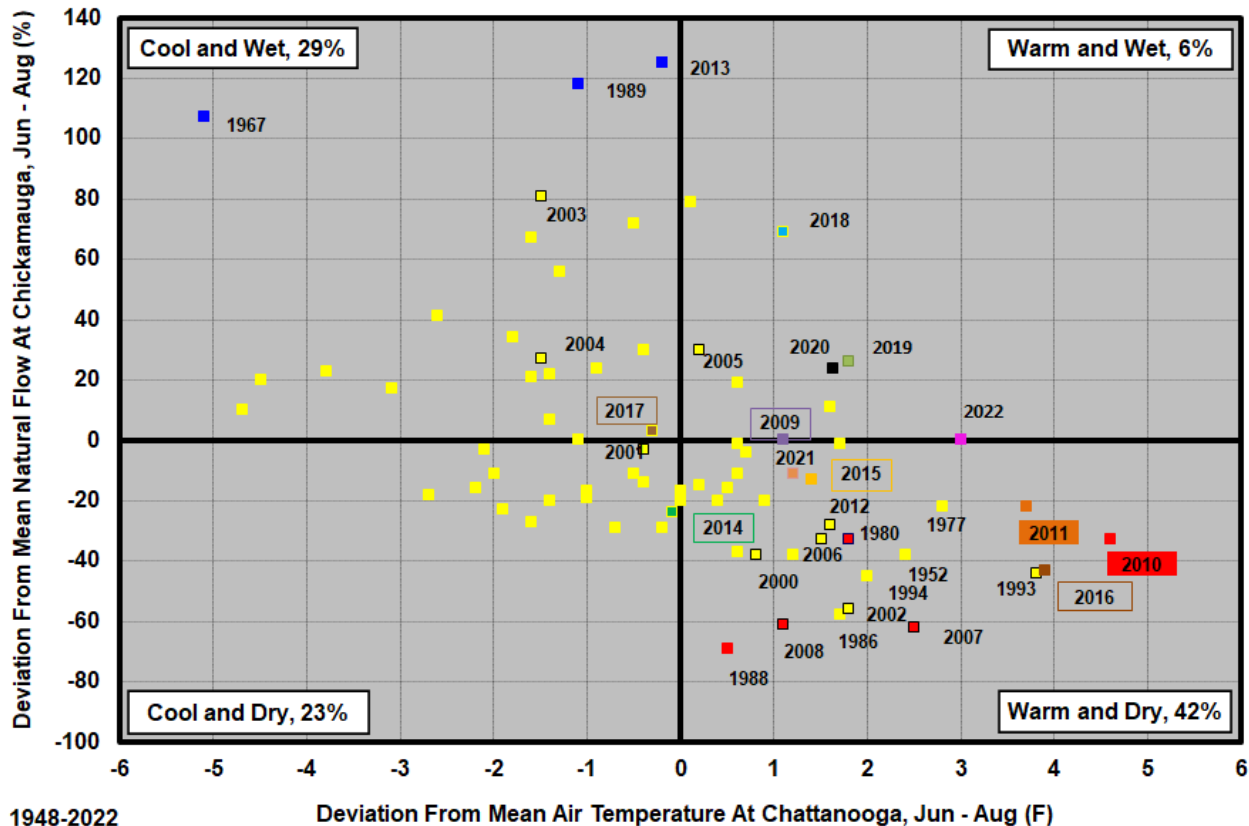


Power Generation

- 3,538 MW Conventional Generating Capacity (109 Units)
- 1,653 MW Pumped-storage Capacity (4 units)
- Peaking, rapid dispatch and flexibility
- Percent of Normal Hydro Generation (MWh):
 - CY18 – 118%
 - CY19 – 115%
 - CY20 – 133%
 - CY21 – 115%
 - CY22 – 107%
- Used to displace more expensive fuels – on track to produce about \$800 million in hydro value this fiscal year

