



# Regional Resource Stewardship Council

August 21-22, 2023



# Welcome!

The RRSC Meeting will  
begin at  
12:00 pm Central

---

# Welcome

---

# **Welcome Jeannette Mills**

**TVA EVP & Chief External Relations Officer**



# RRSC Live and Virtual Meeting

- **We welcome members of the public attending in person and virtually. Those attending virtually are in view and listen only mode.** There will be a Public Listening Session at this meeting. Written comments are always welcomed ([tva.com/rrsc](http://tva.com/rrsc)).
- **Any RRSC Members who are attending virtually are able to mute and unmute their own line.** Council Members who are attending virtually may use the raise hand function to be recognized for questions or comments.
- **RERC Members attending in person,** please turn on your light when you want to comment or ask a question 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 to the room. Exit the building via the front doors. Turn right and gather outside.
- **In case of severe weather**, you will be guided to an interior room.





---

# Introductions

Name

Position, Organization, Location

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 Conservancy

**David Salyers**

State of Tennessee

**RaeLynn Butler**

Muscogee (Creek) Nation

**Whitney Lipscomb**

State of Mississippi

**Sen. Clay Schofield**

Alabama Senate, District 9

**Keith Carnahan**

Meriwether Lewis Electric  
Cooperative

**Tom Littlepage\***

ADECA Office of Water Resources

**Danette Scudder**

TN Valley Public Power Association

**Alan Gates**

Pennyrile Electric

**John McConnell**

McConnell Insurance  
Commonwealth of Kentucky

**Bob Sneed**

Retired, Army Corps of Engineers

**Richard Holland**

Packaging Corp of America

**Will Nelson**

Nelson Tractor Co.  
State of Georgia

**Catherine Via**

TN Farm Bureau Federation

**Cline Jones**

Tennessee River Valley Association

**Ron Robertson**

TN Farmer

**Stacey White**

Arab Electric Cooperative, AL

**Kim Klinker**

Klinker Management

**\* Council Chair**

**Randy Wiggins**

Cherokee County, NC



# Agenda

**RRSC Meeting – Day 1**  
**August 21, 2023 Guntersville, AL**  
All times are CT

12:00 pm	<b>Welcome</b> <b>Designated Federal Officer Melanie Farrell; RRSC Chair Tom Littlepage</b> <b>Jeannette Mills, TVA Executive VP and Chief External Relations</b>
12:10	<b>Introductions of Council Members – Jo Anne Lavender, Facilitator</b> <b>Agenda Review</b>
12:30	<b>DFO Briefing – Melanie Farrell, VP, External Strategy &amp; Reg Oversight</b>
12:45	<b>Break</b>
1:00	<b>TVA’s Sustainability Program, Review Pre-Read</b> <b>Rebecca Tolene, VP, Environment and Chief Sustainability Officer</b>
1:20	<b>Sustainability Priorities Assessment Workshop</b>  <b>EPRI and Tiffany Foster, Sr Program Manager, Env &amp; Energy Policy</b> (Break will occur in the middle)
4:15	<b>Break</b>
4:30	<b>Public Listening Session</b>
5:30	<b>Day 1 Closing Remarks</b> <b>Adjourn</b>

# Agenda

## RRSC Meeting – Day 2 August 22, 2023 Guntersville, AL All times are CT

12:30 pm	<b>Welcome –Designated Federal Officer Melanie Farrell RRSC Chair Tom Littlepage</b>
12:35	<b>Day 1 Recap</b> Facilitator, Jo Anne Lavender <b>Day 2 Agenda Review</b>
12:40	<b>Finalize Advice Statement</b>
2:00	Break
2:15	<b>Natural Resources Update</b> – Anthony Summit, Sr. Mgr, Nat Res & Rec Mgt <b>River Management Update</b> – James Everett, GM, River Management
2:45– 4:45	<b>Cultural Compliance Presentations</b>
2:45	<b>Cultural Resources and TVA, Melanie Farrell, VP, External Strategy</b>
2:55	<b>Respecting Tribal Sovereignty and The Importance of Government-to-Government Relationships</b> RaeLynn Butler, Manager, Tribal and Cultural Preservation Department, The Muscogee (Creek) Nation
3:10	<b>TVA’s Tribal Relations Program</b> , Erin Dunsmore, Sr Specialist, Archaeology
3:25	Break



# Agenda

## RRSC Meeting – Day 2 Page 2

August 22, 2023 Guntersville, AL

All times are CT

	<b>Cultural Compliance Presentations (cont.)</b>
3:40	<b>NHPA Preservation Program</b> , Erin Dunsmore, Sr Specialist, Archaeology
3:55	<b>Archaeological Site Monitoring and Protection</b> Erin Dunsmore, Sr Specialist, Archaeology
4:05	<b>ARPA Enforcement</b> , Mike Angst, Archaeologist
4:15	<b>NAGPRA</b> , Meg Cook, Sr Specialist, Archaeology
4:25	<b>Wrap Up</b> , RaeLynn Butler, Manager, Tribal and Cultural Preservation Department, The Muscogee (Creek) Nation
4:40	<b>Wrap Up &amp; Questions</b> , Melanie Ferrall, VP, External Strategy & Reg Oversight
4:55 pm	<b>Next Meetings</b> <b>Adjourn</b>

---

# FAC Meeting Requirements



---

# Federal Advisory Committee Act Meeting Requirements

## Agenda

- Prepared and approved by the DFO, or alternate DFO, in consultation with Council Chair
- Distributed to Council and an outline is published in the Federal Register prior to each meeting
- Topics may be submitted for consideration 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

## Voting

- Any member of the Council may make a motion for a vote
- Quorum is a majority of the seated members of the Council as defined in the bylaws
- 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 the Committee
- Broad range of diverse views and interests

---

# TVA Update

Melanie Farrell, Designated Federal Officer

# Building the Energy System of the Future

AFFORDABLE / RELIABLE / RESILIENT / CLEAN



National Leader in Carbon Reduction



---

# BREAK

---

# Sustainability Update

Rebecca Tolene  
VP Environment and CSO

August 21, 2023

# What is Sustainability?

**Sustainability for TVA means ensuring our ability to provide the people of the Tennessee Valley with affordable and reliable electricity, a healthy environment, and a prosperous economy - without compromising the ability of future generations to do the same.**



# What is TVA doing in Sustainability?

Sustainability informs programs and initiatives across TVA.



## Biodiversity

In our increasingly developed world, biodiversity conservation is critical for sustainable economic growth. TVA has adopted a Biodiversity Policy that builds on the TVA record of environmental stewardship.



## Carbon Reduction

The sustainable energy system of the future will support a diverse portfolio of clean energy sources, advanced technologies and broad electrification in the transportation sector and elsewhere.



## Environmental Justice

TVA is creating more structure around our environmental justice work to address disproportionate health, environmental, economic and climate impacts on disadvantaged communities.



## Community Vitality

TVA was built to serve the people of the Tennessee Valley. Community service is fundamental to TVA's mission, and community vitality is fundamental to a sustainable future.



## Resilience

As we reduce carbon emissions, TVA remains committed to providing energy that is affordable, reliable, and resilient to the impacts of climate change and other threats-- it's what our customers deserve and expect.



## Diversity & Inclusion

At TVA, we are powered by people— and diversity of thought and background will be essential for continuing to live out our mission of service. TVA is focused on ensuring every employee can bring their true self to work.



## Energy Innovations

Whether it's powering EV transformation in the Valley or partnering in cutting-edge research into hydrogen and small modular nuclear reactors, TVA is innovating to build the sustainable energy system of the future.



## Transparency

TVA is foremost a public power company, and we serve the public's interest. Transparency and continuous engagement is necessary to help us understand our stakeholders' priorities and address their concerns.

# Sustainability by the numbers

---

**315,231 total tons**

of carbon avoided through  
TVA EnergyRight® programs

---

**3.35 GWh of energy**

saved through energy efficiency improvements in  
TVA buildings; Top-ranked federal agency in the  
country for energy use intensity reduction  
against a 2003 baseline

---

**449**

total environmental outreach and stewardship  
projects sponsored

---

**99% reduction**

in SO<sub>2</sub> emissions from 1977

---

**97% reduction**

in NO<sub>x</sub> emissions from 1995

---

**\$3 million**

in estimated flood damage averted in the  
Tennessee Valley in 2022

---

**\$10.2 billion+**

projected capital investments attracted to the  
region

---

**26K+**

projected job creation

---

**40K+**

projected job retention

---

**\$3 million**

in grant funding for 13 pilot projects between  
2022 and 2024 through TVA's Connected  
Communities initiative

---

**\$9 million+**

donated in community contributions and disaster  
relief

---

**Top 15**

Best Employers in Tennessee by Forbes  
magazine in 2022 for the fourth consecutive year

# FY 22 Sustainability Report

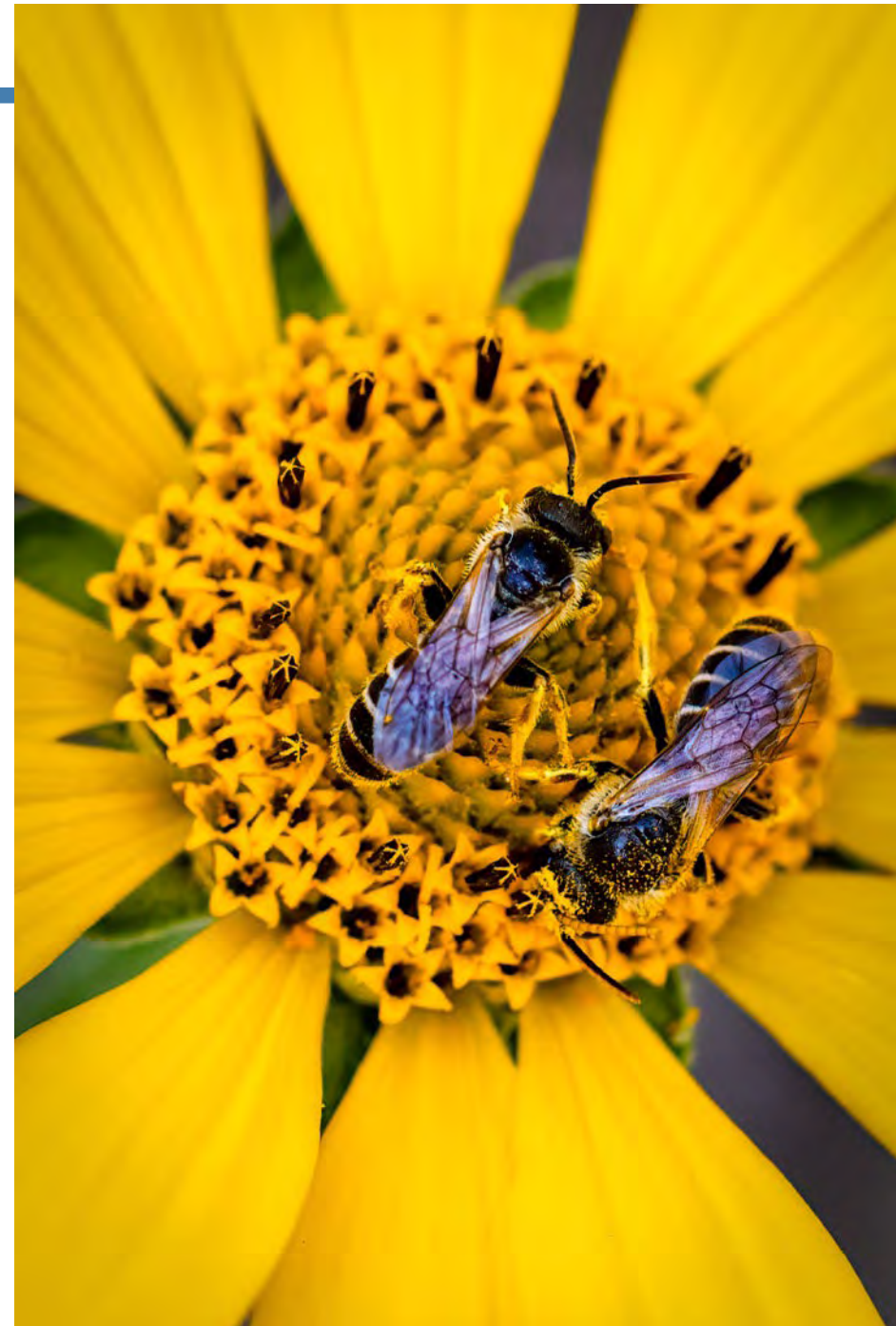
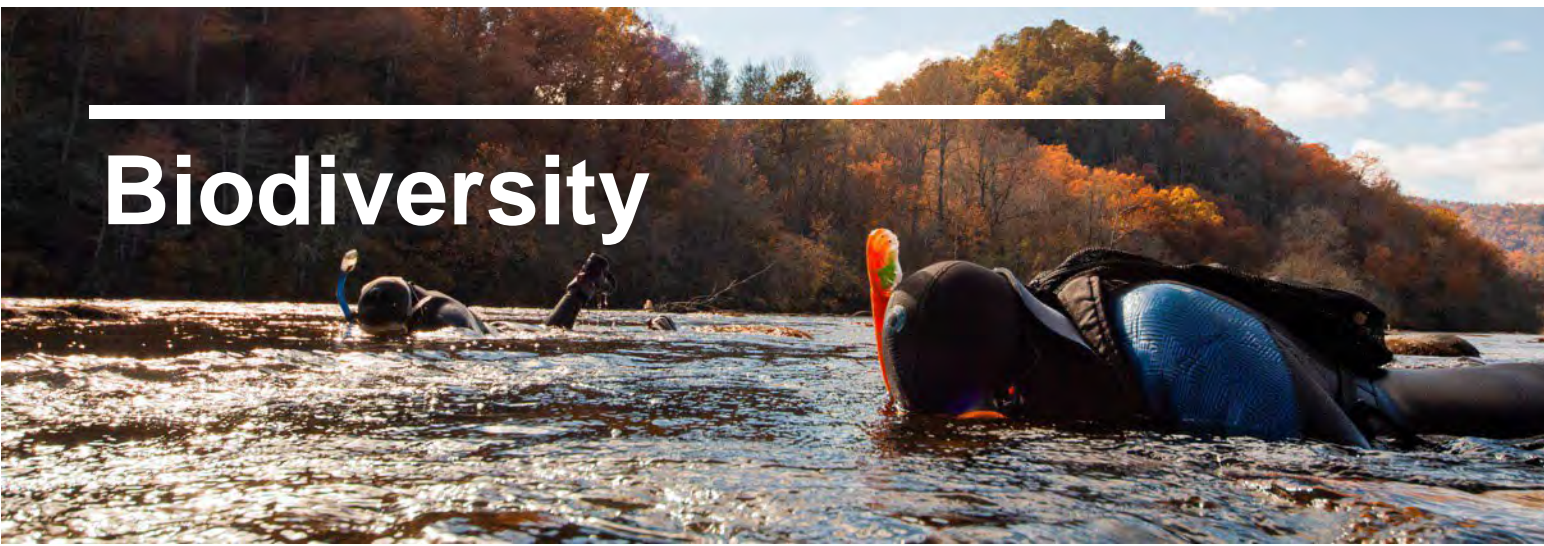
- Delivering Sustainable Solutions... Yesterday. Today. Tomorrow.
- Report content reflects TVA's unique sustainability story
- Aligned with Global Reporting Initiative, Sustainability Accounting Standards Board and UN Sustainable Development goals



View the full Sustainability Report online at:  
[tva.com/sustainability](https://tva.com/sustainability)



# Biodiversity



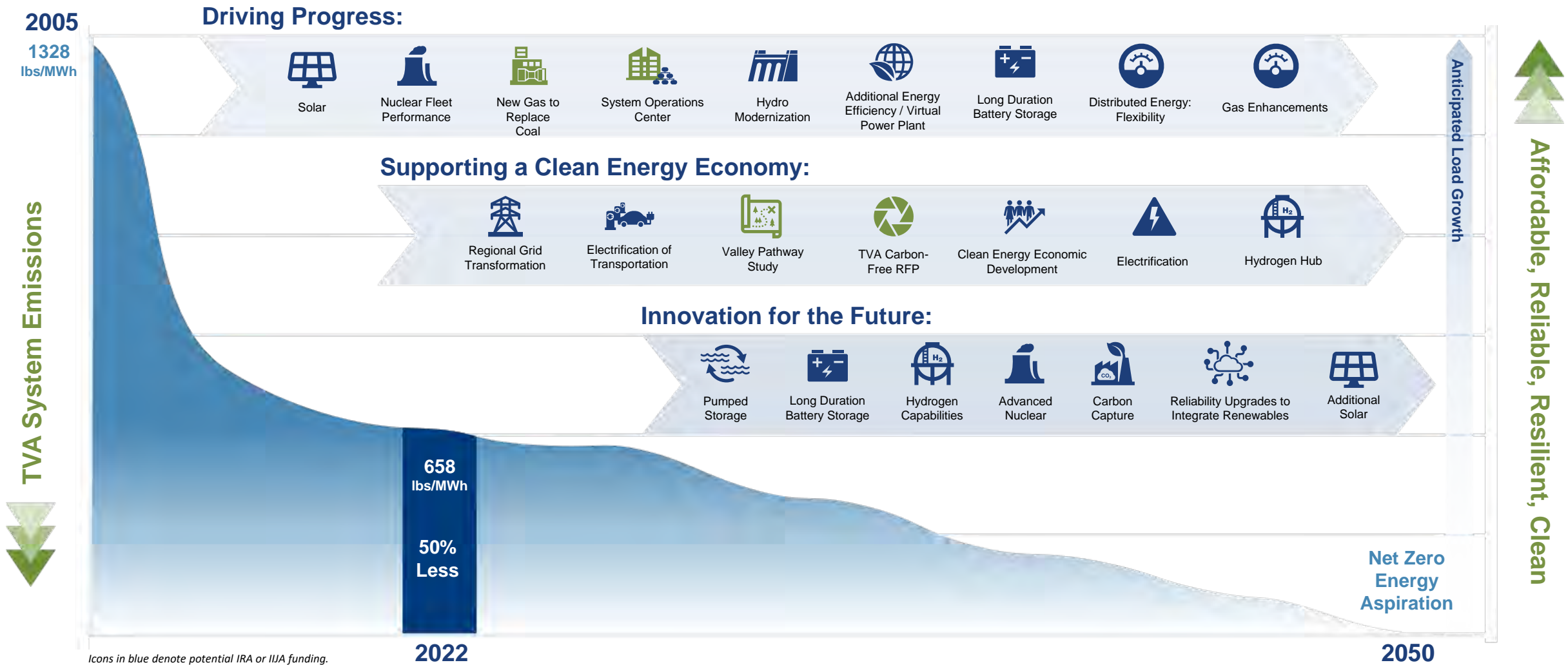


# Pollinators



# Building the Energy System of the Future

AFFORDABLE / RELIABLE / RESILIENT / CLEAN



National Leader in Carbon Reduction



# What is a Pathways Study?

A Pathways Study uses scenario-based analysis to compare several possible visions of the future to help determine the timing, scale, and effects of achieving greenhouse gas targets.

