



2022 Year in Review

TVA
Stewardship
Successes



TENNESSEE
VALLEY
AUTHORITY

Welcome to Our Progress Report

As we pause at the end of the year to reflect on the accomplishments of dedicated staff, partners and volunteers, this year's work speaks volumes about the cumulative impact of many efforts. We all have navigated the changes and challenges of the pandemic. I believe that, together as a community, it has made us stronger, allowing us to add to our toolkit of adaptation skills.

TVA's stewardship mission of managing the Tennessee River system and its public lands started in 1933 and only strengthens with measures like adding an official biodiversity statement, which we did this year.

Some of the methods we use to accomplish work must evolve, so in fiscal year 2022, we embraced the new normal of some things being in-person and some things being virtual. Many trends from last year held steady, such as an above-average Section 26a application load from stakeholders wanting to build a dock or improve their shoreline. Public lands continued to see a high volume of visitors, and that really makes it clear just how valuable this land is to the people of the Tennessee Valley and to those who come here for recreation and relaxation.

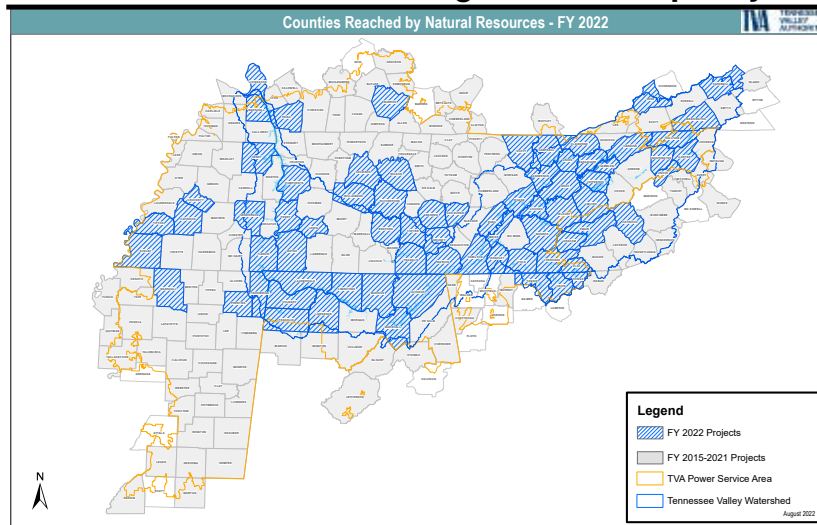
Natural Resources had over 300 positive news stories and 1.4 million impressions on social media, sharing the good work happening in communities. (Follow us on social media!) Our Public Land Information Center answered over 11,000 calls or emails. Other highlights included over 6 miles of new trails added to the system; the return of in-person events in which we interacted with thousands of you; the completion of the Tellico Reservoir Land Management Plan, a multi-year process; the continued growth of our water resources efforts to keep streams cooler and cleaner; and so much more.

Let me take a moment to thank someone many of you know and have worked with. Frank "Bucky" Edmondson has been a vital part of our Natural Resources group for 38 years and has built many partnerships and alliances with other organizations that help care for the Tennessee Valley. Please join me in congratulating him on his retirement! The fruits of his efforts will continue to bloom.

I know I speak for the entire staff when I say how thankful we are for our wonderful partners who help us in our work. When communities, agencies and volunteers come together, we can do so much more than any of us can do alone. As we look forward to 2023 and many new and ongoing projects, we are proud to look back for a moment and share this progress report with you.