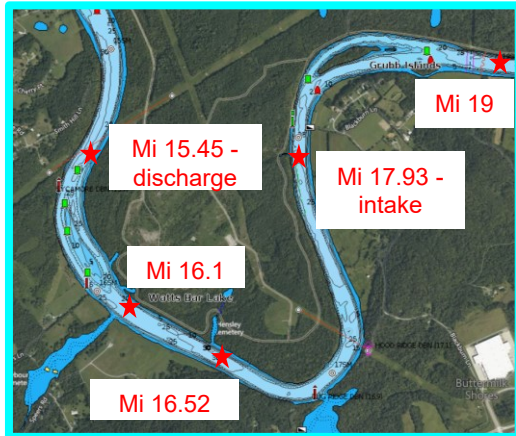


Water Quality: Hydrothermal – Hot Summer!



Hydrothermal - Clinch River Nuclear Site Water Temperature Study

- Hydrothermal & Instrumentation Engineering installed five water temperature monitor strings on tire floats around the Clinch River Nuclear Site for a year-long water temperature study to determine base, pre-plant temperature ranges and pre-emptively identify issues, to facilitate thermal compliance of the future nuclear units on the site.

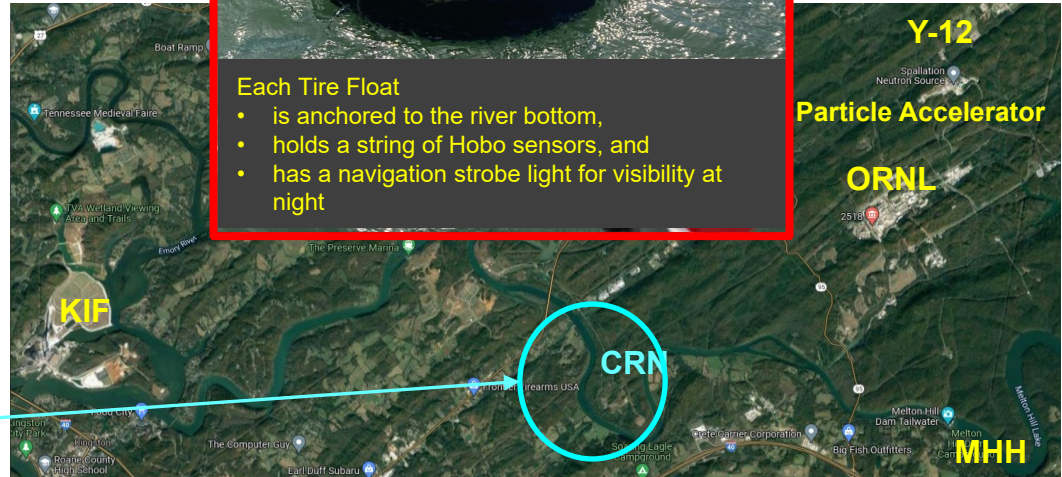


A simple "Tire Float" facilitates data collection at each starred location



Each Tire Float

- is anchored to the river bottom,
- holds a string of Hobo sensors, and
- has a navigation strobe light for visibility at night



Clinch River Nuclear Site (CRN) & Surrounding Landmarks

Hydrothermal - Echosounder at Guntersville Dam

Installed an echosounder at Guntersville Dam to help detect moving underwater masses of aquatic vegetation