**What paths are most feasible for the Valley to get to net zero by 2050?**



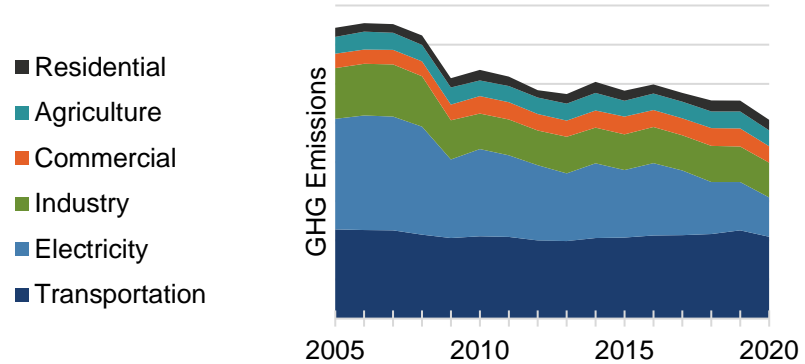
**What impacts will these paths have on the Valley as a whole?**





# Key Components

## Valley Baseline GHG Footprint



## Valley Stakeholders



Geographic & economic sector reps

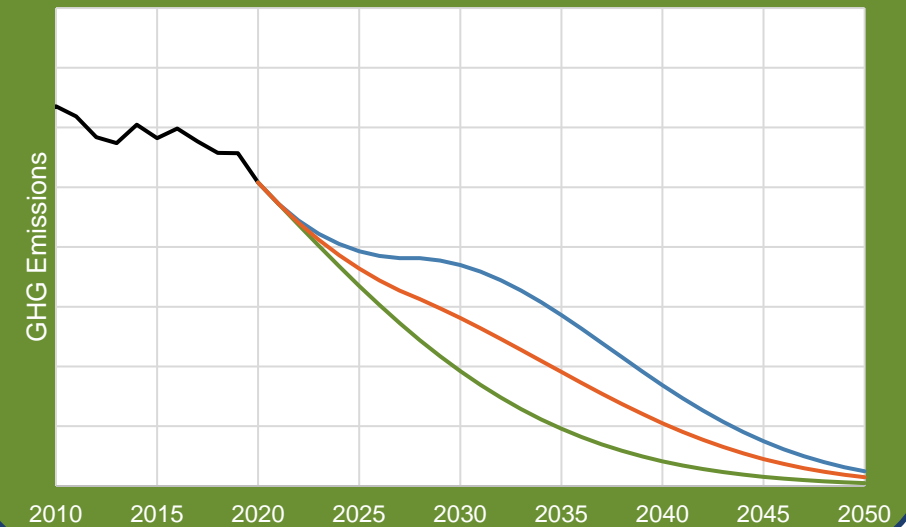


Key issue advocates (EJ, ED, etc)

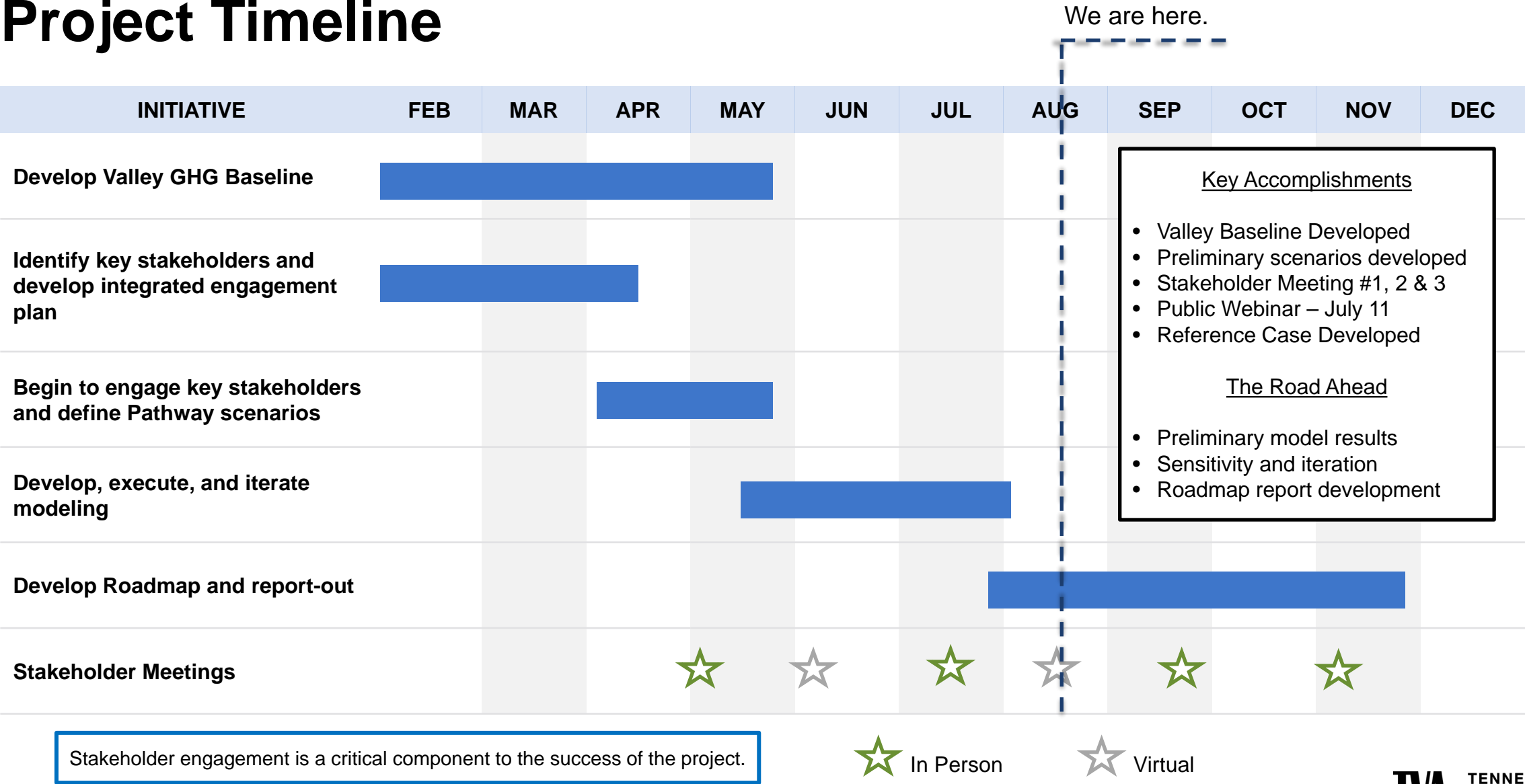


State, municipal, and LPC officials

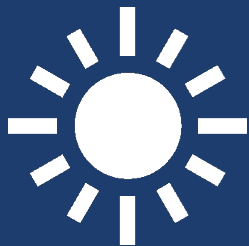
## Pathways to Net Zero



# Project Timeline



# TVA Sustainability Program



The Sustainability Program provides a structure for TVA to engage with stakeholders to determine sustainability priorities; to establish sustainability goals to support the TVA mission; to guide program and project development to further sustainability performance in these focus areas; and to measure and report TVA's sustainability performance.

# Sustainability Focus Areas and Priorities

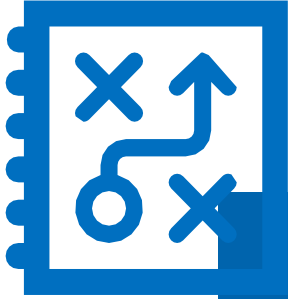
TVA's sustainability work is categorized into four focus areas. The sustainability priorities aligned with each focus area help TVA focus our sustainability efforts.

Economic Impact	Environment	Social	Governance
<ul style="list-style-type: none"><li>▪ Energy Affordability</li><li>▪ Reliability and Resiliency</li><li>▪ Jobs Created and Retained</li><li>▪ Flood and Drought Management</li><li>▪ Energy Innovations</li><li>▪ Renewable Energy</li><li>▪ Investor Relations</li><li>▪ Supplier Partners</li></ul>	<ul style="list-style-type: none"><li>▪ Habitat and Biodiversity Protection</li><li>▪ Climate Change and Resilience</li><li>▪ Air Quality</li><li>▪ Water Quality and Availability</li><li>▪ Waste Management</li><li>▪ Cultural Resource Management</li></ul>	<ul style="list-style-type: none"><li>▪ Environmental Justice</li><li>▪ Health and Safety</li><li>▪ Community Vitality and Engagement</li><li>▪ Reservoir and Stewardship Benefits</li><li>▪ Local Power Company Partnerships</li><li>▪ Diversity and Inclusion</li><li>▪ Labor Relations</li><li>▪ Recruitment, Development and Retention</li><li>▪ Skilled Workforce Availability</li></ul>	<ul style="list-style-type: none"><li>▪ Transparency</li><li>▪ Board and Executive Diversity</li><li>▪ Systemic Risk Management</li><li>▪ Ethics</li><li>▪ Cyber and Physical Security</li><li>▪ Sustainable Financing Framework</li></ul>





# Priority Assessment Results in Action



## Informs Strategy

- Identifies priorities that are most important to your company's long-term value creation
- Provides perspective from internal and external stakeholders



## Focuses Disclosure

- Aligns disclosure efforts with global standards
- Provides structure and organization
- Gives foundation for what's "in" and "out"

---

# Advice Questions:

1. Are there any stewardship priorities where you believe the risks are increasing substantially over the next 5 years?
2. Are there any other inputs or information that you'd like to share with TVA regarding deciding on and ranking our work on these sustainability priorities?

# Sustainability Priorities Feedback Workshop

Regional Resource Stewardship Council

August 21, 2023



[www.epri.com](http://www.epri.com)

© 2023 Electric Power Research Institute, Inc. All rights reserved.



---

# Agenda

## Project Overview

- Norman Shafto, EPRI

## Priorities Discussion

- Brenda Brickhouse, EPRI







EPRI

KEY

ASPECT

S



## Nonprofit

Chartered to serve the public benefit, with guidance from an independent advisory council.



## Thought Leadership

Systematically and imaginatively looking ahead to identify issues, technology gaps, and broader needs that can be addressed by the electricity sector.



## Independent

Objective, scientific research leading to progress in reliability, efficiency, affordability, health, safety, and the environment.



## Scientific and Industry Expertise

Provide expertise in technical disciplines that bring answers and solutions to electricity generation, transmission, distribution, and end use.



## Collaborative Value

Bring together our members and diverse scientific and technical sectors to shape and drive research and development in the electricity sector.

# Industry Sustainability Priorities Research Foundation

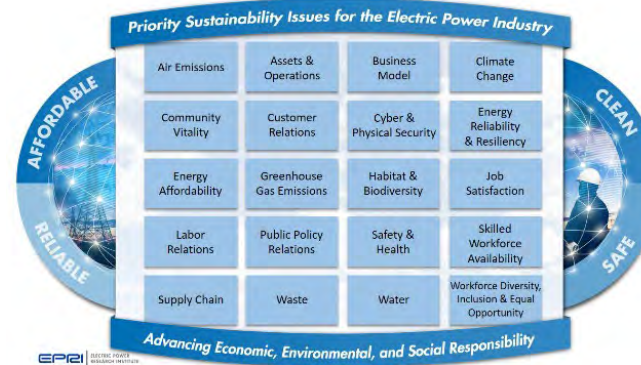
## *Initial 2013 Report*

- “Material Sustainability Issues for the North American Electric Power Industry”
- **15 material sustainability issues**



## *Refreshed 2017 Report*

- “Priority Sustainability Issues for the North American Electric Power Industry”
- **20 sustainability priority issues**



## *Refreshed 2021 Report*

- “Sustainability Priorities for the North American Electric Power Industry”
- **20 sustainability priorities**
- **3 emerging priorities**
- **3 management elements**



**2023 Sustainability Priorities Refresh Currently In Progress**

# Sustainability Priorities Assessment Overview

---







# Workshop Objective and Guidelines

## Objectives: validate and refine priorities

*Is this a sustainability priority for TVA and its stakeholders?*

- Focus on priorities, not strategies
- Provide feedback on how priorities can be refined, expanded, or consolidated
- Think about what you think is important to communicate to your internal and external stakeholders

### Key

-  This is a priority, and does not need any edits
-  This is a priority, but needs edits
-  This is a priority, but is captured under another priority
-  This is not a priority

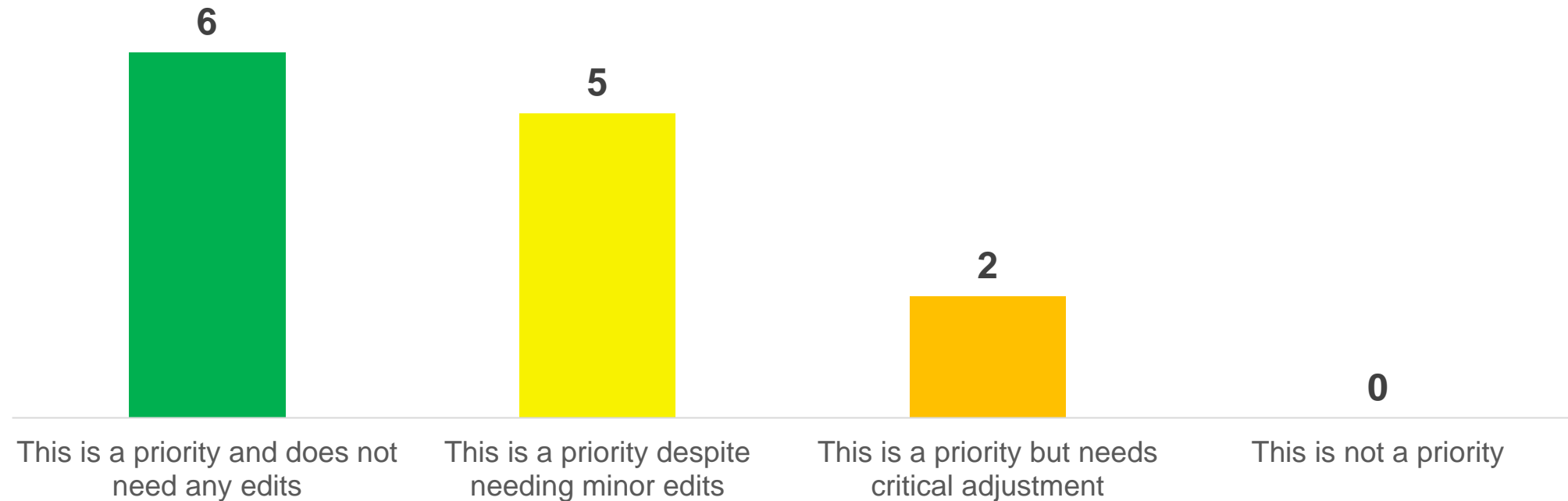
**Feedback from this workshop and stakeholder interviews will inform priority refinement**



---

## Clean Energy

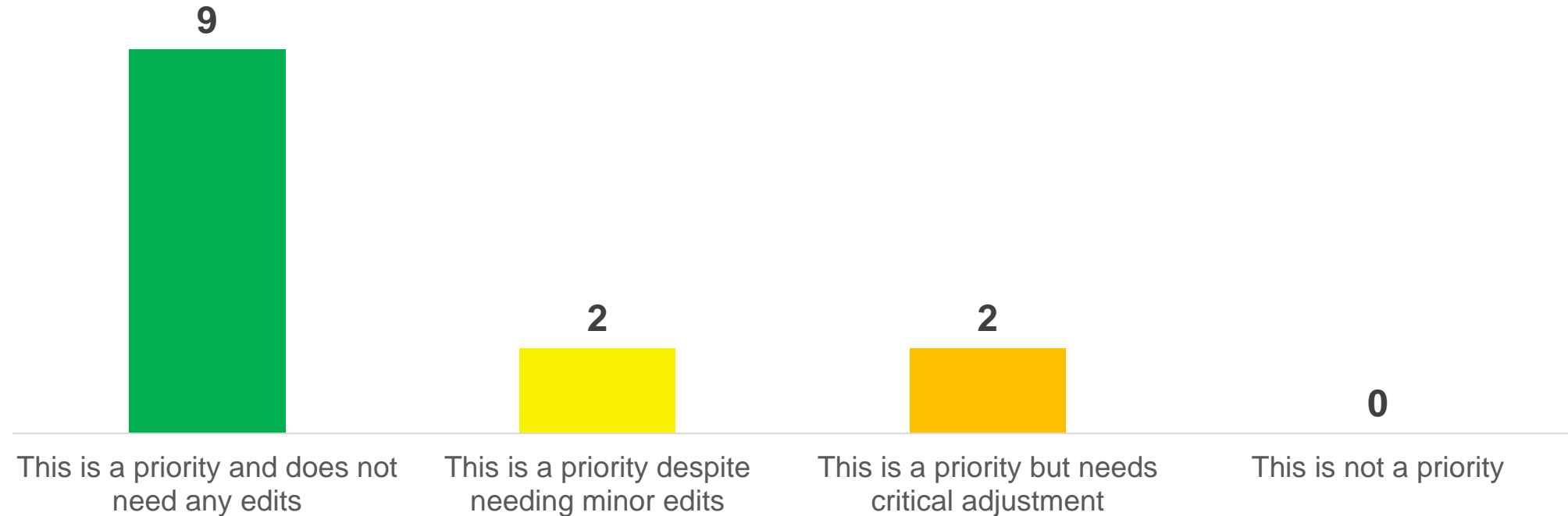
Reduce carbon emissions of company operations and across the economy