Rebecca Hayden
Director, TVA Natural Resources

Counties We've Served Through Stewardship Projects





293,000
Acres of
Public Land



166+
tons of litter removed
from Tennessee Valley
land and water



HUNDREDS
of historic sites
protected



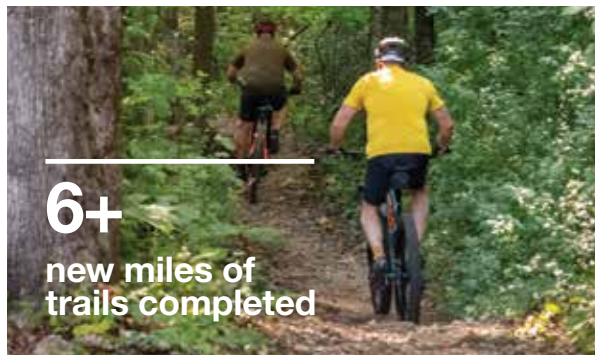
650,000
Acres of
Reservoir
Surface Water



3,800+
schoolchildren
became "TVA
scientists for
a day"



11,000
Miles of
Public
Shoreline



6+
new miles of
trails completed



140,000+
bats monitored



\$12 Billion
Economic
Benefit From
Recreational
Opportunities



3,000+
feet of streambank
vegetation planted

Reservoir Lands Planning

Our Natural Resources group at TVA manages 293,000 acres of public lands across the Tennessee Valley. As a federal agency, we hold these lands in trust for you, the public. We use our reservoir lands planning process to create plans for each reservoir area, allocating parcels into one of seven zones.

The lands planning process provides a consistent approach to balancing shoreline development, recreation, natural and cultural resource management, and other demands by applying a systematic methodology to identify the most suitable land uses. Public lands are used for public parks, industrial development, commercial recreation, residential development, tourism, forest and wildlife management areas, and much more. Reservoir lands plans are expected to have a lifespan of approximately 20 years and will help guide TVA's land-use decisions over that time.

This year saw completion of the Tellico Reservoir Land Management Plan (RLMP) after a second public comment period to review the draft documents and final approval by the TVA chief executive officer. This was the conclusion of a multi-year effort to review and update the 2000 Tellico RLMP. The 2022 Final Tellico RLMP affected approximately 16.5% of the TVA land allocations from the 2000 Tellico RLMP.

Section 26a Permitting/Land Use

TVA's goal is to protect land and shoreline resources while supporting access to public lands and waters according to the purposes laid out in Section 26a of the TVA Act of 1933. The lands and shorelines along TVA reservoirs are special places, and Section 26a and land-use processes help ensure they stay that way.



1,832
Section 26a
permits
issued

1,851
environmental
reviews closed

67
land-use
agreements
issued

Public Land Protection

TVA protects the public land under its care by maintaining clear boundaries, coordinating cleanups, assessing condition of parcels, and managing access sites to prevent damage to cultural and natural resources. TVA works all year round, in all temperatures, to monitor and maintain our public parcels for you to enjoy.

After the easing of COVID-19 restrictions, we began to gather again this year with our partners and volunteers. We value our Powerful Partnerships—a core emphasis at TVA—because together, we can accomplish so much more than we can individually.

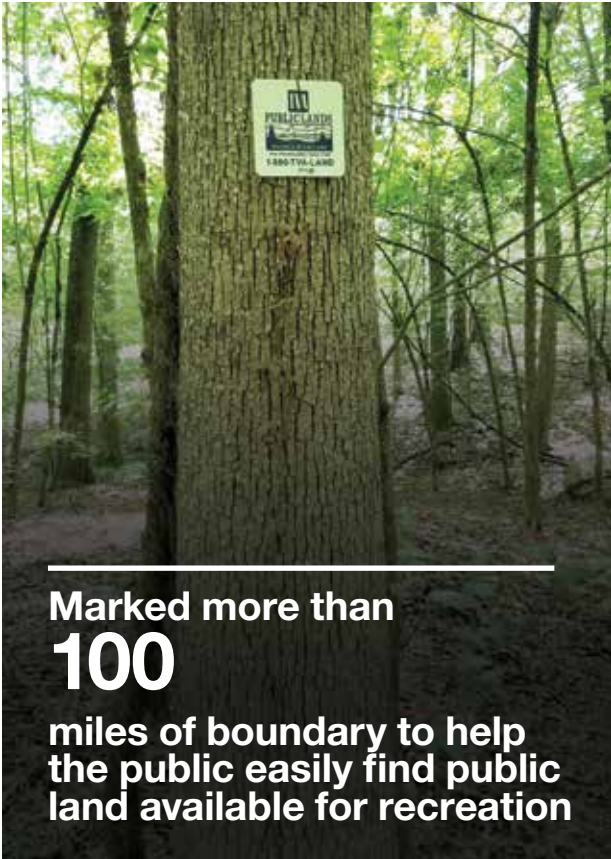
This year, TVA:

- Performed 699 maintenance tasks on 57,575 acres.
- Evaluated 2,907 natural resources assets on 278 parcels of land.
- Made improvements to access-control measures to prevent illegal dumping, removed trash, repaired roads, replaced signage, resurfaced parking areas and repaired trail features.
- Sponsored partner organizations in 75 cleanups in 44 counties.

Keep the Tennessee River Beautiful (KTNRB):

- 36 cleanups hosted; 400+ volunteers participated; over 60 tons of trash removed.





Land and Habitat Stewardship

TVA manages its public lands and natural resources to protect and improve a valuable diversity of habitats, especially native plant communities. TVA's management of these lands supports hunting, fishing, camping, hiking, biking, photography, wildlife watching and much more.

Completed 158 projects on 26 TVA reservoirs

Our objectives and how we met them:

1. Improve protection and monitoring of sensitive resources on TVA land
 - 27 projects completed
 - Monitoring and survey efforts pertaining to threatened, endangered and protected species, vegetation maintenance, cave protection and compliance, and natural area surveys
2. Enhance biological diversity and wildlife benefits
 - 60 projects completed
 - Native plant communities establishment and maintenance, pollinator enhancements, dewatering project management, grass and agricultural land improvements, and resource protection measures
3. Improve forest health and associated ecological benefits
 - 40 projects completed
 - Native plant restoration efforts, storm damage and disease assessments, tree seed bank improvement, and research partnerships
4. Improve interagency relationships and partnership efforts toward mutual stewardship goals
 - 31 projects completed
 - Conservation planning events, partnership and compliance, resource data sharing and collaboration, public outreach events, local and regional stewardship efforts

TVA also partnered to support research efforts across the Valley:

- Bat research
 - Conducted gray bat emergence counts and winter cave surveys
 - Partnered with University of Tennessee, Knoxville, to conduct research on foraging and roosting behaviors of tricolored bats, which are imperiled
 - Monitoring efforts documenting species presence and abundance of artificial bat roosts
 - Fund bat conservation projects
- Amphibian research of four-toed and marbled salamander populations at South Holston
- Western pygmy rattlesnake research
- Native plant communities and timing of prescribed fire effects

Prescribed Fire

TVA's Natural Resources Management professionals use prescribed fire under controlled conditions on TVA public lands across the Tennessee Valley. Prescribed fire use offers many benefits to responsible land stewardship. Some of the primary reasons for using prescribed fire are to enhance desirable plant communities, reduce hazardous fuels that can feed wildfires, perpetuate native, fire-dependent plants such as shortleaf pine and warm-season grasses, as well as to control insects, diseases and nonnative invasive plants. Prescribed fire may be the best and most cost-effective on-the-ground tool that land managers have in their "toolkit" to help meet multiple stewardship objectives.



Reforestation efforts that go back to the 1930s have gotten a big boost and new technology from a partnership with the University of Tennessee. Careful grafting of selected trees, replanting of trees, and an extensive seed orchard are carrying this program to future generations.



Nuisance and Invasive Species Management

Nuisance and invasive species of all kinds represent one of the most significant threats to the Tennessee Valley's natural resources. Some species of plants or animals may be considered acceptable in some circumstances but undesirable in others. Nonnative species must be controlled because they often will take advantage of a new climate and flourish too much, taking food and habitat from native species.