Hydrothermal - Floats on Wheeler Reservoir

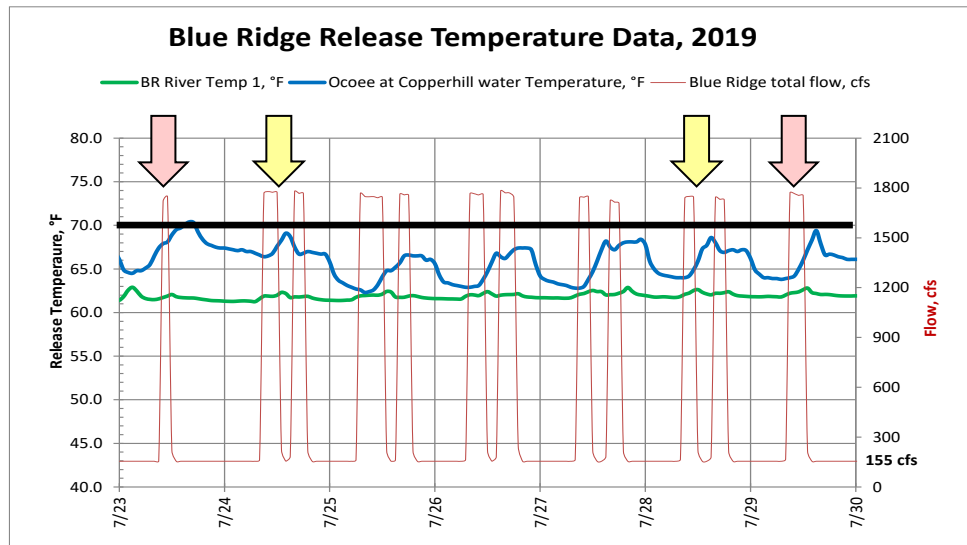
Installed 3 water quality and wave-monitoring floats in Wheeler Reservoir to gather information on reservoir conditions that may impact aquatic vegetation growth or movement



Hydrothermal - Trout Fishery Protection

TVA alters dam releases at Blue Ridge and Apalachia Dams to decrease water temperatures for trout health

- Impacts of different dam release patterns were first evaluated with a 2-D river model
- When water temperatures downstream of the dams reach 70°F, an extra 1-2 hours of morning dam releases are scheduled to help decrease the 5PM peak water temperature in trout fishery and habitat areas
- Data shown are for Blue Ridge Dam and the Copperhill trout fishery, 14 miles downstream



- Only an afternoon dam release block = warmer PM water temps downstream.
- AM and PM dam release = cooler PM water temps, better trout health

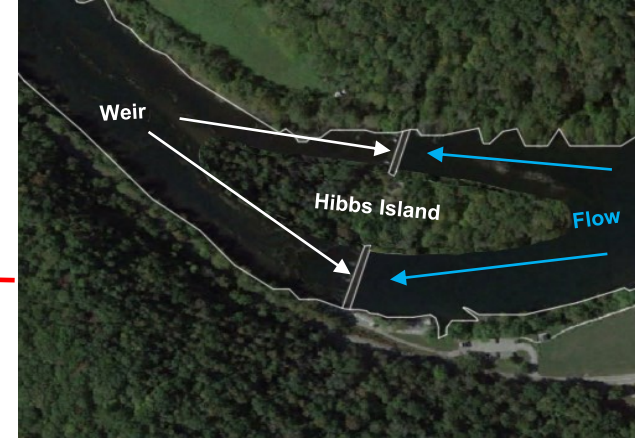
Water >70°F is bad for the trout

Reservoir Release Improvements - Rehabilitating Hibbs Island

Throughout the years, high flow releases from Norris Dam (such as spilling) have resulted in high river currents that caused part of the about 10.6-acre island to erode and deteriorate.



Weir Function: Ensuring a constant minimum flow during non-power generation from Norris Dam



Hibbs Rehab Project Objectives

- Decrease erosion over island, increase useful life of weirs
 - Help to guarantee minimum flow through weirs
 - Sustain aquatic life and fisheries below the weir
 - Public attraction & recreation
- Install a berm across the center of the island between the existing concrete weir abutments
- Eliminates flow over the island to help prevent erosion
- Implementation is scheduled to begin October 2022



Generation from TVA Norris Dam



Spilling from TVA Norris Dam, 2019

Water Supply

- Reviewed Section 26a permits for water intakes in the Tennessee Valley
- Published “Water Use in the Tennessee Valley for 2020 and Projected Use in 2045” in Summer 2022
- Performed Drought Analysis and Impact Studies
 - TVA’s Drought Management Plan
 - Dendrochronology
 - Normandy/Duck River Study
- Closely monitored abnormally dry conditions during spring in the eastern Valley and prepared custom, reservoir-specific messaging to articulate drier than normal conditions and build awareness around the lake levels heading into the summer months
- Filled 9 of 10 large tributary reservoirs by June 1, despite dry conditions