---

## Climate Change Adaptation

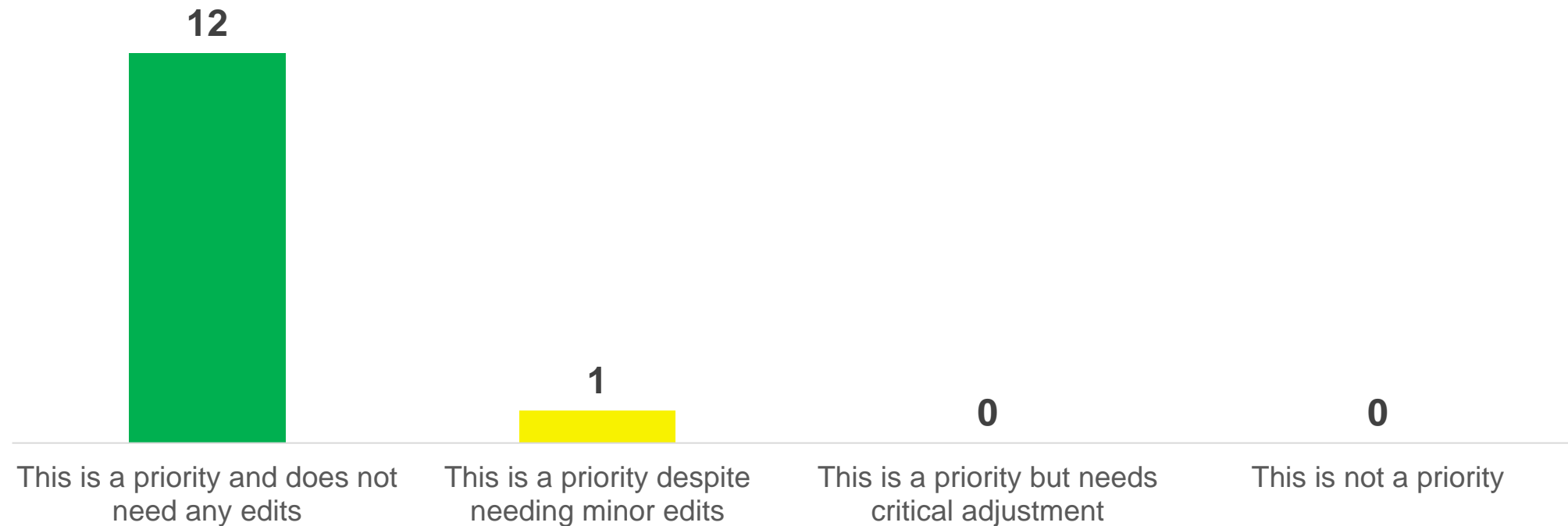
Operational and planning decisions to mitigate and prepare for potential risks related to a changing climate



---

## Energy Reliability and Resilience

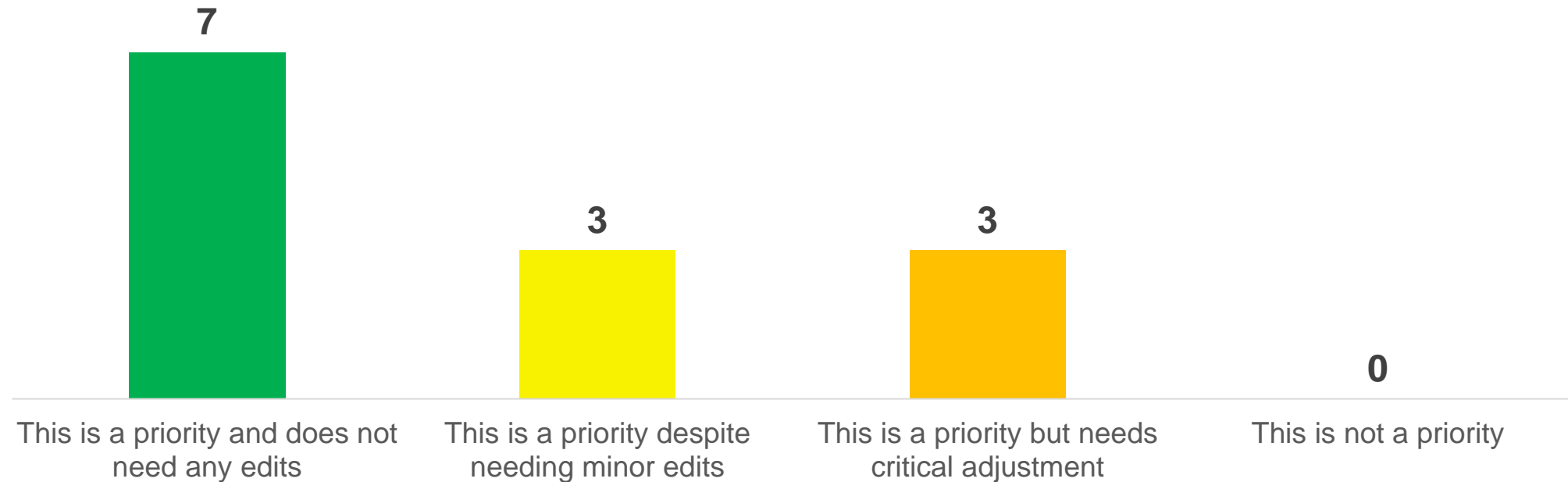
Consistent delivery of energy to customers and rapid recovery from extreme weather and other disruptive events



---

## Community and Stakeholder Engagement

Support of and a just transition of communities served or impacted by company operations, and intentional, meaningful, and transparent interactions and involvement

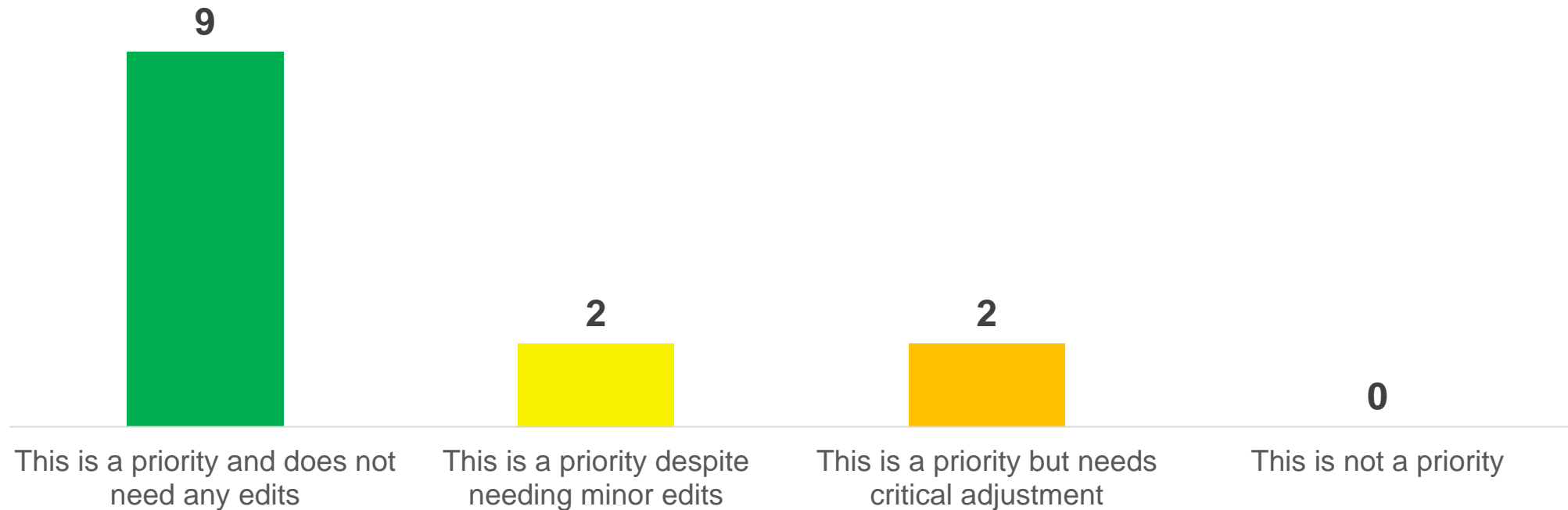




---

## Customer Engagement and Partnerships

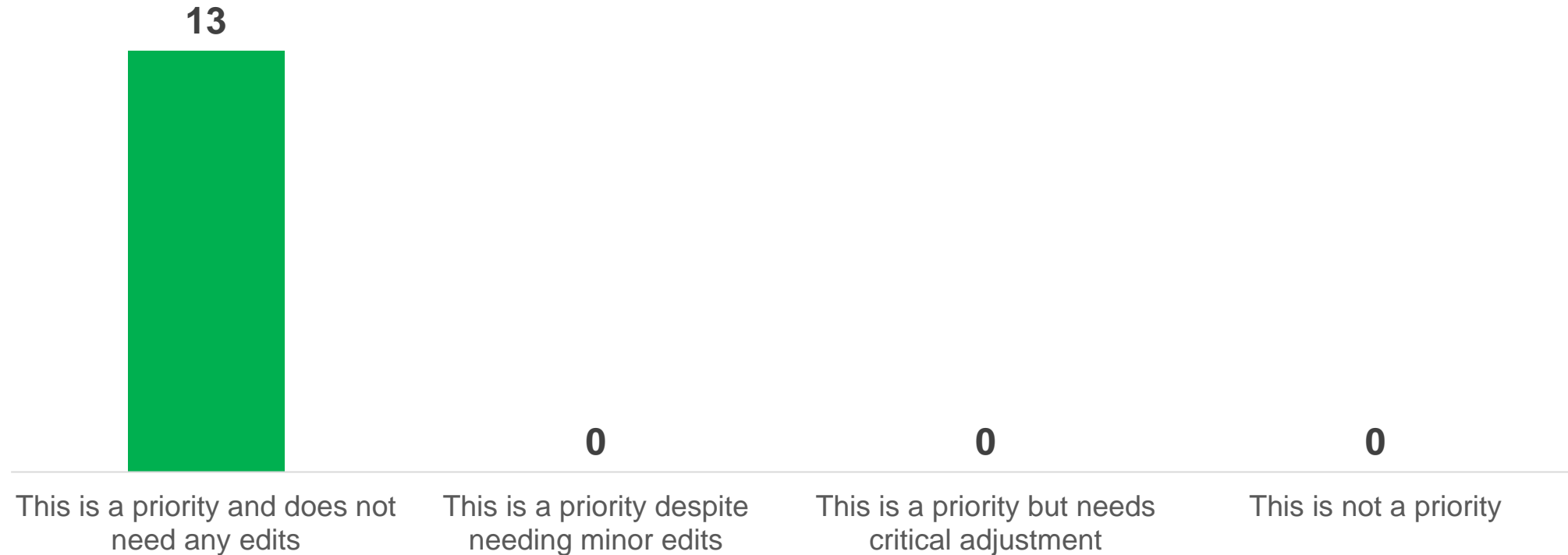
Interaction with customers through evolving services, technologies, communication, education, and community partnerships



---

## Energy Access and Affordability

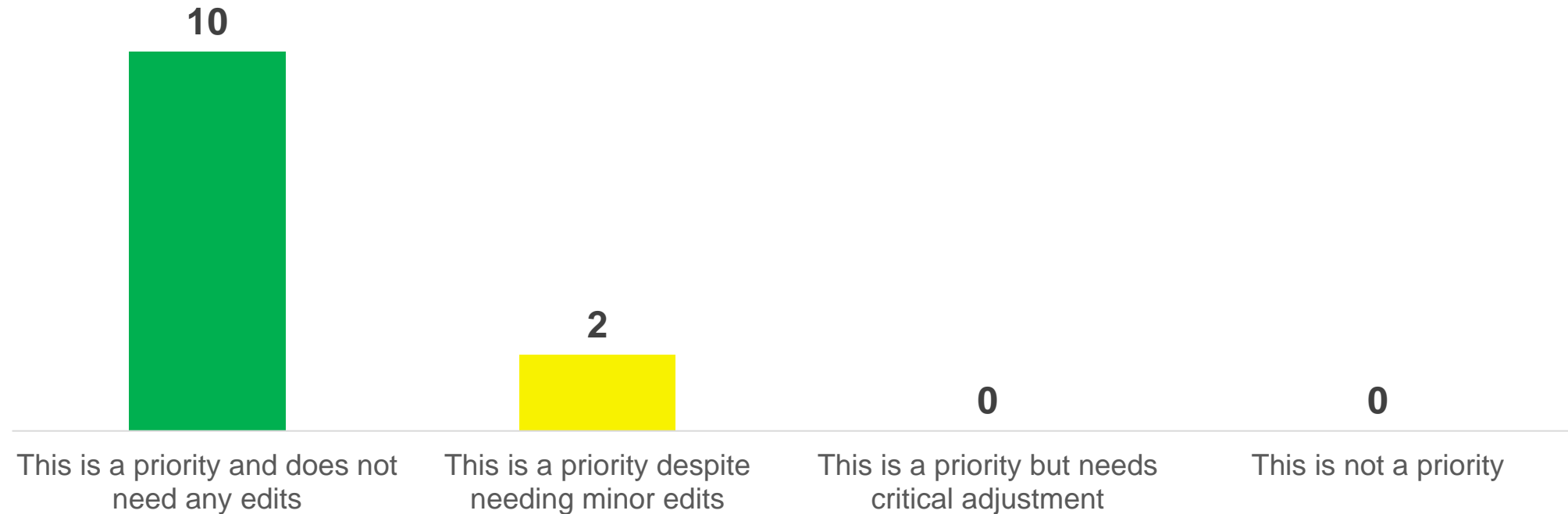
Maintain affordable energy costs and availability of energy services for all customers



---

## Valley Economy

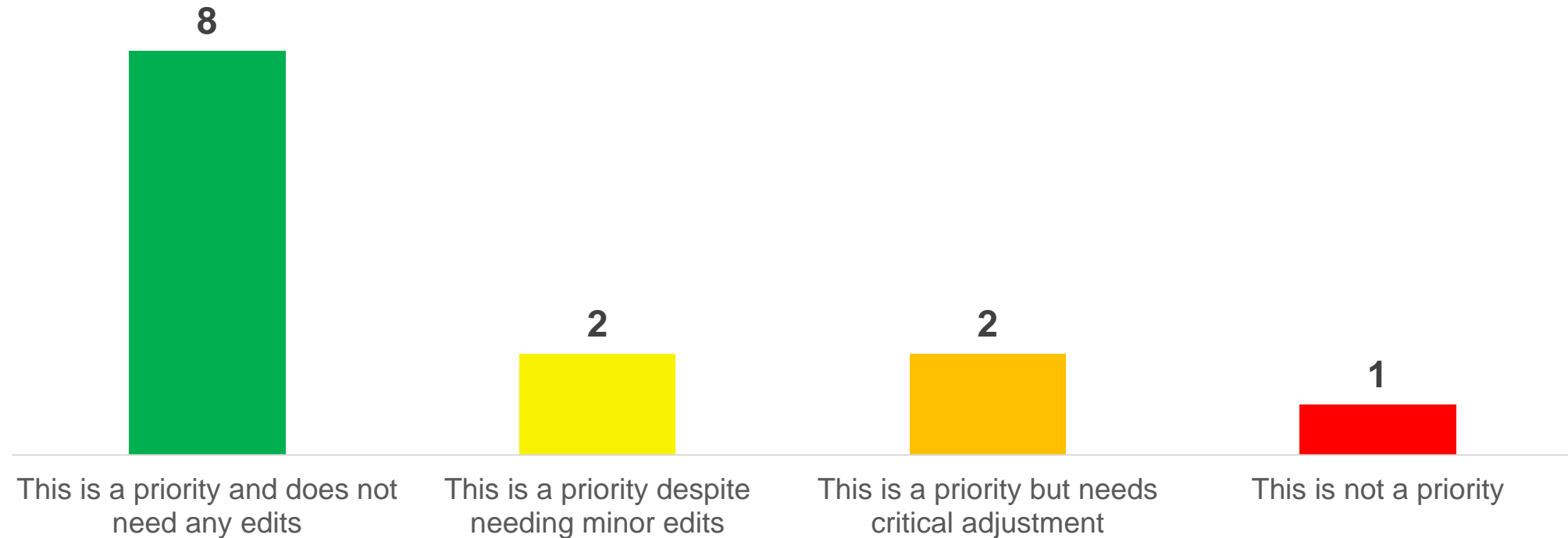
Strategies and actions to foster investment, job growth, and thriving communities in the region



---

## Supply Chain

Economic, environmental, and social performance of suppliers, and resilience to disruptive events