On Land

- This year, TVA treated and removed kudzu, privet and other invasive plants on 17 acres of land. We also work to educate gardeners and landowners on the importance of choosing native species from their local nursery.

On Water

- TVA managed invasive aquatic plants from 2,595 acres of water, focusing especially on Pickwick, Guntersville, Nickajack, Chickamauga and Watts Bar reservoirs.
- Natural Resources, by providing two aquatic harvesters, technical expertise, 1,500+ staff hours and harvester operator coverage, helped Browns Ferry Nuclear Plant and Guntersville Hydro in managing and removing invasive eelgrass from water intakes.



250+

acres of land treated for
removal of kudzu and
other invasive plants

Cultural Resource Management

A lot of history has taken place on the acres of fertile land that is now TVA's power service region. From ancient indigenous tribes to early European settlers to the Civil War to the homesteads of the early 20th century, remnants of the past still can be found.

TVA has a rich history in cultural resource management that goes back to its establishment in 1933. As a federal agency, TVA is responsible for identifying, managing and protecting cultural resources that are found on its property or affected by its action.

This year, TVA:

- Under our Section 110 program, conducted surveys on 970 acres of TVA land containing possible historic resources.
- Completed an inventory of items identified as funerary objects associated with present-day federally recognized Native American tribes. This is part of TVA's responsibility to comply with federal protection acts as well as our ongoing commitment to building relationships with tribes.
- Partnered with Native American tribes and academic archaeologists to conduct research on TVA public lands.
- Through our successful Thousand Eyes volunteer program, trained more than 65 volunteers to help monitor archaeological sites around the Valley.
- Stabilized 3,900 feet of shoreline, which is important in stopping erosion of some sites.
- Worked with University of Alabama for the ninth year on a project to curate and care for objects recovered in the earliest days of TVA's work.
- Continued to support the McClung Museum of Natural History & Culture and the University of Tennessee, Knoxville, in the preparation of NAGPRA (Native American Graves Protection and Repatriation Act) cultural items for repatriation and reburial. We also assist multiple Native American Tribes in the reburial of cultural items.



Water Resources Stewardship

The Tennessee River watershed encompasses parts of seven states in the Southeast and comprises about 41,000 square miles. It is one of the most biologically diverse watersheds in all of North America. Hundreds of species call this region their home.

Clean water is vitally important—for people, for plants and for animals. Year after year, we monitor conditions in Valley streams and waterways with a broad range of clean water initiatives to support aquatic health.

One of the most efficient and cost-effective ways to improve water quality and improve aquatic habitat is to establish “riparian buffers,” which are created by the planting of trees and vegetation by the stream, thereby keeping the water cool and filtering out pollutants before they reach the stream.

This year, TVA:

- Partnered with the Tennessee Department of Agriculture to establish the Tennessee Riparian Incentive Program, which is expected to establish over 700 acres of riparian buffers over the next 10 years.
- Worked with Mainspring Conservation Trust to conduct tree planting events with local school groups and interested landowners, thereby establishing riparian buffers along 3,050 linear feet of streambank in North Carolina.
- Sponsored the Tennessee Environmental Council's Tennessee Tree Day, during which 18,000 people planted approximately 80,000 trees in Tennessee.
- Partnered with the U.S. Fish and Wildlife Service and The Nature Conservancy to stabilize and plant vegetation on approximately 600 feet of streambank in the Paint Rock watershed in Alabama.

Additional Support

In addition to establishing riparian vegetation, TVA works with multiple agencies and nonprofit organizations across the Valley to protect aquatic biodiversity.

We supported the Center for Natural Capital's cleanup along a 60-mile stretch of the Clinch River in Russell County, Virginia. To date, this partnership has removed approximately 3,760 tires and 43.25 tons of trash and debris from the Clinch River.

TVA also partnered with Conservation Fisheries to help propagate and reintroduce at-risk fish species like the sickle darter and boulder darter in streams to reestablish viable populations for the future.