Recreation

- Partnered with U.S. Forest Service and Tennessee State Parks to mitigate impacts from the Ocoee Whitewater Center fire that destroyed the visitor facility and building and impacted TVA's water alert system
- Worked with Dam Safety during the Boone Dam remediation project to hit reservoir refill targets as the project wrapped up through the spring
- Asian Carp
 - Issued the Programmatic Environmental Assessment with a Finding of No Significant Impact (FONSI) - Kentucky and Wilson are the top two candidates for a barrier system
 - Continued monitoring for Asian Carp in the Tennessee River System - the leading edge remains at Pickwick Dam, but some carp have been found in Gunter'sville by TVA and Alabama Department of Wildlife and Fisheries
 - The U.S. Army Corps of Engineers (USACE) has received appropriations to begin planning barrier installation on the Tennessee and Cumberland Rivers
 - TVA and the USACE are developing a Memorandum of Agreement per the Water Resources Development Act (WRDA) 2020 legislation



Outreach

- Conducted numerous public and stakeholder briefings throughout the year including virtual and in-person River Forecast Center tours
- Continued strong presence and engagement on TVA's social media platforms
- Contributed to TVA's Environmental, Social, and Governance / Sustainability Report and Biodiversity Policy
- Completed website and mobile app enhancements



Questions?