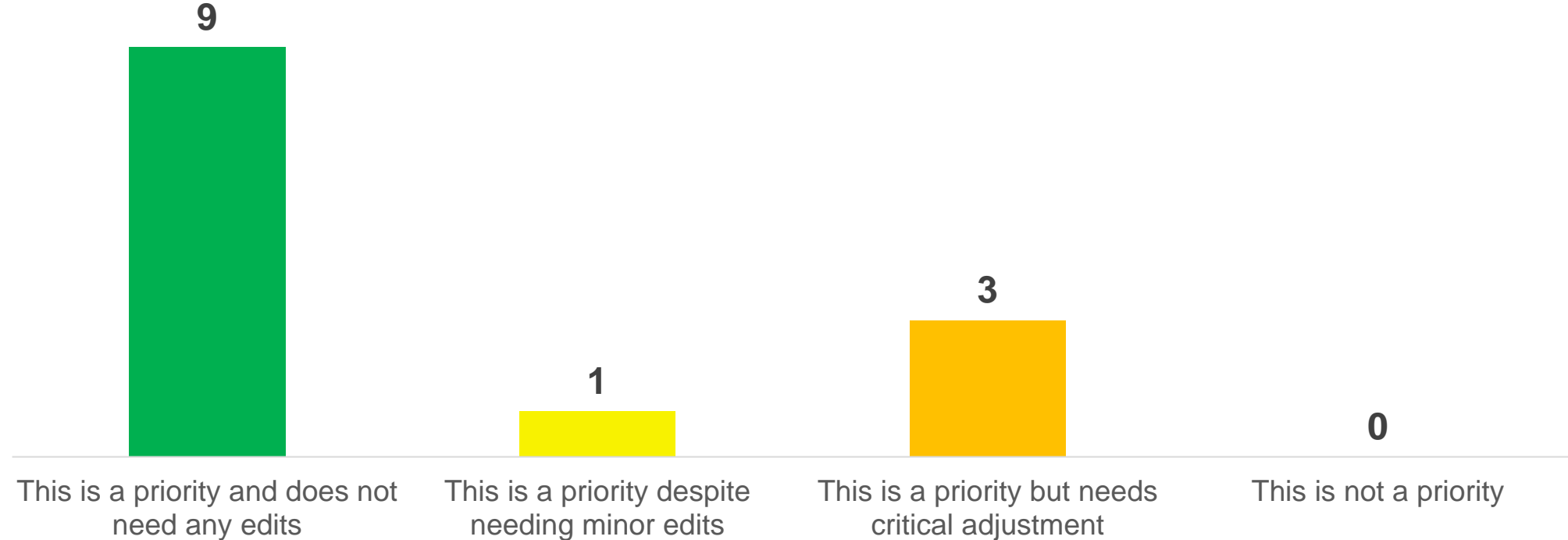




---

## Diversity, Equity, and Inclusion

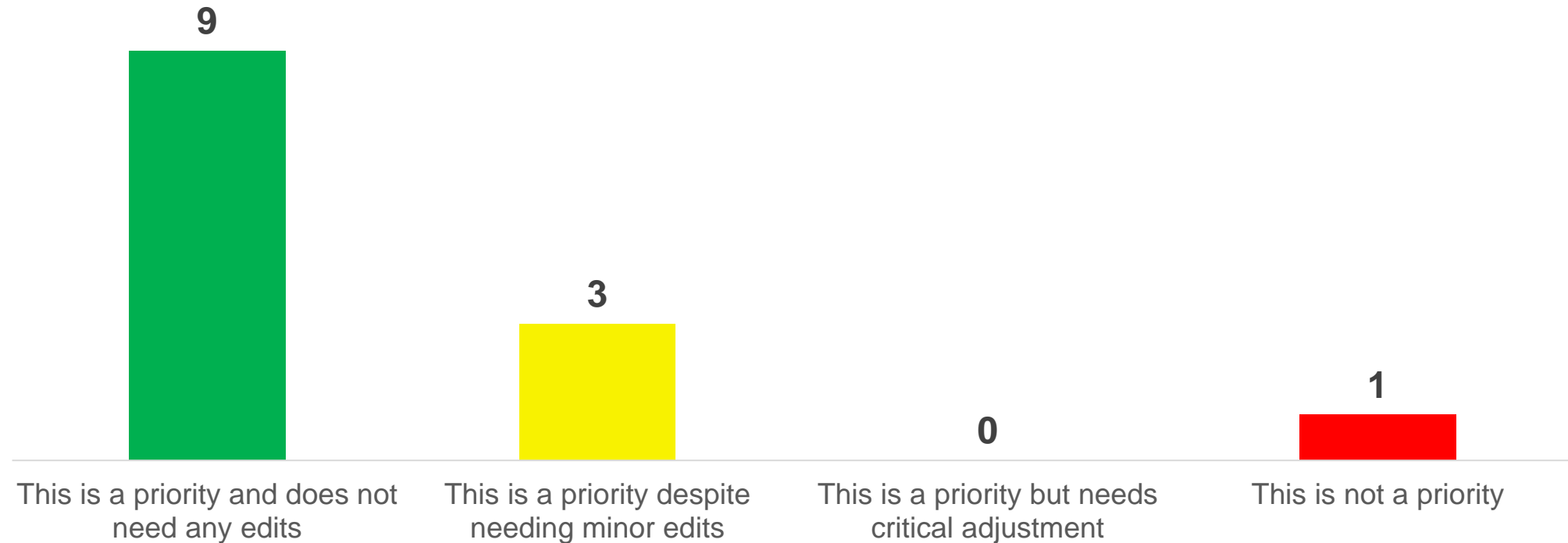
A company culture that ensures fair treatment and opportunity for all



---

## Workforce Development

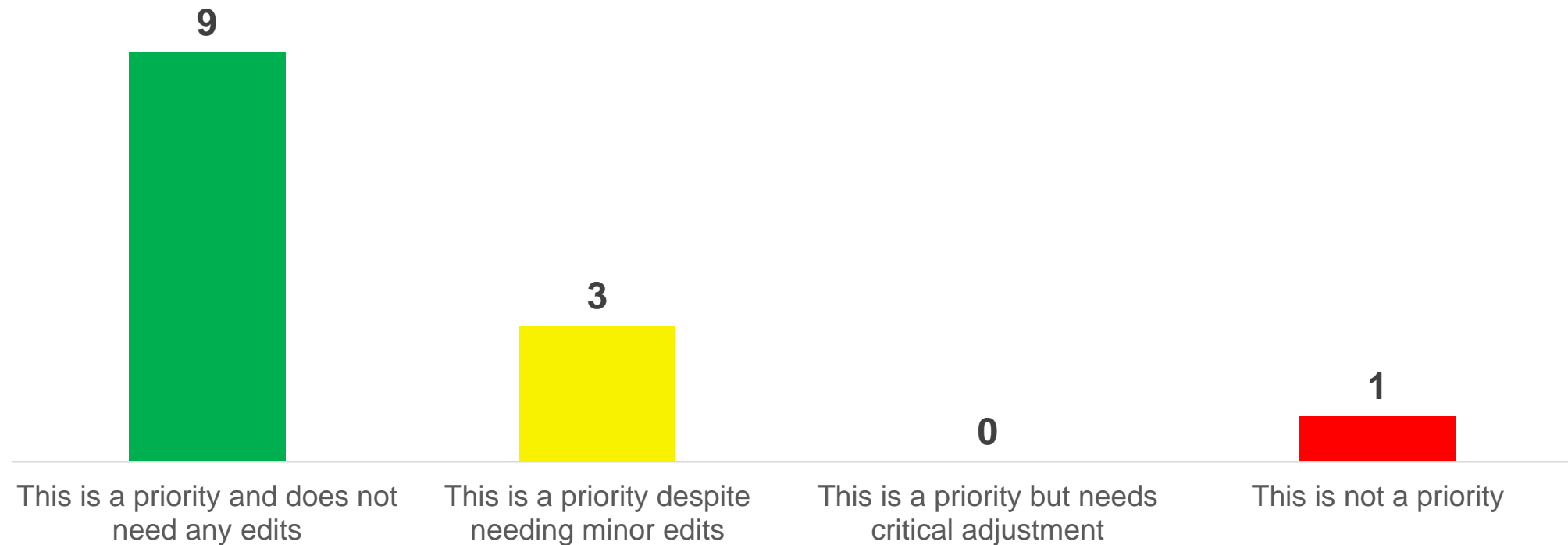
Attracting, hiring, training, engaging, and planning for appropriately skilled and experienced workers



---

## Innovation

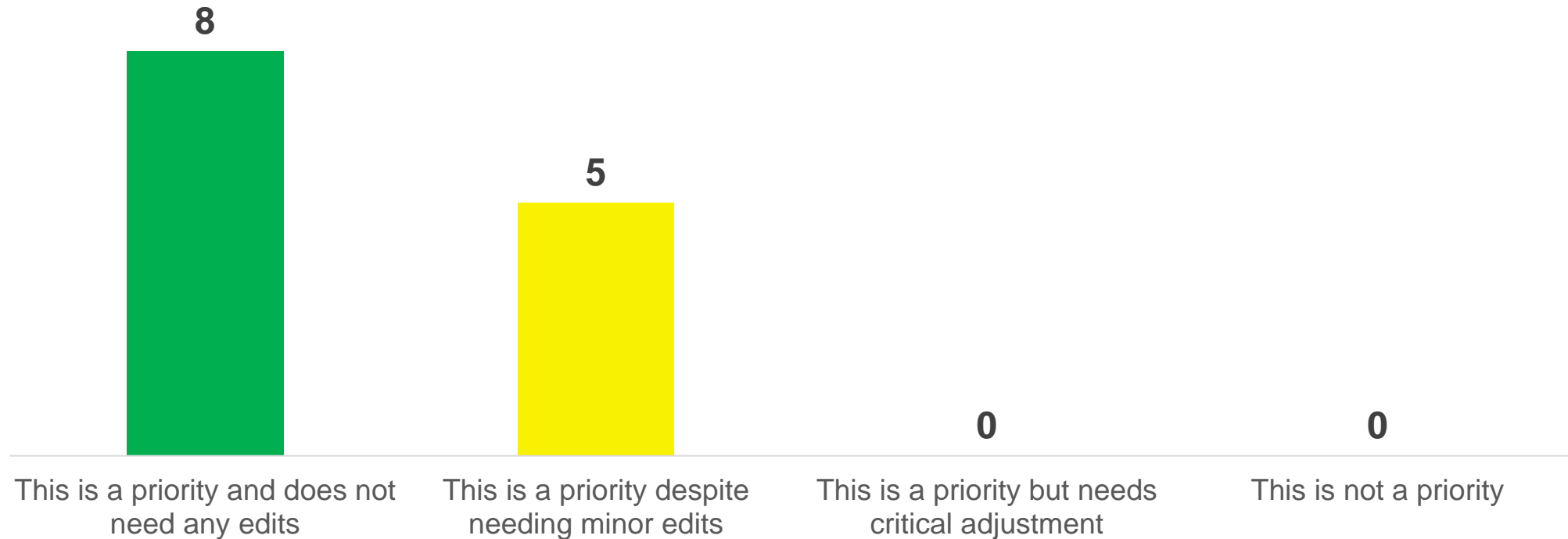
Supporting (Facilitating) and promoting new technologies, processes, and business and market models



---

## Environmental Management and Stewardship

Monitor and implement actions to improve air quality, waste management, land management and stewardship benefits

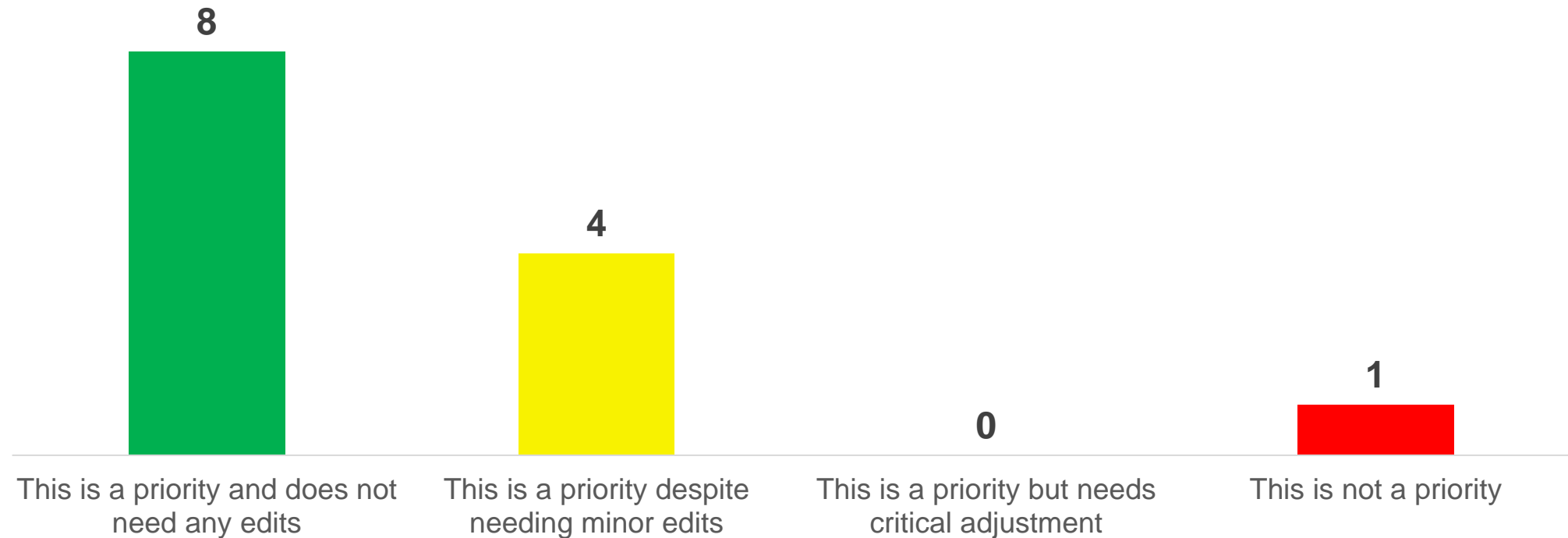




---

## Habitat and Biodiversity

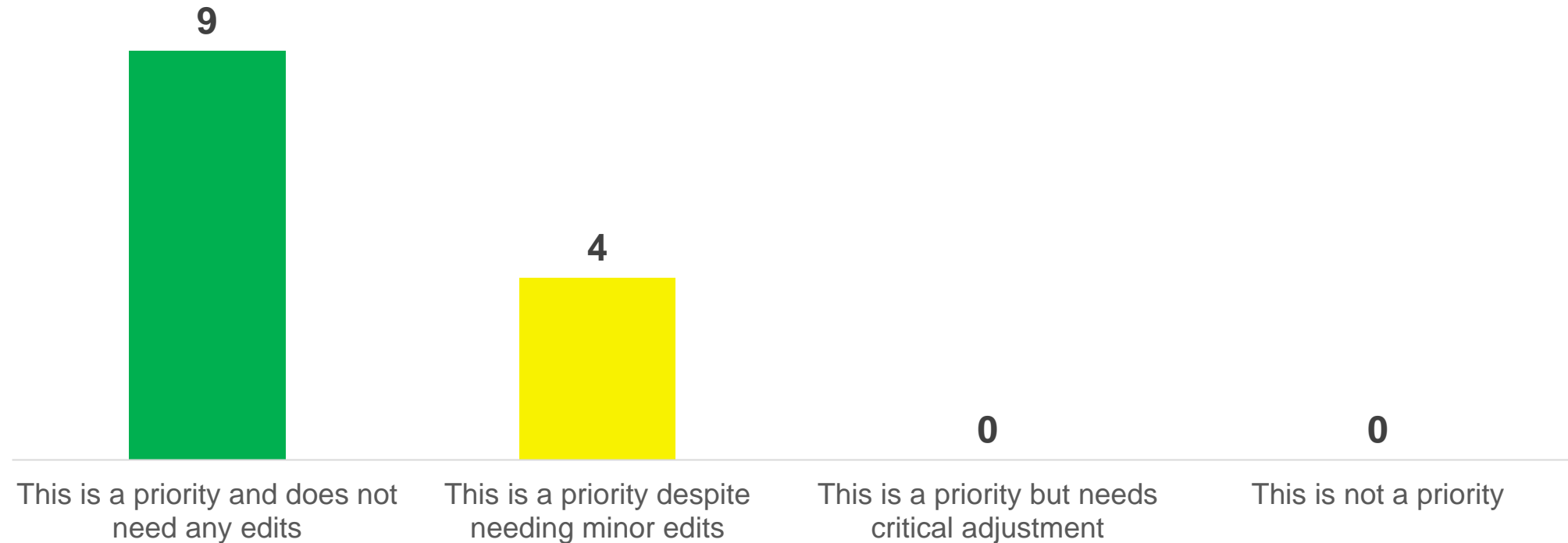
Protect and enhance biodiversity and related habitats within the region



---

## Water Management

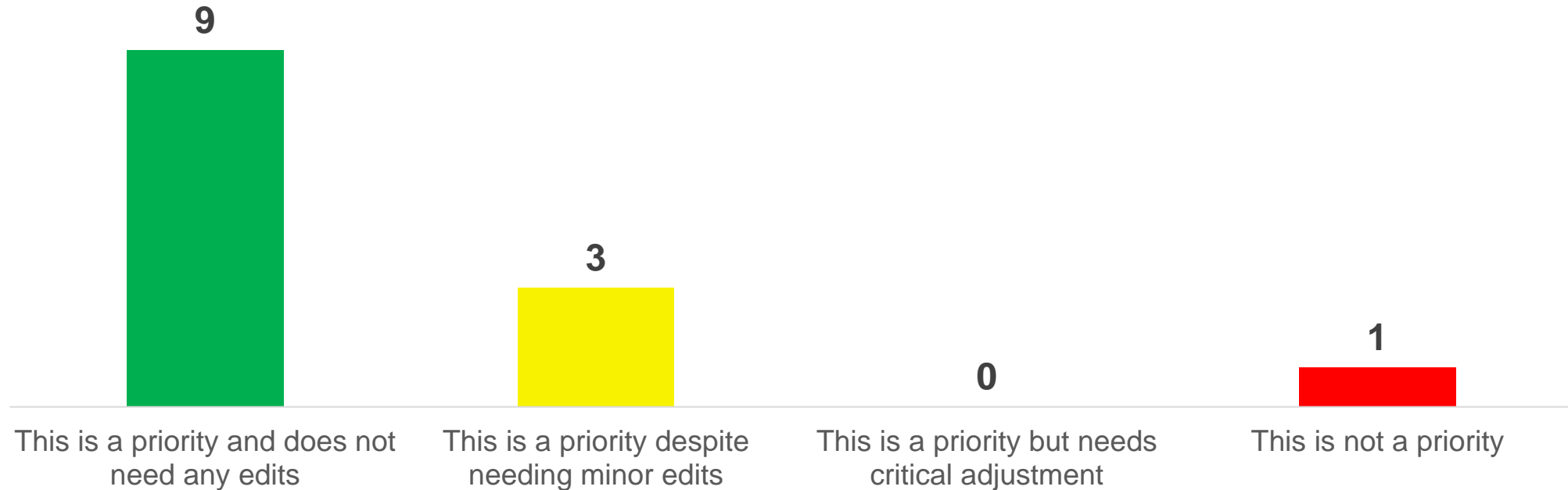
Operational actions and planning decisions to address water quality, water supply, aquatic systems, floods and droughts