TVA continues to conduct stream and river biological monitoring. The primary goal is to assess fish and benthic macroinvertebrate communities to determine stream health across the Tennessee River watershed. Objectives are to provide stream condition data sufficient for making informed watershed management decisions; to target and track watershed improvements; and to support TVA programs and compliance goals. These monitoring efforts played a major role in documentation of snail darter populations in the Tennessee River, and this supported the delisting of the snail darter from the U.S. Fish and Wildlife Service Endangered Species Act.

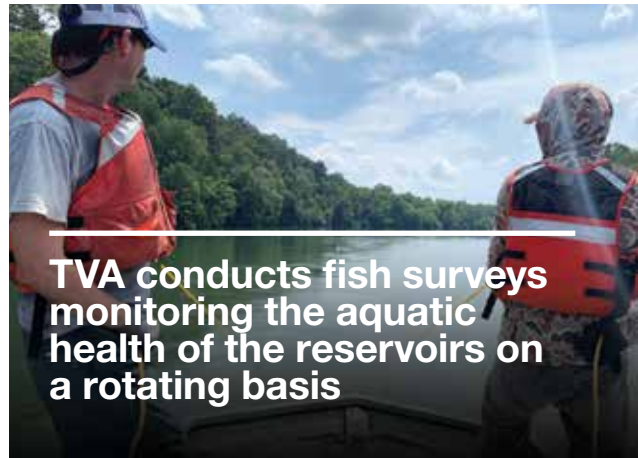
TVA works with the Little Tennessee Native Fish Conservation Partnership, which helps conserve and restore native fish, mussels and aquatic habitat in the Little Tennessee River. This year, TVA provided funding to numerous partners in this collaborative group, to help them implement a variety of conservation projects, including the establishment of riparian buffers, mussel releases, and aquatic life assessments. The Little Tennessee River is recognized as a national Native Fish Conservation Area, and partnering to protect and enhance aquatic and terrestrial habitats in this watershed is an important part of TVA's management of the Tennessee River system.

Since marinas are on the water, we have a program just for them: Tennessee Valley Clean Marinas, in which we certify marinas that go the extra mile to keep water resources clean. Three new ones were certified in FY22, making a total of 45 certified Clean Marinas on TVA reservoirs. The Clean Marina program helps protect water resources through implementation of best practices for fuel management, septic storage and removal, and sediment control.

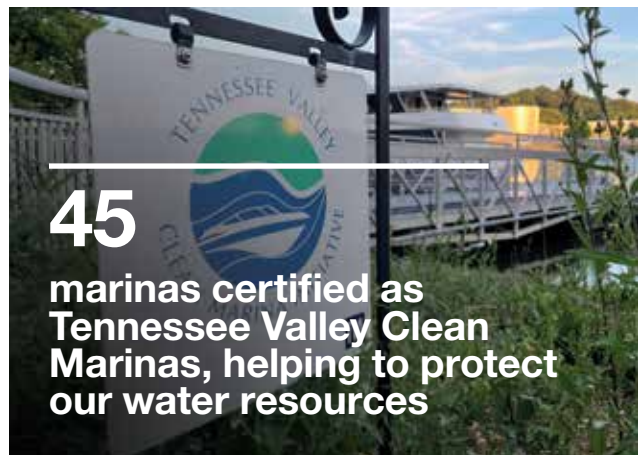


**Tennessee River
Watershed
supports**

240
**native fish species
and 80 freshwater
mussel species**



**TVA conducts fish surveys
monitoring the aquatic
health of the reservoirs on
a rotating basis**



45
**marinas certified as
Tennessee Valley Clean
Marinas, helping to protect
our water resources**

Recreation

As part of its mission of service, TVA manages its public lands and waters to support recreation so that the Tennessee Valley remains one of the best places to live, work and play. From primitive hiking trails to fully developed commercial campgrounds, TVA works to balance the resources under its care to provide recreational opportunities for everyone.