Tom Barnett

September 21, 2022





TVA Natural Resources

RRSC Presentation

Sept. 21, 2022

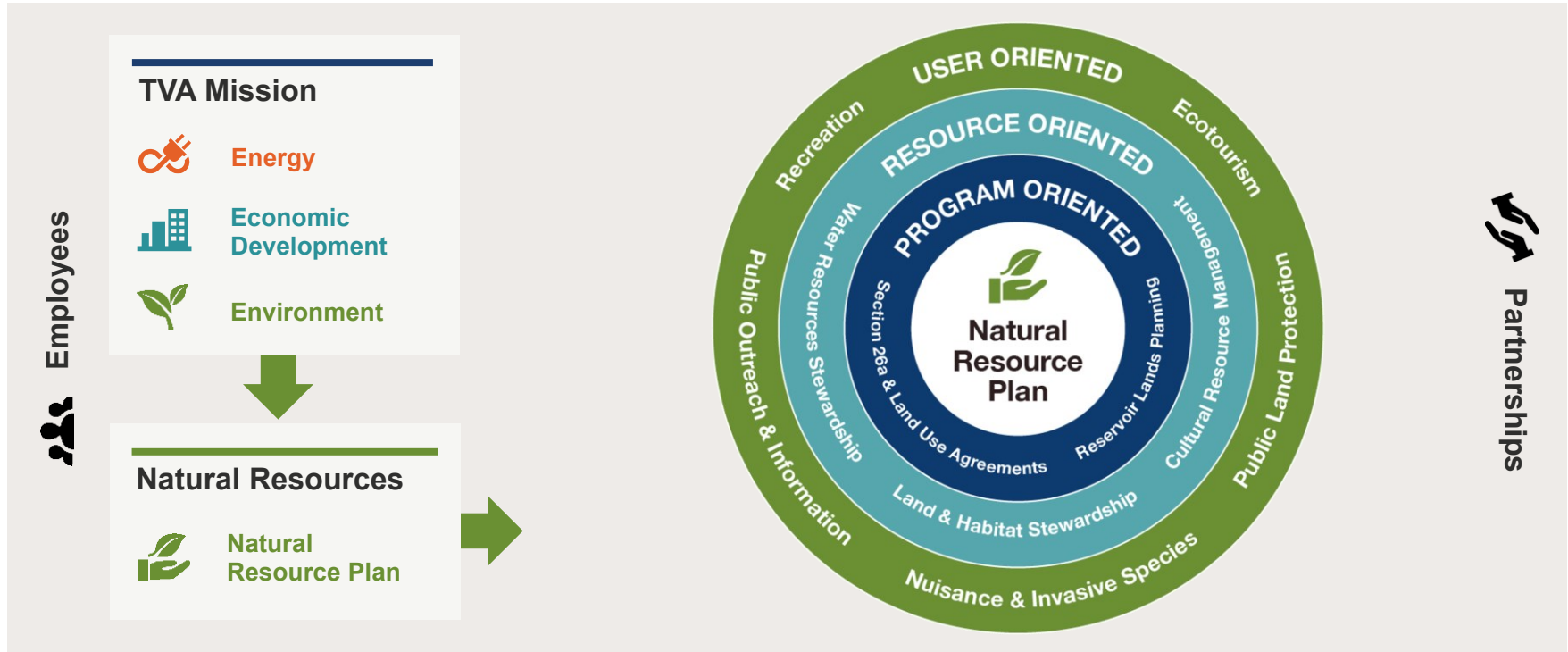


TVA Natural Resources

RRSC Presentation

September 2022

TVA Natural Resources



Natural Resource Plan

Average percent spend by driver:

| Driver | Average |
|-------------------|---------|
| User-Oriented | 70% |
| Resource-Oriented | 28% |
| Program-Oriented | 2% |



- 10 focus areas, 35 objectives, and 48 programs in the NRP – Spread resources across each of these strategically.
- Strategic implementation is executed through a year-round business planning process that prioritizes and aligns our work allowing us to remain flexible with a three-year list of projects.
- This process aligns the NRP and five-year action plans with our annual business planning.
 - Reports of past years' work and plans for future years' projects can be found at our website: www.tva.com/nrp.

Natural Resource Plan

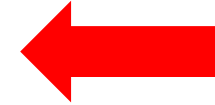
- Two years of implementation after 2020 NRP update.
- Approximately **250** projects completed annually.
- Take advantage of CI opportunities as we implement and track our work.
 - What we track
 - Why we track
 - How we report
 - Where we report



Continued Media Performance Improvements

Traditional Media: Natural Resources content is consistently positive, raising overall TVA media tone and engagement with stakeholders.

- FY22 YTD: Natural Resources content is 100% positive/neutral.
- FY21: Natural Resources content was 97% positive/neutral.



Continued Media Performance Improvements



Social Media:

- Natural Resources has had over 900K 'impressions' (number of people who saw social media posts) since the start of FY22.
- Engagement rate is well above industry average (1.65% vs. 0.9%).



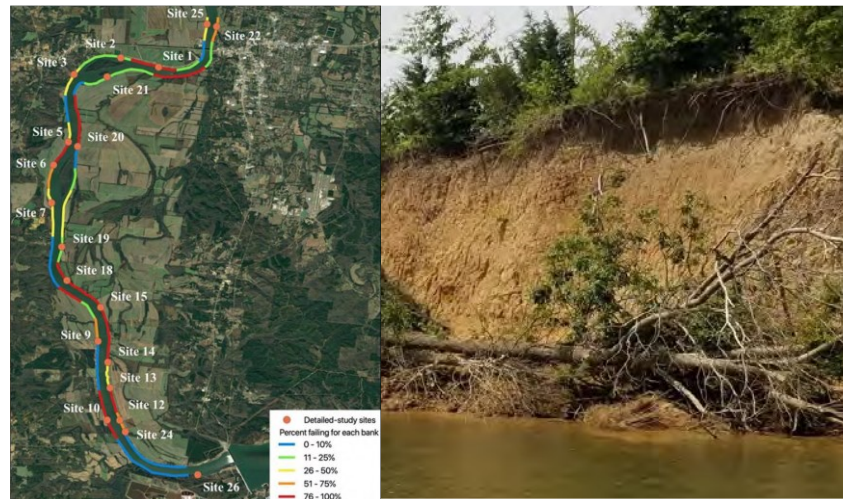
Water Resources Stewardship

TVA is partnering with the West Tennessee River Basin Authority and the Tennessee Valley Farmers to identify, prioritize, and leverage funding to stabilize eroding shoreline on the Tennessee River from Pickwick Dam to Savannah, TN.