---

## Cultural Resource Management

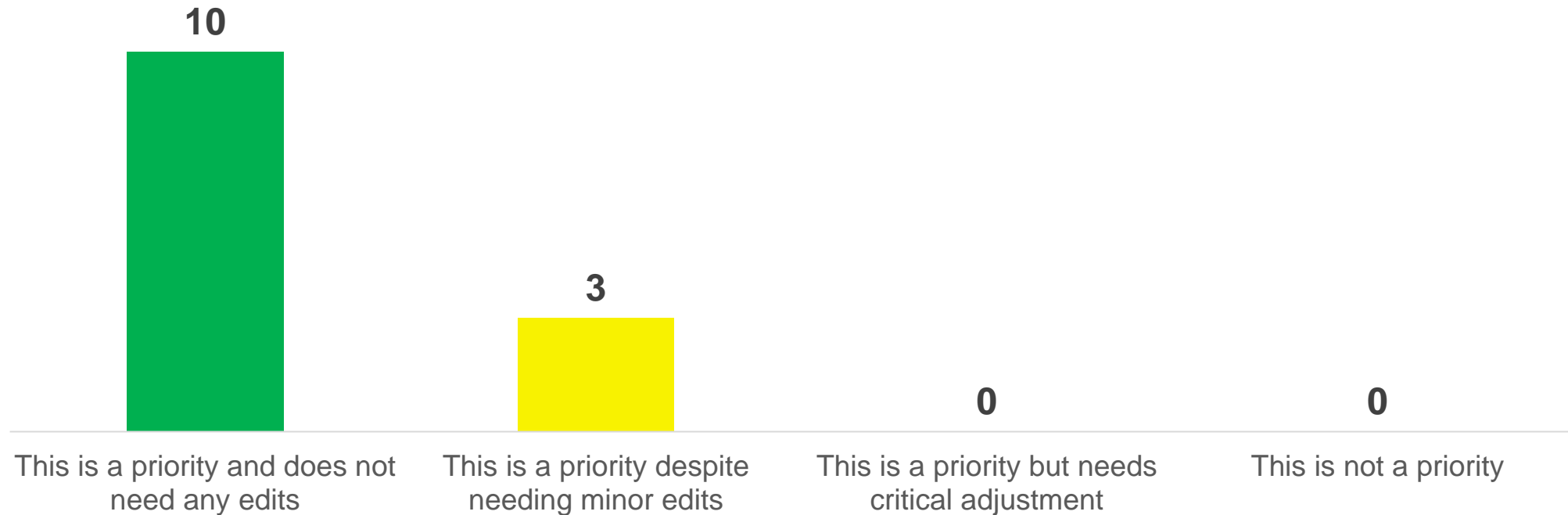
Protect and preserve archaeological and historical resources through management practices, collaboration, consultation, and education



---

## Equity and Environmental Justice

Fair treatment and meaningful involvement regarding how energy services, environmental benefits, and related impacts are distributed throughout the communities served or impacted by company operations

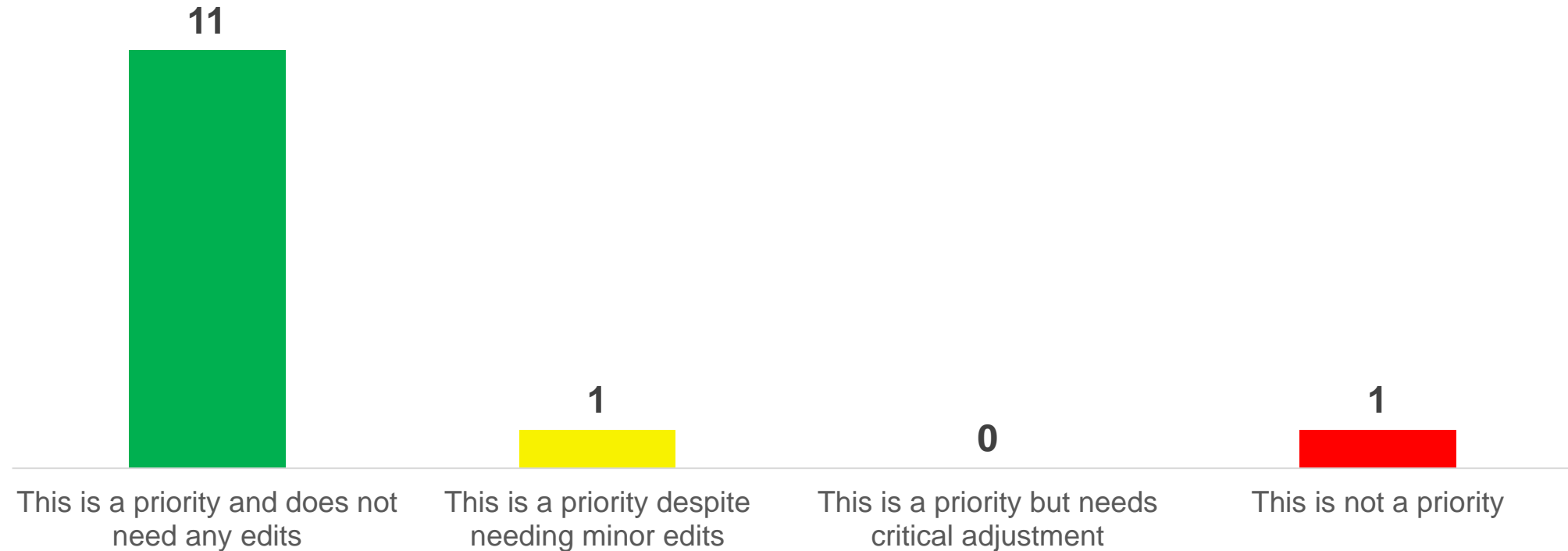




---

## Health and Safety

Health, safety, and well-being of employees, contractors, and the public with respect to interaction with owned or managed assets



---

## Governance

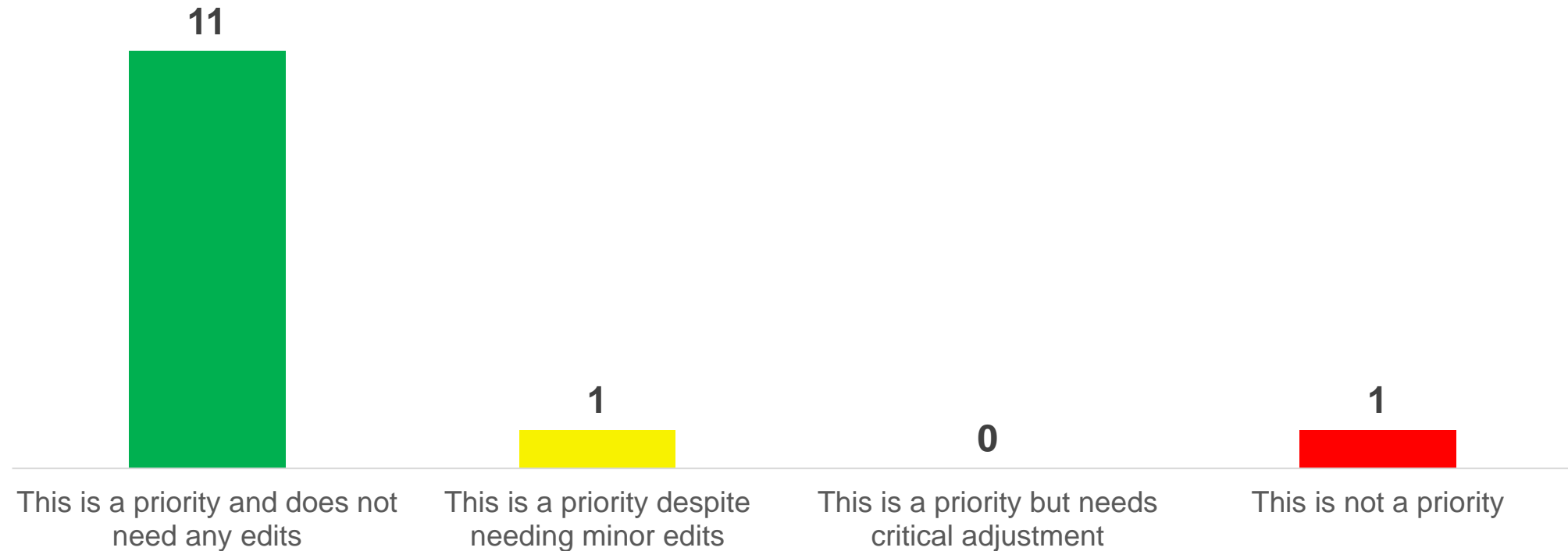
Leadership and systems to foster ethics, accountability, and effectiveness of activities, risk mitigation, and compliance



---

## Financial Health

Strategies and practices that support financial performance and promote sustainable value creation



---

## Cyber and Physical Security

Protection of customer and company information, facilities, systems, and infrastructure from digital and physical threats



# Additional Questions and Next Steps

---

## Final questions or feedback?

- Priorities not addressed?

## Next Steps

- EPRI will conduct stakeholder interviews and hold an internal TVA workshop to gather additional feedback
- TVA's list of sustainability priorities will be refined based on feedback
- A prioritization survey will be sent to TVA stakeholders to gauge the importance of each priority relative to each other

**Thank you!**



---

# Advice Questions:

1. Are there any stewardship priorities where you believe the risks are increasing substantially over the next 5 years?
2. Are there any other inputs or information that you'd like to share with TVA regarding deciding on and ranking our work on these sustainability priorities?

---

# BREAK

---

# Public Comment

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



---

# Thank You

---

# Closing Remarks



---

# Adjourn

**Day 2 RRSC Meeting  
Begins at 12:30 pm Central**



# Regional Resource Stewardship Council

August 22, 2023 – Day 2



# Welcome!

The RRSC Meeting will  
begin at  
12:30 pm Central

---

# Welcome

---

# Day 1 Recap



# Agenda

## RRSC Meeting – Day 2 August 22, 2023 Guntersville, AL All times are CT

12:30 pm	<b>Welcome –Designated Federal Officer Melanie Farrell RRSC Chair Tom Littlepage</b>
12:35	<b>Day 1 Recap</b> Facilitator, Jo Anne Lavender <b>Day 2 Agenda Review</b>
12:40	<b>Finalize Advice Statement</b>
2:00	Break
2:15	<b>Natural Resources Update</b> – Anthony Summit, Sr. Mgr, Nat Res & Rec Mgt <b>River Management Update</b> – James Everett, GM, River Management
2:45– 4:45	<b>Cultural Compliance Presentations</b>
2:45	<b>Cultural Resources and TVA, Melanie Farrell, VP, External Strategy</b>
2:55	<b>Respecting Tribal Sovereignty and The Importance of Government-to-Government Relationships</b> RaeLynn Butler, Manager, Tribal and Cultural Preservation Department, The Muscogee (Creek) Nation
3:10	<b>TVA’s Tribal Relations Program</b> , Erin Dunsmore, Sr Specialist, Archaeology
3:25	Break

# Agenda

## RRSC Meeting – Day 2 Page 2 August 22, 2023 Guntersville, AL All times are CT

	<b>Cultural Compliance Presentations (cont.)</b>
3:40	<b>NHPA Preservation Program</b> , Erin Dunsmore, Sr Specialist, Archaeology
3:55	<b>Archaeological Site Monitoring and Protection</b> Erin Dunsmore, Sr Specialist, Archaeology
4:05	<b>ARPA Enforcement</b> , Mike Angst, Archaeologist
4:15	<b>NAGPRA</b> , Meg Cook, Sr Specialist, Archaeology
4:25	<b>Wrap Up</b> , RaeLynn Butler, Manager, Tribal and Cultural Preservation Department, The Muscogee (Creek) Nation
4:40	<b>Wrap Up &amp; Questions</b> , Melanie Ferrall, VP, External Strategy & Reg Oversight
4:55 pm	<b>Next Meetings</b> <b>Adjourn</b>

---

# FINALIZE ADVICE

---

# Advice Questions:

1. Are there any stewardship priorities where you believe the risks are increasing substantially over the next 5 years?
2. Are there any other inputs or information that you'd like to share with TVA regarding deciding on and ranking our work on these sustainability priorities?

---

# BREAK





# Natural Resources and River Management Updates

August 22, 2023

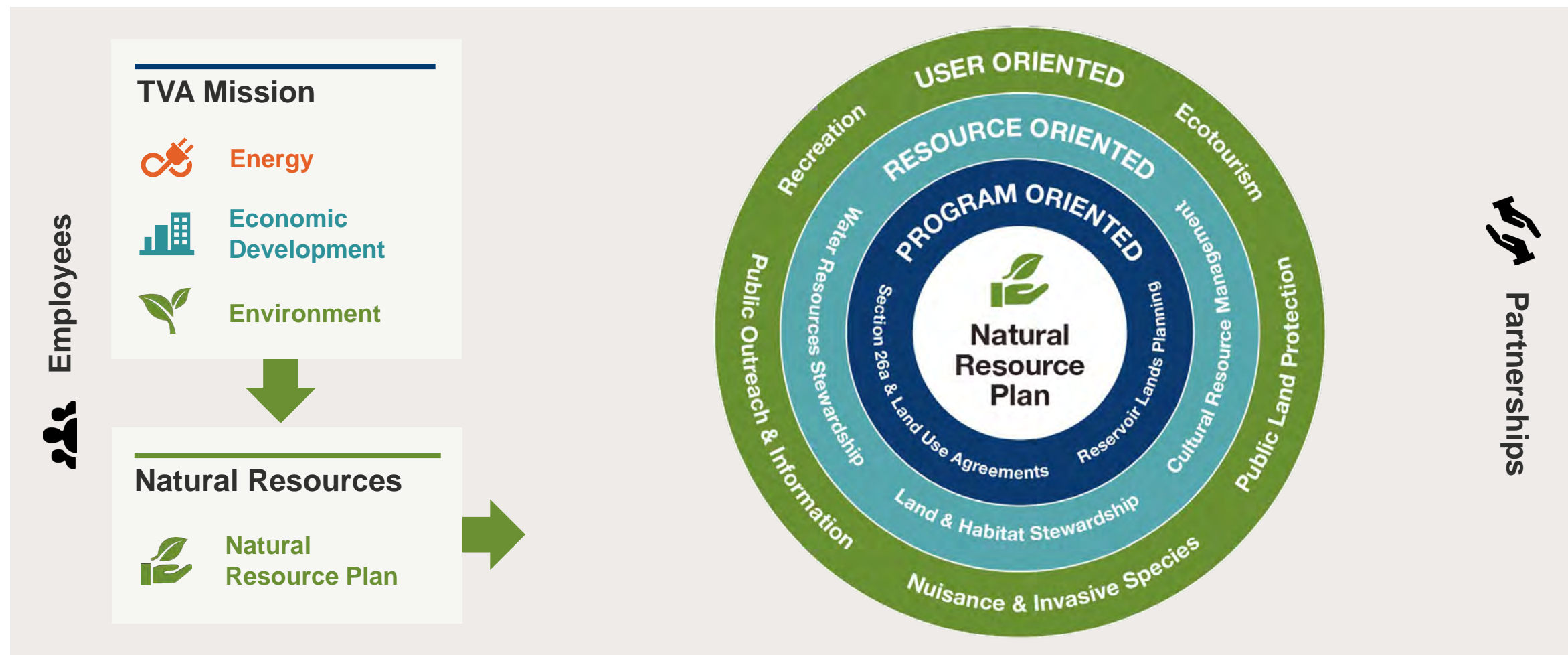


# Natural Resources Update

Anthony Summitt

Senior Manager, Natural Resources & Recreation Management

# TVA Natural Resources





# Current Highlights

Fiscal Year 2023, Third Quarter

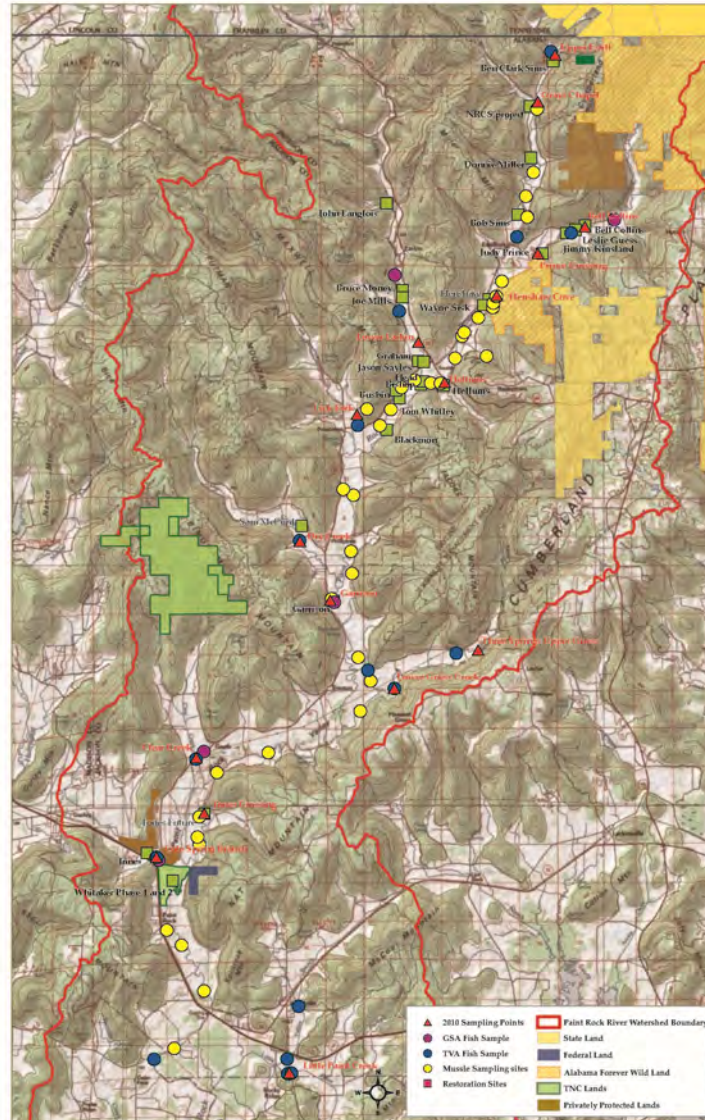
- Paint Rock Watershed Collaborative Conservation Efforts
- Joint Agency Wildfire Training Exercise
- National Pollinator Week Events