It's our ongoing responsibility to maintain, repair and add to our TVA dam reservations and day-use areas so you can enjoy them. This includes:

- Repaired: walkways, ramps, docks, piers, pavilions, bathrooms, parking areas, roads
 - Replaced: safety barriers, benches, signs, handrails
 - Installed: fence, parking; new camping pads, fire pits, lighting
- Partnered with the city of Elizabethton, TWRA and others to construct a new stream access site on the Watauga River
 - Partnered with the city of Florence to perform soil testing in support of the Florence Wagon Works Project
 - Continued to maintain the Elk River, Duck River and Bear Creek scenic floatways

Camping

- TVA's six Dam Reservation Campgrounds are managed by Vista Recreation. TVA performed improvements at Pickwick, Melton Hill, Cherokee, Watauga and Douglas campgrounds.

This year, TVA:

- Stabilized 450 feet of shoreline near Boone Dam Reservation.
- Expanded a parking area at the very popular Hall Bend trailhead.
- Constructed a new ADA fishing pier on Little Bear Dam Reservation.
- Extended the South Holston ADA trail, with the goal of working our way toward the dam in future phases.
- Partnered with Clay County, Tennessee, to improve the Sweetwater Park stream access site on the Hiawassee River.
- Partnered with Fannin County to improve the Shallowford Bridge stream access site on the Toccoa River.
- Partnered with Calloway County to improve road conditions on Kentucky Reservoir.
- Partnered with Union County to stabilize 500 feet of shoreline on Norris Reservoir.





Loyston Point Trails

More than 6 miles of new trail completed in Loyston Point Trails.

Ecotourism

Did you come visit us this year? TVA partners with state agencies and municipalities to expand recreational opportunities and support the booming industry of ecotourism.

- For ideas on where to travel: We are longtime sponsors of the National Geographic Tennessee River Valley (TRV) MapGuide initiative (exploretrv.org). The MapGuide showcases the beauty and wonder of our natural resources and places to visit.
- With 293,000 acres of public land and 180+ miles of trails, we are always replacing or adding to the signs and kiosks that help you find your way and learn about what is around you.

Tennessee RiverLine

TVA is a founding member of the Tennessee RiverLine partnership, whose goal is to develop a 652-mile water trail along the Tennessee River, connecting Knoxville, Tennessee, and Paducah, Kentucky.



Public Outreach and Information

TVA provides environmental education, volunteer opportunities, and support to engage communities in outdoor activities and caring for the environment. Through River Neighbors and other e-newsletters, social media, web-based interactive tools, publications, and TVA's Public Land Information Center, we connect with you.

With COVID-19 restrictions easing, we were back in the classroom this year. More than 3,800 children participated in our hands-on EarthEcho Water Challenge (formerly World Water Monitoring Challenge) program, in which fourth- through sixth-graders become scientists for a day, testing and studying water from creeks, lakes or rivers in their area. We also created a video version of the class and added several STEM (Science, Technology, Engineering, Mathematics) learning modules to our website.

TVA sponsored 14 organizations that implemented environmental education events. We continued to add participants to our iScience program partnership with Discover Life in America, and now have 29 middle schools working to collect species data around their school grounds, helping us learn more about our unique public lands.

- Outreach Events: 79 in 202 counties
- Children reached with outreach and environmental education: 3,800
- We added nine new Adopt a Trail volunteers to bring our team to a total of 43 people who give of their time to help monitor and maintain TVA public lands. In FY22, our volunteers put in almost 230 hours of work in 24 different locations across the Valley. We appreciate our volunteers!

Total outreach and stewardship projects: 449



79
outreach
events



449
total outreach
and stewardship
projects



Engaged with
3,800+
children through
outreach and
environmental
education programs
across the Valley



43
Adopt a Trail volunteers
spent 230 hours at 24
locations across the Valley

Public Land Information Center

They answer calls, emails, complaints and questions all day long. The Natural PLIC was established to be an easy point of contact for external stakeholders to receive consistent information. Each year they handle about 10,000 inquiries but this year the count surpassed 11,400.