Data Collection



Eroding Shoreline



Water Resources Stewardship

Aquatic Health and Monitoring



© JON MICHAEL MOLLISH

- Assessed stream health in over 100 of the 500 sites in the Valley.
- Assessed over 20 sentinel monitoring sites in support of tracking impacts from climate change and supporting TVA's Climate Change Adaptation Strategy.
- TVA's Natural Resources and Aquatic Monitoring identified viable populations of the Snail Darter. We supported efforts leading to its delisting from the Endangered Species list.

Cultural Resource Management



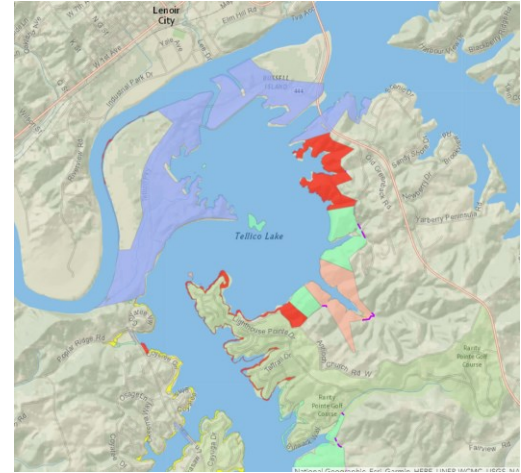
TVA is working with federally recognized Native American tribes to propagate and harvest native plants and educate the public about them. TVA plans to plant and restore river cane on land around Tellico Reservoir and propagate native plants at the Cherokee Removal Park near Blythe Ferry.

Reservoir Lands Planning



The Tellico Reservoir Land Management Plan and the associated Environmental Assessment have been finalized and approved after a multi-year effort by TVA staff incorporating two public input opportunities.

The final documents and interactive maps are available for public viewing on the TVA website and interested parties have been notified of their availability.



Public Land Protection, Recreation



- Tons of old tires and trash have been removed from vital waterways; trees have been planted along streams; hundreds of stream access sites have been assessed.
- Supported 78 clean-ups with approximately 3,600 volunteers and collected about 300,000 pounds of trash thus far for FY22.
- Added 6.7 miles of new trails to the 180+ mile TVA trail system.

Public Land Protection

Resolving Violations and Encroachments on TVA Public Lands



- Working swiftly to respond to unauthorized dock facilities or vegetation/tree removal on TVA public lands and working with the landowner to resolve the encroachments.
- Often landowners are assessed fees for bat habitat/value of the wood and replanting trees may also be required.

Public Land Protection

Assessing and Improving TVA Public Lands



- Natural Resources performed Land Condition Assessments on 10,000 acres of TVA public lands; inspected over 800 assets (signs, roads, trails, kiosks, gates, etc.); completed over 600 tasks to improve public lands; re-marked over 84 miles of boundary.

Land and Habitat Stewardship

Osprey Research Project

Osprey tagging and banding will help TVA evaluate how to protect our transmission assets as well as the birds.

Installation of alternative nesting platforms is proving to be a good solution.



Land and Habitat Stewardship

Tree Improvement Program – Norris Dam



- Partnership with the UTK Tree Improvement Project for selection of superior species of trees to be planted for future seed production.
- This is a new phase of the historic TVA tree seed orchard at Norris Dam that began in the early 1940s.

Land and Habitat Stewardship

Pollinator Conservation

- Improved pollinator habitat on approx. 220 acres.
- Cross-organizational collaboration (Transmission, Facilities, Biological Compliance).
- Examples - Douglas Dam Visitor Overlook Area; Bristol Tennessee Essential Services ROW at South Holston



Nuisance and Invasive Species Management



- Comprehensive Land Conditions Assessments have documented that nonnative invasive exotic plants and animals are degrading approximately 15 percent of 157,000 acres assessed.