# Paint Rock Watershed Jackson, AL

## Biodiversity Hotspot

- 98 fish species and about 59 mussel species
- 3 endemic species: 2 mussels (Pale lilliput, Alabama lampshell) and 1 fish (Palzone shiner)
- 3 imperiled fish: Sawfin shiner, Blotchside logperch, and Snail darter



Guntersville, AL



← Scottsboro, AL



# Paint Rock – Stream Assessments

Assessed fish communities at 15 different locations, conducted mussel surveys at 37 sites, and walked/floated over 80 miles of stream to identify barriers and eroding streambanks

## Fish Community Monitoring



## Mussel Surveys





# Paint Rock – Aquatic Barrier Removal

Replaced a low-water bridge on Estill Fork to provide safe access to the community and restored stream connectivity for aquatic life

**Estill Fork Bridge (Before)**



**Estill Fork Bridge (After)**





# Paint Rock – Streambank Stabilization

Restoring 550 linear feet of streambank utilizing bank grading, toe protection, erosion matting, and riparian plantings of native seedlings and grasses on 0.3 acres to help secure the project's streambank and footprint

Pre-restoration



Ongoing restoration



# Paint Rock - Accomplishments

- Implemented over 42 conservation projects
- Established approximately 8 miles of riparian buffer
- Planted 35,000 hardwood trees
- Acquired 30,000 acres of conservation lands
- Reintroduced over 1,000 freshwater mussels





# Wildfire Aerial Field Training Exercise



Land and  
Habitat  
Stewardship

# Wildfire Aerial Field Training Exercise





# Wildfire Aerial Field Training Exercise





# National Pollinator Week



Land and  
Habitat  
Stewardship

Nuisance  
and Invasive  
Species  
Management

Public  
Outreach  
and  
Information

Public Land  
Protection

# National Pollinator Week





# National Pollinator Week





# National Pollinator Week





---

# River Management Update

James Everett

General Manager, River Management

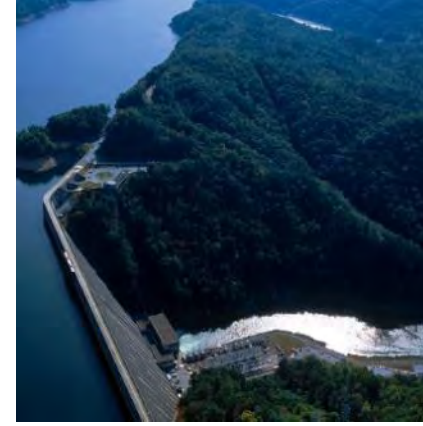
# Integrated Tennessee River System



**Navigation**



**Flood Damage Reduction**



**Power Generation**



**Water Supply**



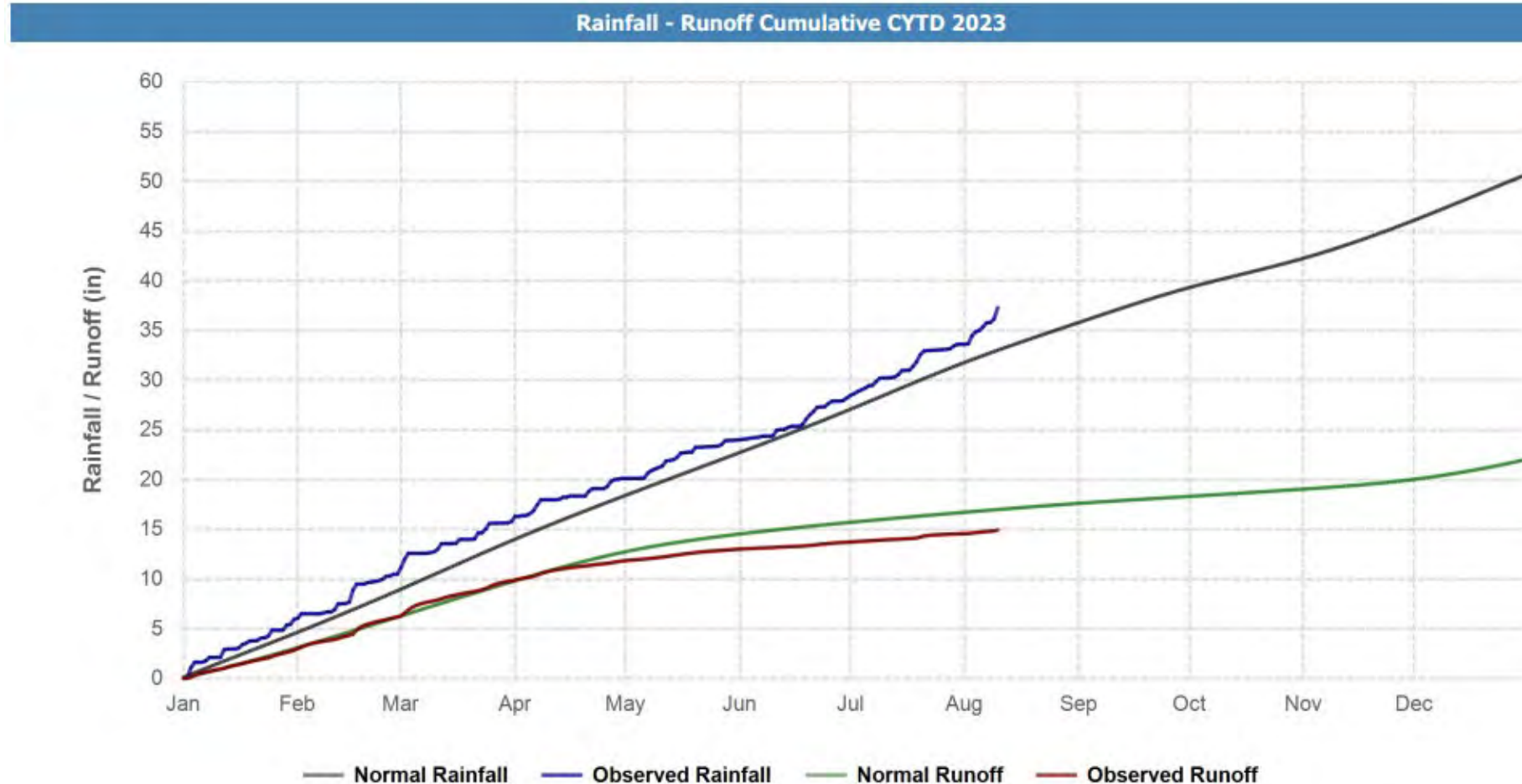
**Recreation**



**Water Quality**

# 2023 Rainfall and Runoff

113% of normal rainfall and 88% of normal runoff through August 10, 2023



TVA Restricted Information - Deliberative and Pre-Decisional Privileged

# Navigation – Regional and National Impact

Releases from reservoirs support the nations inland waterway transportation system through efficient commodity movement

Supported continued navigation during the 2012, Fall 2022 and Summer 2023 low-water events on the Ohio and Mississippi Rivers

- The Tennessee and Cumberland Rivers provided more than one-third of the flow down the Mississippi River with only 5 percent of the drainage area

**OHIO RIVER NAVIGATION SYSTEM**  
NOVEMBER 2, 2022

**CURRENT STATUS**

- Ohio River Basin is experiencing drought conditions.
- Navigation is moving with draft advisories and one-way traffic restrictions.

**ACTIONS**

- Tennessee Valley Authority's (TVA) Kentucky and Barkley Dams are creating more predictable water conditions e confluence of the Ohio and Mississippi River at Cairo, IL.
- The Cairo, IL river gage will remain between 8ft and 9ft for the next two weeks.

**WAY FORWARD**

- Emergency dredging operations are being conducted below Olmsted, at the Ohio River Mile 967-976.
- USACE is monitoring navigation conditions throughout the Ohio-Mississippi River.

The infographic includes three circular images: a wide river view, a close-up of a dam structure, and a view of a dam with a barge. A red TVA logo is in the bottom right corner.



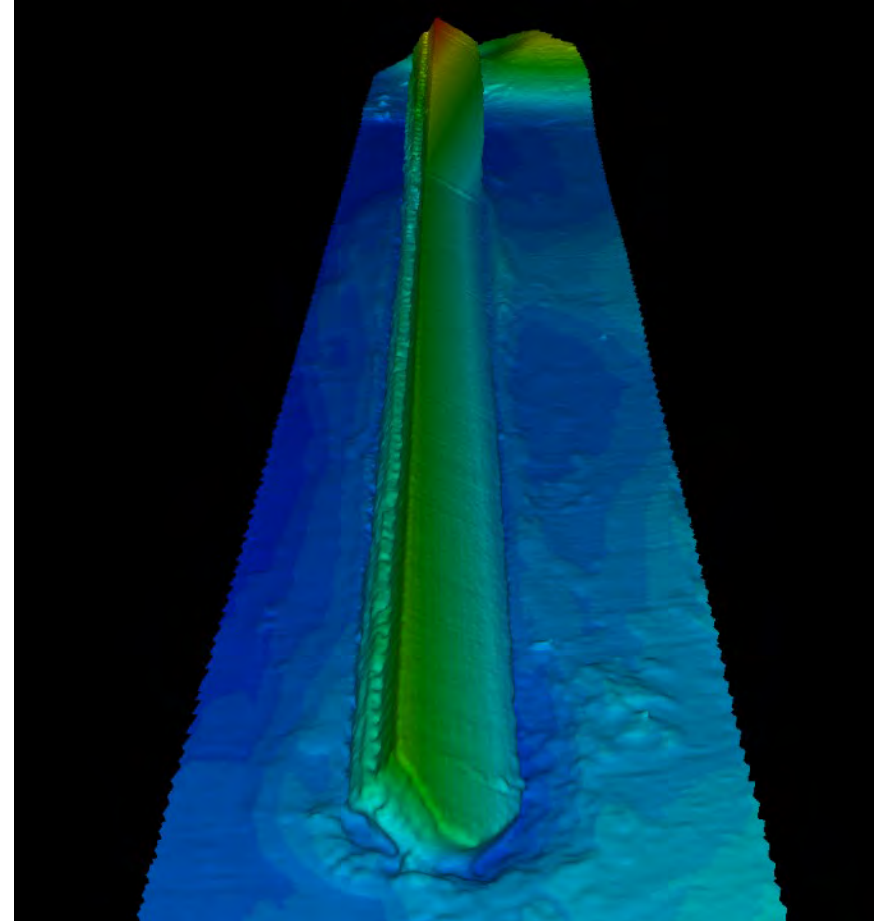
# Navigation – Wilson Lock Guard Wall

Continue to support lock operations through modified lockage procedures, special spillway flow operations, and helper boats

Currently progressing through the project and planning phase for a temporary solution based on the U.S. Army Corps of Engineers' (USACE) Engineer Research and Development Center (ERDC) 2-D model analysis which uses a system of barges as a temporary wall

Working with USACE and other partners to explore funding sources for the guard wall permanent solution

Communicating with the navigation industry and congressional stakeholders on existing lock restriction impacts and the path forward



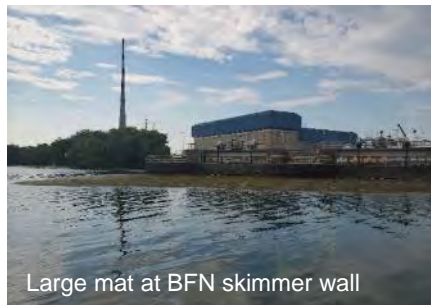
# Water Quality – Floating Aquatic Vegetation

Floating aquatic vegetation (FAV) remains an operational consideration for TVA

- Identified and mitigated risk through summer readiness as plant fouling potential at Browns Ferry Nuclear, Wheeler Hydro, and Guntersville Hydro plants remains a risk

## TVA Response

- Conduct field observations by helicopter or airboat
- Provide bi-weekly report to internal stakeholders
- Operate harvester boats as needed
- Monitoring cameras, sonar, and water quality platforms in Wheeler Reservoir to monitor FAV movement
- Forecasting system developed and undergoing operational testing and calibration



Large mat at BFN skimmer wall



Harvester boat in operation



Floating vegetation near BFN

# Power Generation & Winter Storm Elliott

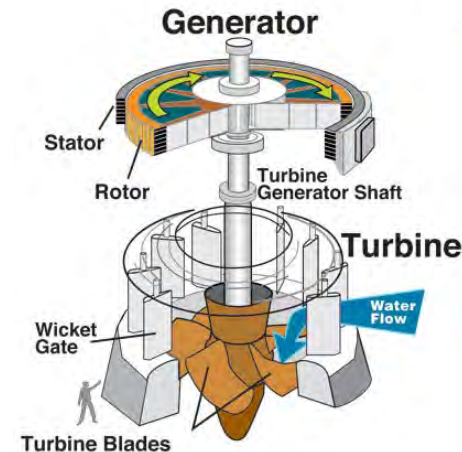
3,538 MW Conventional Generating Capacity (109 Units)

1,653 MW Pumped-storage Capacity (4 units)

Coordinated significant Hydro Generation support during the extreme weather event

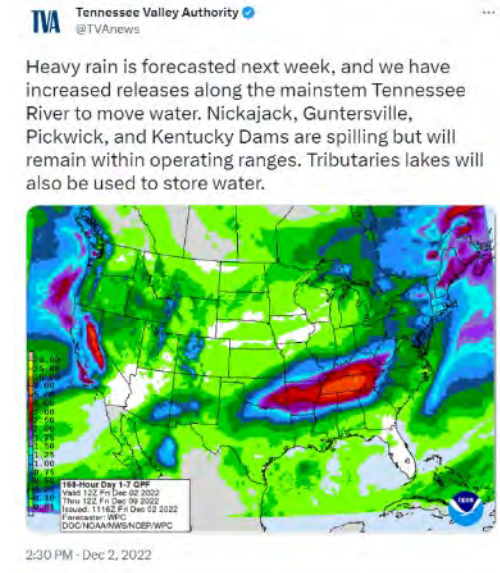
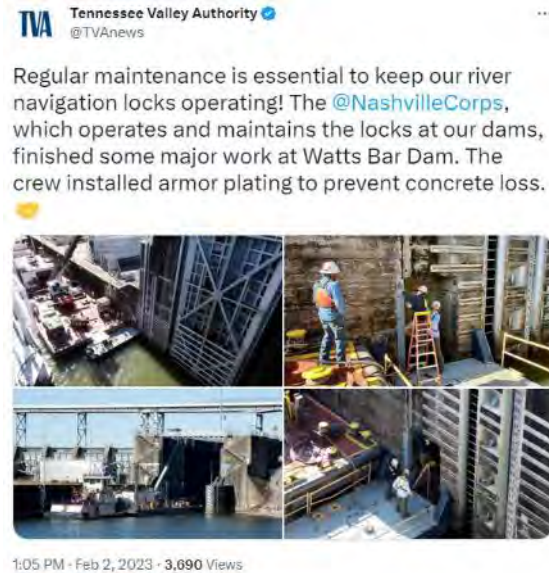
- Hydro System provided increased flows in June to support the power system
- Pre-storm strategy, real-time response and coordinated increased releases with stakeholders

Total Hydro Value realized in CY2022 was over \$923 million or almost double a normal year





# Outreach



Conducted numerous public and stakeholder briefings throughout the year including virtual and in-person River Forecast Center (RFC) tours

TVA Lake Info is the most clicked on link on TVA.com and the LakeInfo app saw a Bassmaster's peak of new users at 39,000

Hosted all 9 TVA Board Members for RFC tours

Thus far in 2023, hosted 38 tours and briefings that reached nearly 600 stakeholders



# River Management Continuous Improvement

Utilize industry standard software and lead the way in technological innovation via advanced modeling and systems that standardize data management, modeling, and visualization across a broad worldwide user group of water management agencies and utilities

Utilize water management maturity matrix to evaluate current maturity level and prioritize improvement opportunities to reach desired state

Engage with internal and external stakeholder groups, share lessons learned, and cultivate collaborative relationships

Lead reviews of extreme events, such as Waverly, Tennessee flood, and implement lessons learned

Solicit and implement continuous improvement ideas from the workforce through the River and Resources Stewardship Continuous Improvement Peer Team



Jeff Lyash with Tennessee Valley Farmers



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



---

# BREAK

---

# Cultural Resources and TVA

Melanie Farrell, Vice President, External Strategy and Oversight

August 22, 2023



---

# Respecting Tribal Sovereignty and the Importance of Government-to-Government Relationships

RaeLynn Butler, Manager, Historic and Cultural Preservation Department, The Muscogee  
(Creek) Nation

---

# Tribal Relations

Erin Dunsmore, Senior Specialist, Cultural Resource Management & Policy

---

# Government to Government Relationship

The United States government has a unique legal relationship with Federally Recognized Indian Tribes (“Tribes”) set forth in the Constitution of the United States, treaties, statutes, and court decisions. As a federal agency, the Tennessee Valley Authority (TVA) is committed to work with Tribes within the framework of a government-to-government relationship, respecting tribal sovereignty and self-determination.

*TVA’s Tribal Consultation Official, Melanie Farrell, has principal responsibilities for consulting with Tribal Governments.*

# What is the federal trust responsibility?

The **federal Indian trust responsibility** is a legal obligation under which the United States “has charged itself with moral obligations of the highest responsibility and trust” toward Indian tribes (*Seminole Nation v. United States*, 1942).



**TVA takes this trust seriously and strives to be a leader in Tribal Partnerships.**



The relationship between TVA and Tribes should be treated as a partnership. TVA provides partnership and engagement opportunities to strengthen relationships, and to encourage meaningful cultural interaction between Native Americans, TVA staff, and the public.