Public Outreach and Information



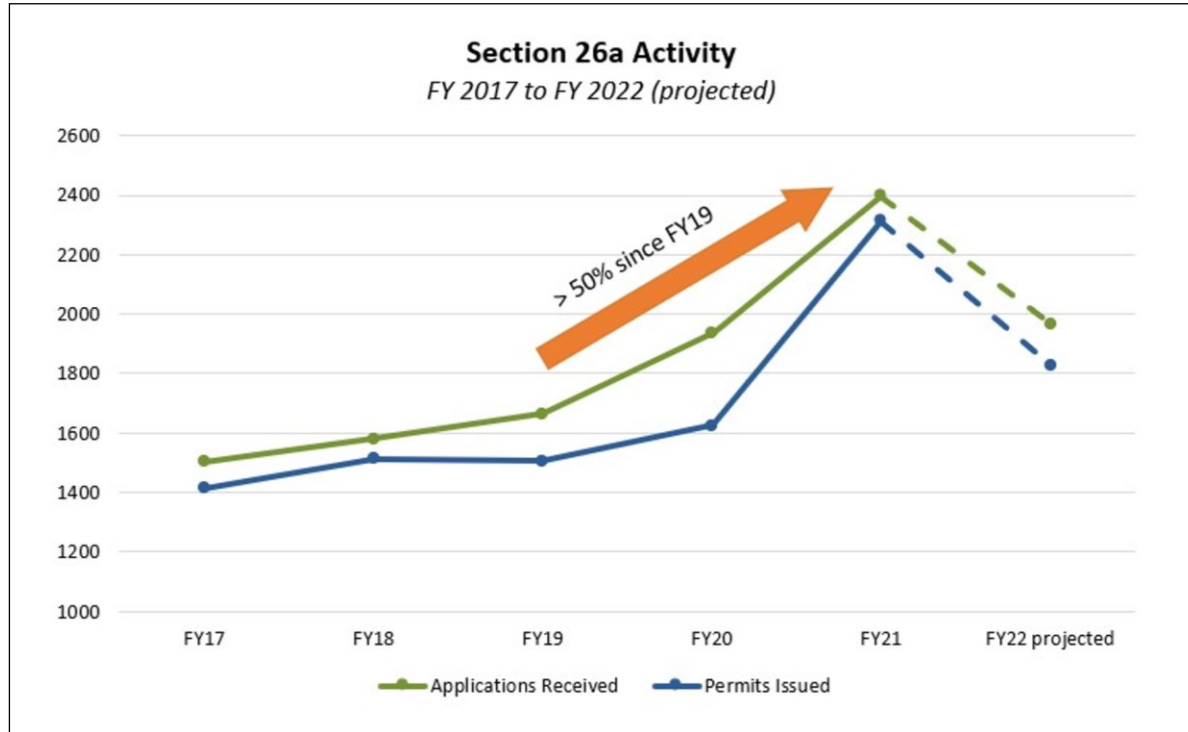
- After two years, in-person events came back. Natural Resources supported numerous events, interacted with thousands of people, and displayed new outreach banners and materials.
- Expanded the Outreach Calendar and formed new connections with Regional Relations to coordinate event support.

Public Outreach and Information



- Natural Resources attended multiple events (such as Bassmasters and Major League Fishing Tournaments and Hydrofest) where staff showcased the mobile aquarium and interacted with thousands of public stakeholders highlighting fish diversity and stewardship efforts in the Tennessee Valley.

Section 26a Permitting and Land Use Agreements



Engaging with Employees and Stakeholders



- Navigator Program – Staff-led program that was launched in FY22 to offer new opportunities for mentor/mentees, team-building, and job shadowing.
- Public Land Information Center – Calls and requests for information grew again, averaging as many as 300 calls a week; over 9,000 requests so far this year.

Making the Tennessee Valley a Better Place to Live, Work, and Play



Questions?

Rebecca Hayden

September 21, 2022



Summary

Next RRSC Meeting

November 2 - 3 Nashville

Joint Meeting with Regional Energy Resource Council (RERC)

Thank You



TENNESSEE
VALLEY
AUTHORITY