# Ancestral Tribes of Tennessee Valley

1. The Muscogee (Creek) Nation
2. Alabama-Coushatta Tribe of Texas
3. Alabama-Quassarte Tribal Town
4. Coushatta Tribe of Louisiana
5. Kialegee Tribal Town
6. Thlopthlocco Tribal Town
7. Poarch Band of Creek Indians
8. Seminole Nation of Oklahoma
9. The Chickasaw Nation
10. Choctaw Nation of Oklahoma
11. Jena Band of Choctaw Indians
12. Mississippi Band of Choctaw Indians
13. Cherokee Nation
14. Eastern Band of Cherokee Indians
15. United Keetoowah Band of Cherokee Indians
16. Eastern Shawnee Tribe
17. Shawnee Tribe
18. Absentee Shawnee Tribe
19. Monacan Indian Nation
20. Delaware Nation
21. Osage Nation
22. Quapaw Tribe of Indians
23. Peoria Tribe of Indians



# Legal Authorities

Antiquities Act of 1906

National Environmental Policy Act of 1969

American Indian Religious Freedom Act of 1978 (AIRFA)

Archaeological Resources Protection Act of 1979 (ARPA)

Native American Graves Protection and Repatriation Act of 1990 (NAGPRA)

National Historic Preservation Act 1966, as Amended (NHPA)

Executive Order 13007 - Indian Sacred Sites (1996)

Executive Order 13175 – Consultation and Coordination with Indian Tribal Governments (2000)

Executive Memoranda:

- “Government-to-Government Relations with Native American Tribal Governments (1994)
- Tribal Consultation (2009)
- Tribal Consultation and Strengthening Nation-to-Nation Relationships (2021)
- Uniform Standards for Consultation (2022)





# Focusing on Tribal Needs/Concerns



## NAGPRA

Transferring control and custody of Native American ancestors to Tribes  
Ensuring Ancestors are protected on TVA lands  
Inadvertent Discovery of Ancestors



## ARPA

Identification of Important Native American archaeological resources  
Monitoring and Protection from Looting, erosion and climate change  
Reduce trafficking of Native American objects  
Outreach in local communities on the importance of site protection



## NHPA

Consultation on TVA Undertakings  
Identification of Significant Native American Historic Properties  
Evaluate and Nominate historic properties to the National Register of Historic Places



## Other Priorities

Reinterment of Native American Ancestors  
Sacred Sites  
Protection of Natural Resources  
Tribal Engagement  
Tribal Partnerships & Outreach



# Reinterment

TVA is committed to providing locations for the reburial of Native American Ancestors and their belongings.

Most of these ancestors were removed prior to the construction of TVA dams.

Some have been removed as a result of illegal desecration or environmental impacts.

TVA Supports:

- Individual reinterments
- Regional reinterment locations



CH 363 9-28-36

# Tribal Partnership Projects

TVA partners with Tribes on a number of different projects, including:

- *Removal Route Project* – Compiling historic records and ground truthing actual route locations in the TVA Power Service Area
- *Stone Features Management Project* – Developed a management plan and documentation form
- *Tribal Cultural History Project* – Work with individual Tribes to record accurate and inclusive tribal histories for improved archaeological reporting





# Outreach & Engagement

- Tribal Homeland Visits
- TVA Tribal Engagement Initiative
- Public Outreach
- Volunteer Archaeological Stewardship Training
- Archaeological Field School Partnership
- Native Plant Partnership



---

# NHPA Preservation Program and Section 106

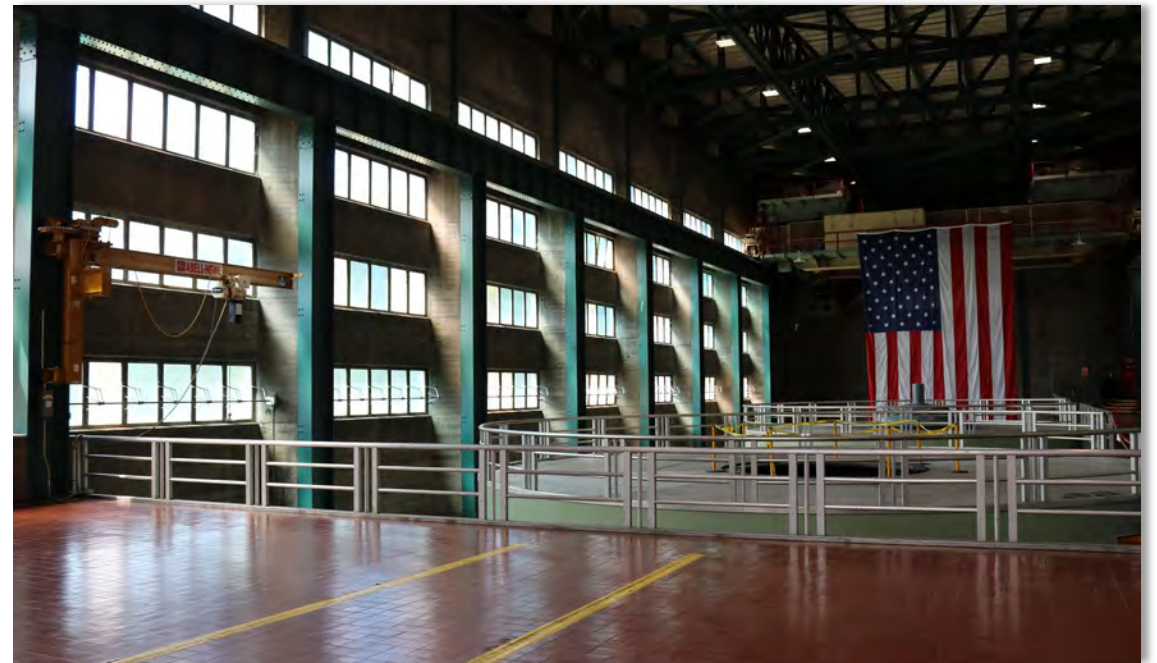
Erin Dunsmore, Senior Specialist, Cultural Resource Management & Policy



# National Historic Preservation Act (NHPA)

“The spirit and direction of the Nation are founded upon and reflected in its historic heritage” and these ‘cultural foundations should be preserved as a living part of our community life and development in order to give a sense of orientation to the American people;”

“the preservation of this irreplaceable heritage is in the public interest..”





# NHPA Requirements for Federal Agencies

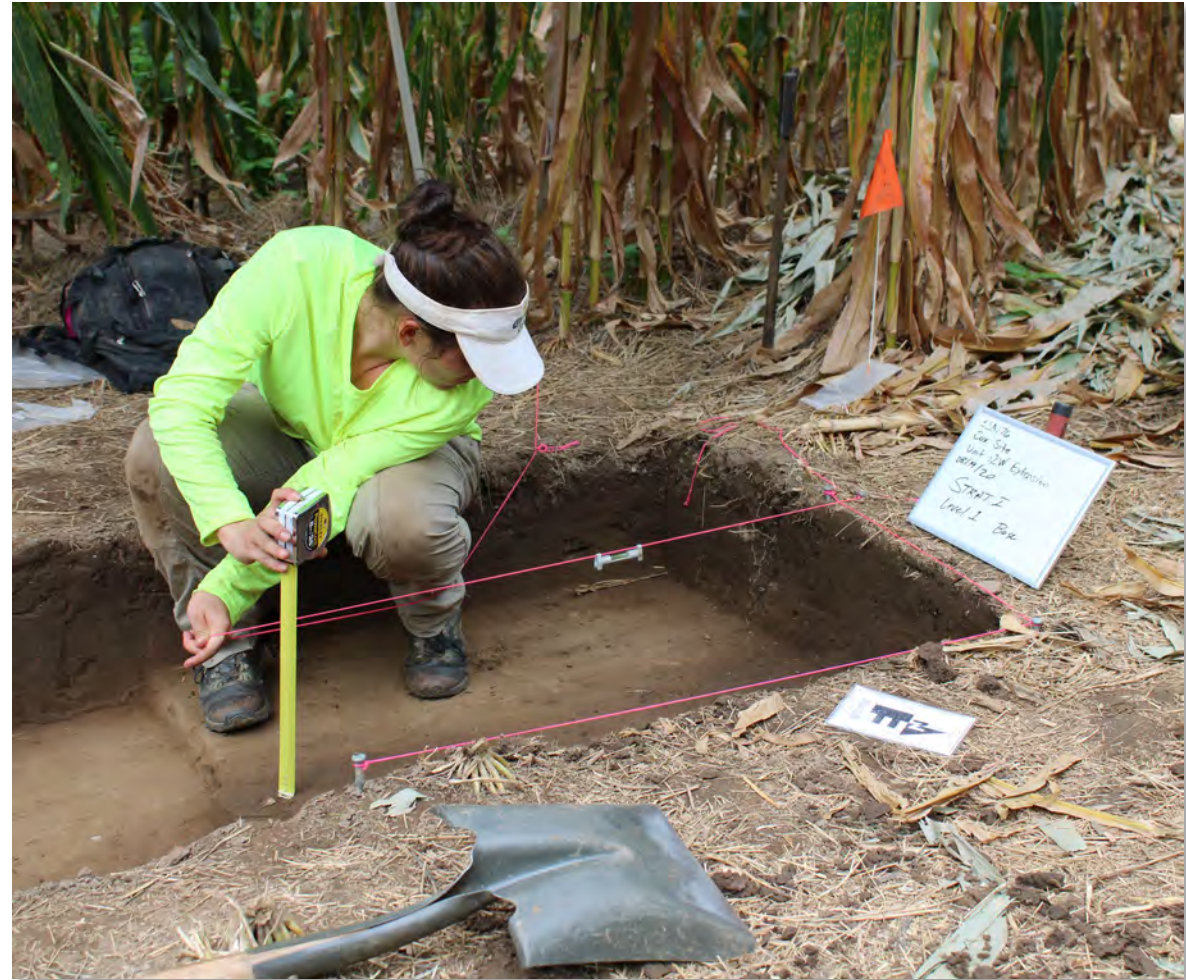
## Establish Preservation Program (Section 110)

- Identify, evaluate and nominate historic properties to the National Register of Historic Places
- Coordinate preservation activities with State Historic Preservation Officers and Federally Recognized Indian Tribes

## Designate Federal Preservation Officer

## Minimize impacts to National Historic Landmarks

## Consider effects of undertakings on historic properties (Section 106)



Test excavations conducted to evaluate significance of archaeological site.



# Section 110

Maintain inventory of historic properties

- Archaeological Sites
- Architectural Resources
- Historic Items

Cultural Resource Management System

Improve Section 106 through preservation planning

Evaluate and nominate historic properties to the National Register of Historic Places (NRHP)



Insectary building (used to conduct malaria research) in Muscle Shoals being mothballed until identified use.



# National Register of Historic Places

- Official list of the Nation's historic places worthy of preservation
- Must have integrity of location, design, setting, materials, workmanship, feeling or association.
- TVA has archaeological sites, historic buildings, and dams listed on the NRHP
- Wilson Dam is a National Historic Landmark



Norris Dam is listed on the National Register of Historic Places



# Heritage Tourism and Historic Properties

- Executive Order 13287 Reaffirms federal agency's role in protection, enhancement and use of historic properties outlined in NHPA.
- Heritage Tourism is the practice of attracting and accommodating visitors to a place based on the location's history, landscape, and culture.

Examples of Heritage Tourism:

- Historic Dam Tours
- Virtual Dam Tours
- Muscle Shoals Reservation-CCC Trails and Park



CCC Pavilion located on the Muscle Shoals Reservation in Colbert County, Alabama

# Section 106 Undertakings

- Requires agencies to take potential project effects on historic properties into consideration.
- Outlines process for agencies to identify historic properties that could be affected by their projects (Undertakings)
- TVA undertakings can include any permit, license, construction, maintenance or other project that could physically or visually impact a historic property
- Requires agencies consult with SHPOs, Tribes and others with an interest in the project area (consulting parties)





# Section 106 Consultation Process



## Initiate Section 106

- Identify Consulting Parties



## Identify Historic Properties

- Area of Potential Effects
- Survey and Evaluate



## Assess Effects

- Consult on Effects to Historic Properties



## Achieve Resolution

- Avoid, minimize, or mitigate adverse effects

# Section 106 Programmatic Agreement

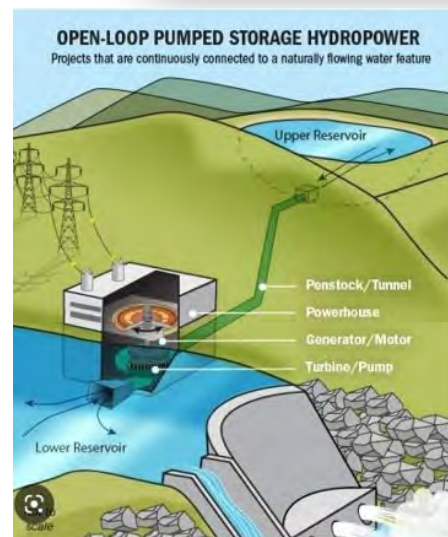
- TVA executed a PA with 7 states and 13 Tribes to streamline Section 106 process for repetitive and routine management activities
- These projects do not have to follow standard process:
  - Appendix A – Excluded activities do not require cultural review (no potential to effect)
  - Appendix B – Low potential activities that require cultural review and sent to consulting parties in annual report
- In FY22, over 1200 projects fell under the Appendix A and B.
- Projects where historic properties are identified must go through standard review process.





# New TVA Projects

- New Gas-fired Generation plants (CC, CT, Aero CT), or combo gas- and fuel oil fired
- Decommissioning (D4): Decommissioning, Deactivation, Decontamination, and Demolition
- Alternative Generation Technologies (Battery storage, pumped storage)
- Solar panels
- Electric Vehicle charging stations
- Dam Safety instrumentation



---

# BREAK

---

# Archaeological Site Monitoring and Protection

Erin Dunsmore, Senior Specialist, Cultural Resource Management & Policy

August 22, 2023



# Archaeological Site Management

TVA is responsible for management of over 12,500 archaeological sites

- Monitoring
- Protection
- Outreach





# Monitoring

## Annual Visits to known vulnerable sites

### *Focus Areas:*

- Reservoir shorelines during winter drawdown
- Sites vulnerable to looting

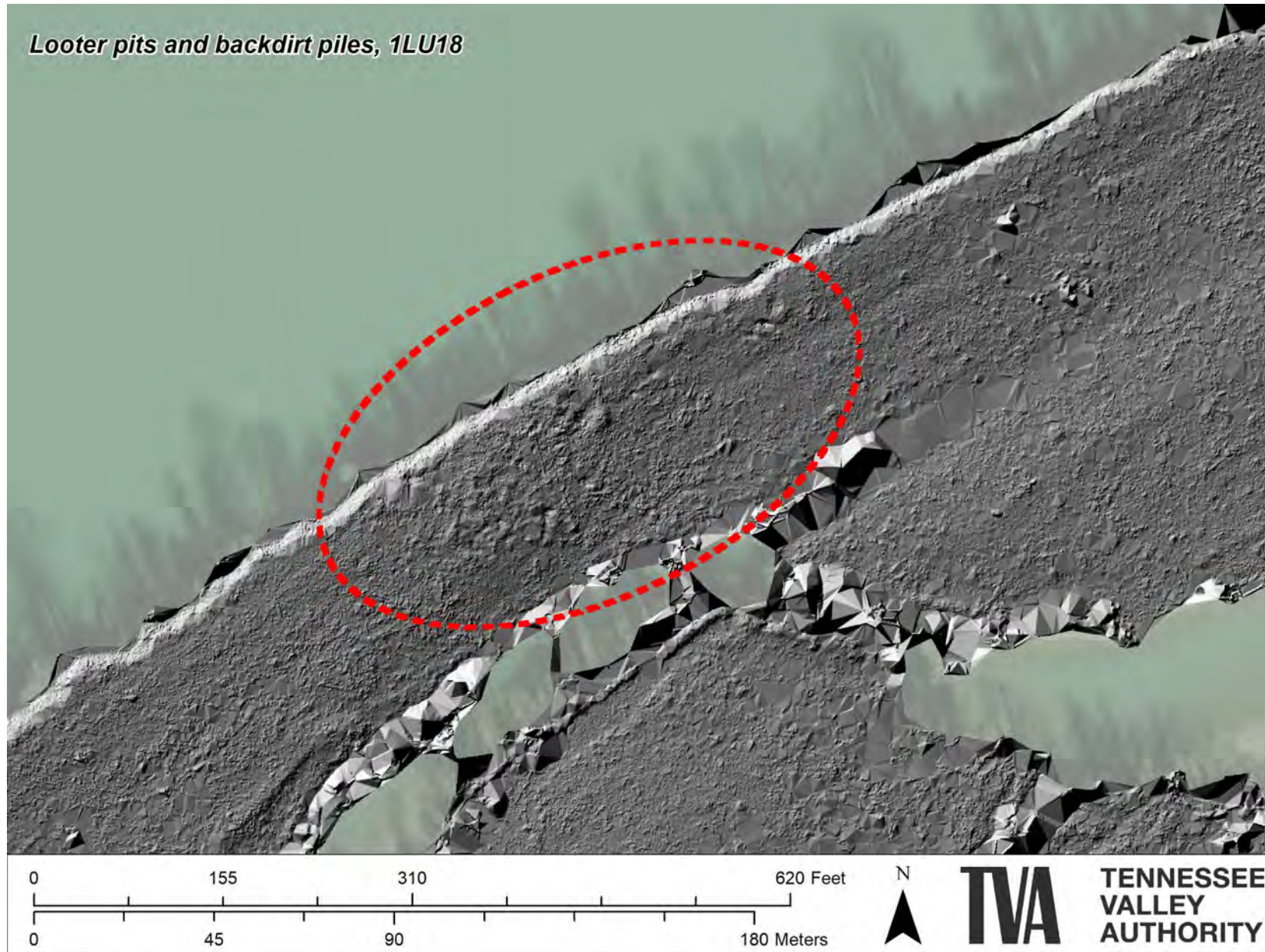
### *Goals:*

- Identify sites with protection needs
- Prioritize needs (outreach, protection, additional monitors, TVA Police patrols)
- Coordinate findings with Tribes in Quarterly Reports





# LiDAR



# Protection

Prioritized based on resource sensitivity and identified impacts

Protection methods include:

- Shoreline stabilization
- Site capping
- Cave gating or closure
- Signage
- Fencing
- Increased monitoring and/or patrols





# "A Thousand Eyes" Archaeological Outreach

- Participation in community events and festivals
- Tribal partnerships
- Community partnerships
- Classroom activities and STEM Programs
- Speaking engagements
- Articles and publications
- Signage
- Volunteer Site Stewardship Program
- TVA Police saturation events





# Volunteer Site Stewardship Program

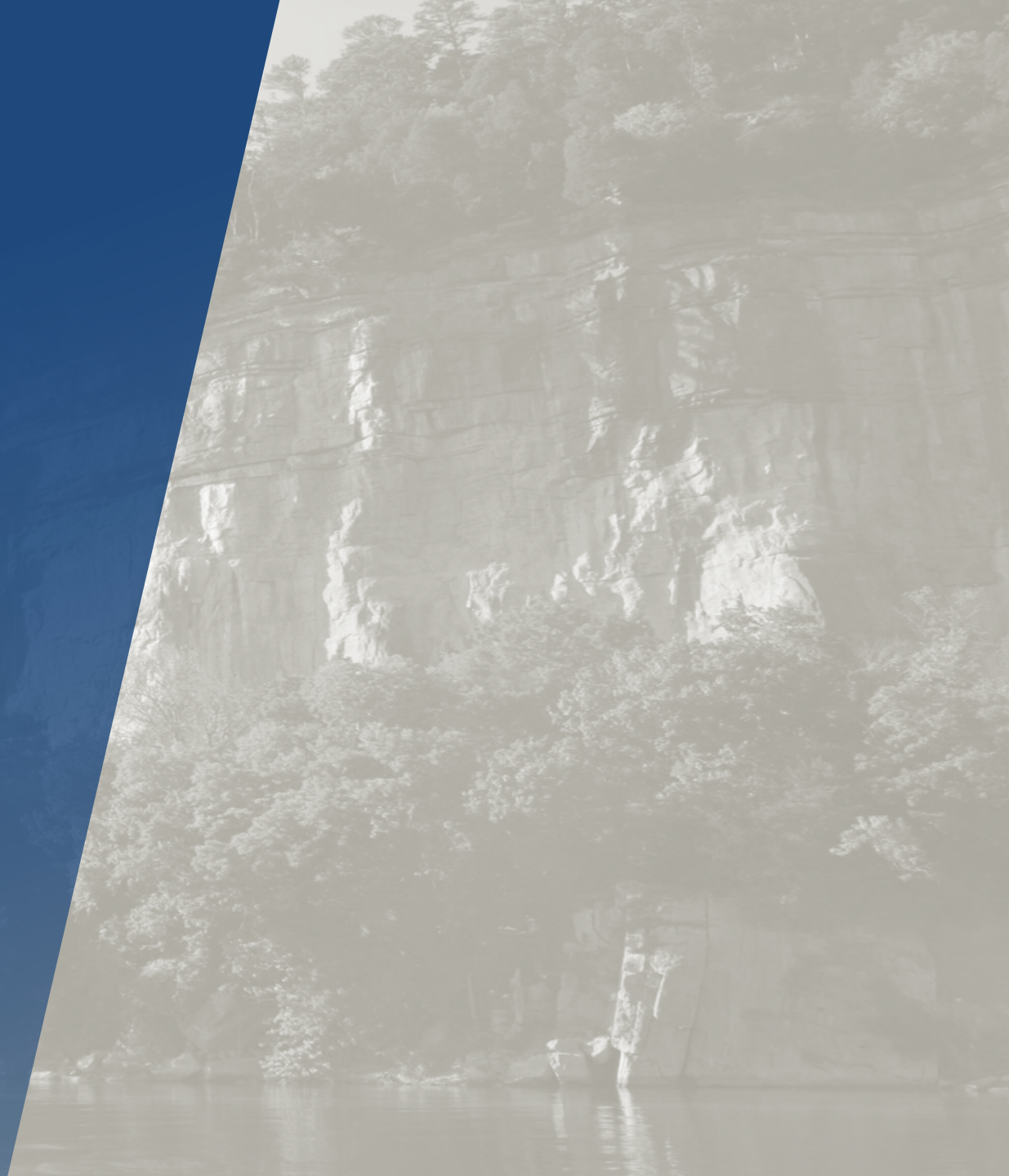


- Began in 2015
- Two-day workshop with TVA and Tribal instructors
- Focus on safety, archaeology, tribal perspective, and laws
- One day in classroom
- Half-day in field with instructors
- Focus in areas where looting is prevalent
- Over 60 volunteers trained
- Florence, AL Chapter

# ARPA Enforcement

Mike Angst, Archaeologist

August 22, 2023





# Archaeological Resources Protection Act (ARPA)

- ARPA was enacted to secure, for the present and future benefit of the American people, archaeological resources and sites on Federal lands and Indian lands...
- ARPA makes it illegal to excavate, remove, damage, alter, deface or attempt to excavate, remove, damage, alter, or deface any archaeological resources on public or Indian lands without a permit.



# Surface Collecting





# What looting looks like





# What looting looks like





# Other types of site damage





# Other types of site damage

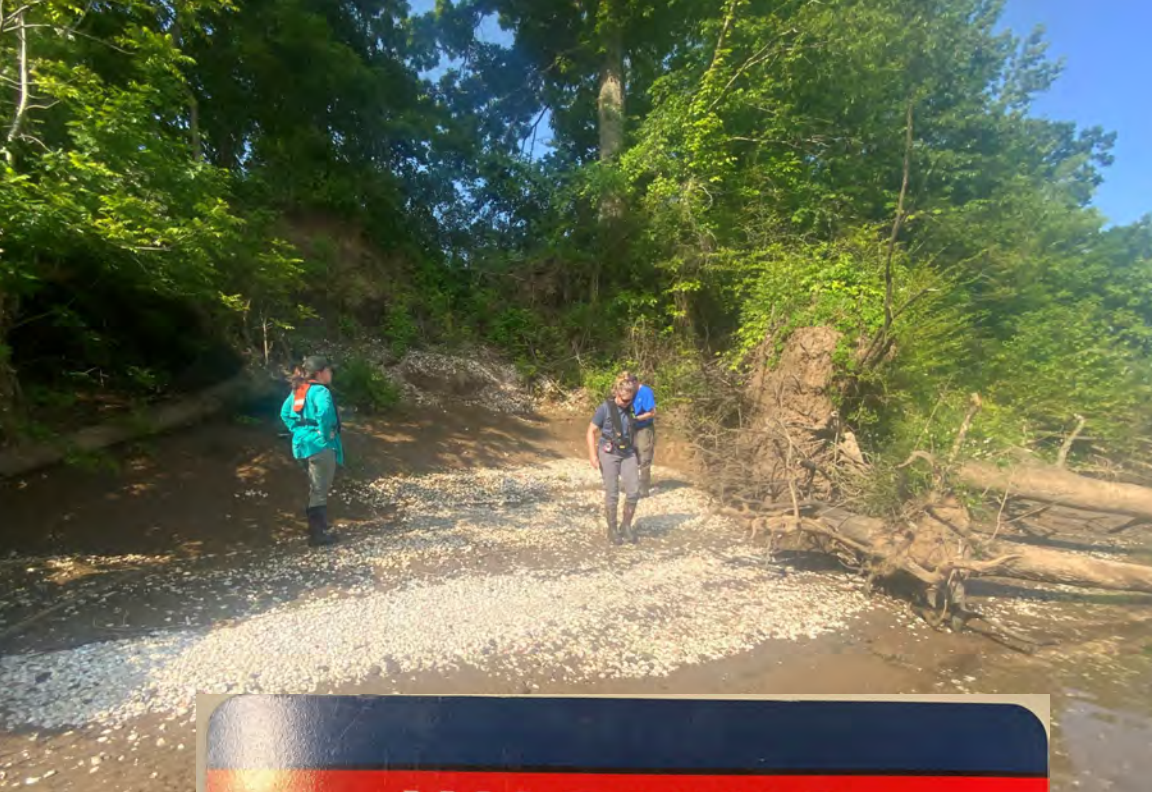




# ARPA Enforcement Overview at TVA

- Six TVA police officers devoted to protection of natural and cultural resources (ARPA)
- Additional support from TVA Police, other LEOs
- Detection of archaeological crimes on TVA land and enforcement of ARPA
- Work with U.S. Attorneys in prosecution of archaeological crimes on TVA land





**WARNING**

**ARCHAEOLOGICAL SITE**

Removal of artifacts or destruction of archaeological sites is punishable by civil and criminal sanctions, including fines, forfeiture, and/or imprisonment.

**IVA** 16 U.S.C. 470ee-470gg  
TO REPORT VIOLATIONS 1-800-548-4005





# Dealing with Looters

What to do when you see someone looting:

- Contact TVA Police immediately (**1-855-476-2489**).
- Note general description of the individual and other information (car, boat, or other vehicle description).
- Drop a pin on a map or note the general location.
- Remove yourself from the scene.
- Have as little contact with the individual as possible.
- If damage has already been done, essentially a Violation & Encroachment, contact Cultural Compliance staff.
- Reminder: ARPA only applies to archaeological resources and sites on fee-owned land; does not include flowage easements, transmission line ROWs, etc.

---

# NAGPRA

Meg Cook, Senior Specialist and Interim Tribal Liaison

August 22, 2023

# Native American Graves Protection and Repatriation Act

---

Enacted Nov. 16, 1990; Regulations promulgated Dec. 4, 1995

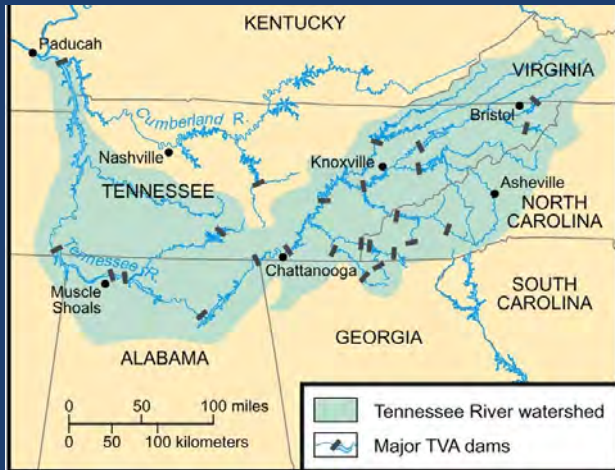
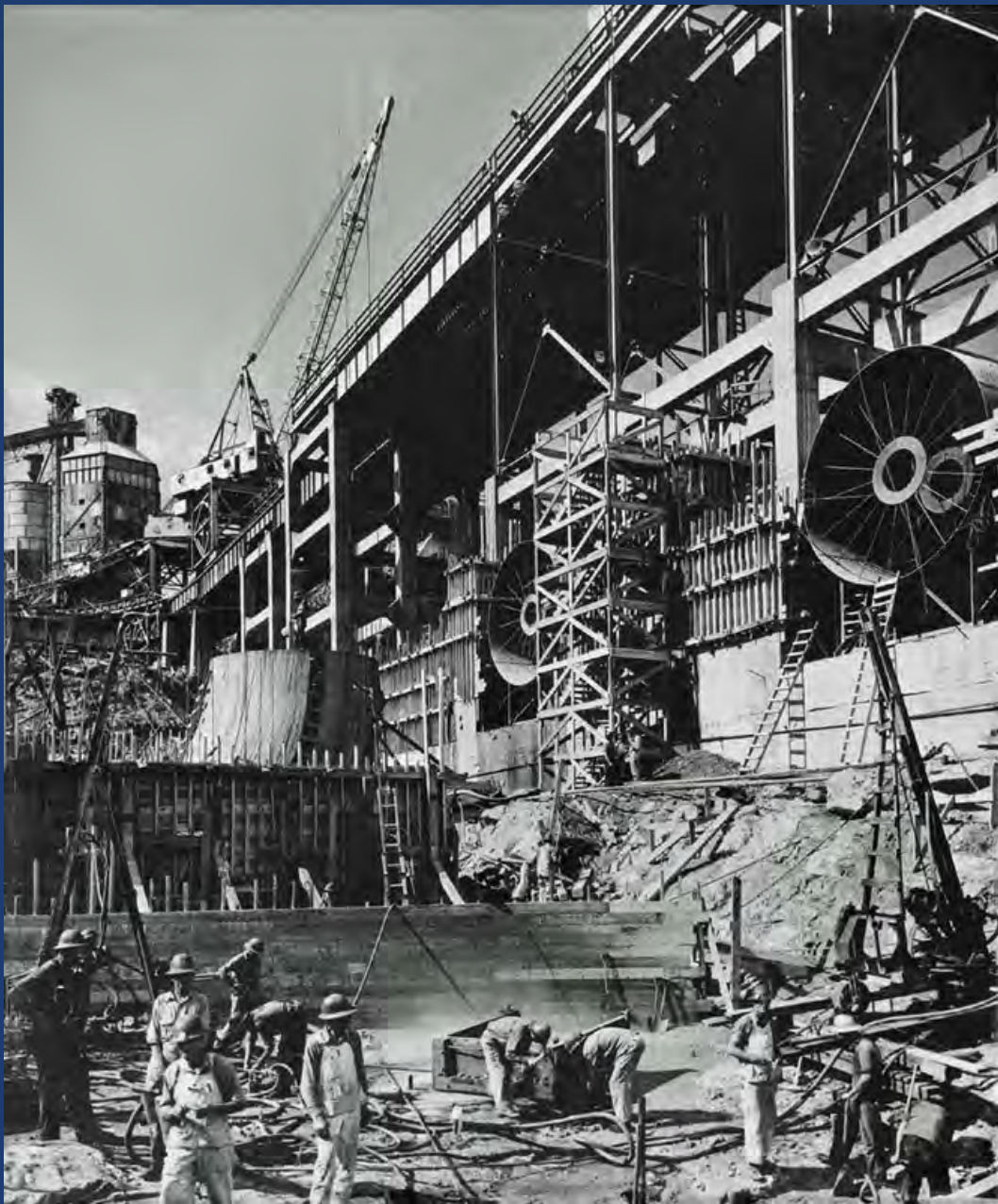
“...to reach agreement on repatriation or other disposition of these remains and objects.”

US House Report 101-877

“...to provide for the protection of Native American graves and the repatriation of Native American remains and cultural patrimony.”

US Senate Report 101-473





# Regulatory Process

---

NAGPRA requires repatriation or transfer of Native American human remains and other cultural items after



**Consultation** with lineal descendants and Federally Recognized Indian Tribes (Native Hawaiian Organizations if applicable).



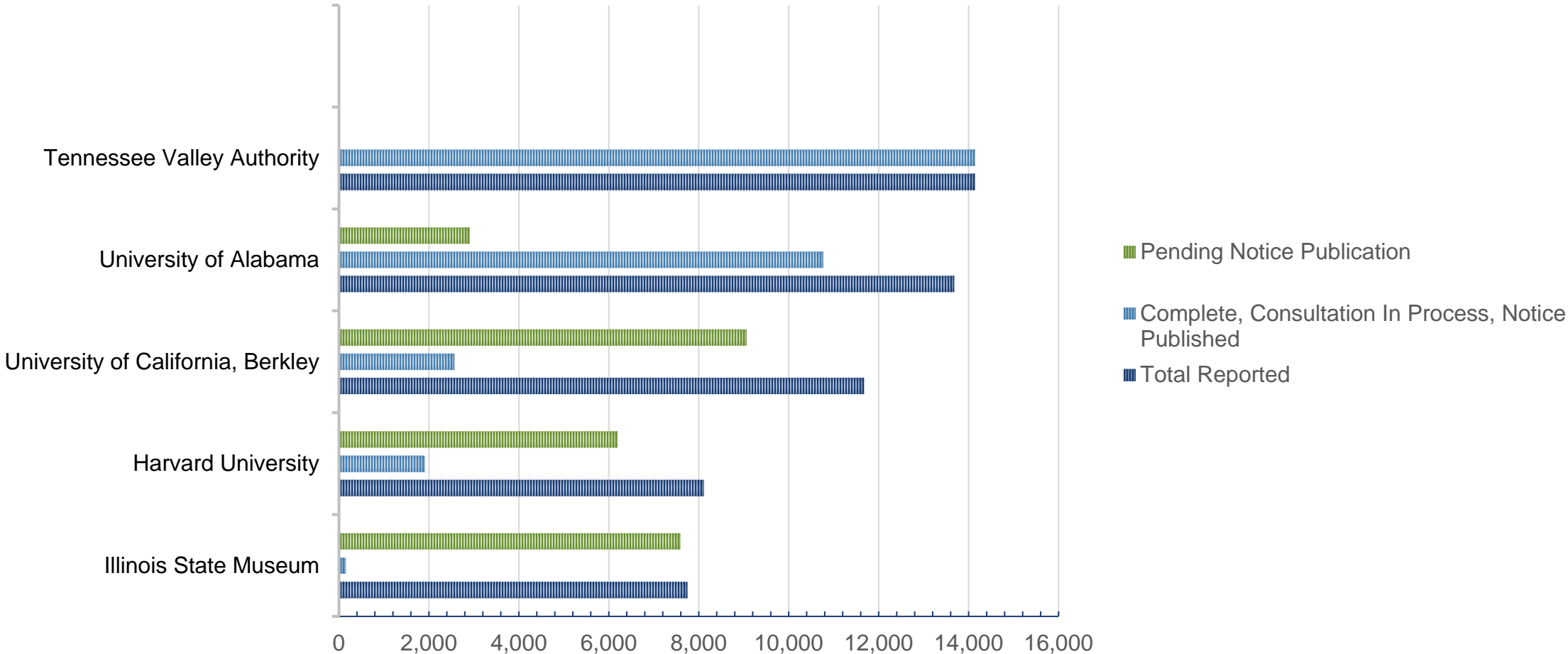
Identifying and **reporting** collections likely to contain Native American Human remains and other cultural items (inventory).



**Giving notice** prior to repatriating or transferring human remains and other cultural items.

# Top 5 NAGPRA Collections

Reported to Dept of Interior, National NAGPRA Program





# Consultation Matters

*“Any additional inventory work should be based upon the request of a tribe, involve only existing records, and only for the limited purposes of geographic origin, affiliation, or facts around acquisition.” –Melanie O’Brien, National NAGPRA Program Director, 3/16/21*

Cataloging includes documenting each item from a site. One site may easily produce many thousands of artifacts, which requires time and resources.



---

# Wrap-up

RaeLynn Butler, MCN

---

# Wrap-up & Questions

Melanie Farrell



---

# Closing Remarks

---

# Adjourn

---

# Drive Safely!



An aerial photograph of a river winding through a city, with a large forested area in the foreground and a highway interchange on the right. The sky is blue with some clouds. The text 'TVA' is in large white letters, and 'TENNESSEE VALLEY AUTHORITY' is in smaller white letters to its right.

# TVA

TENNESSEE  
VALLEY  
AUTHORITY