

Tennessee Wildlife Resources Agency

FY 2022-23 ANNUAL REPORT



*Committed to
Conservation*

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Tennessee Wildlife Resources Agency

Mission Statement

To preserve, conserve, manage, protect, and enhance the fish and wildlife of the state and their habitats for the use, benefit, and enjoyment of the citizens of Tennessee and its visitors. The agency will foster the safe use of the state's waters through a program of law enforcement, education, and access.





Agency Leadership



Jason Maxedon
Executive Director



Brandon Wear
Deputy Director
Field Operations



Frank Fiss
Deputy Director
Business Operations



Torrey Grimes
General Counsel



Emily Buck
Communications



Mike Bell
Legislative Affairs



Randi Tarpy
Human Resources



Col. Darren Rider
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Enforcement



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Biodiversity



Jay McClellan
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Joe Benedict
Wildlife & Forestry



Ken Tarkington
Budget &
Procurement



Don King
Multimedia



Tim Churchill
Federal Aid & Real Estate



Dennis Saucerman
Accounting



Scott Denton
Information Technology

Letter from the Executive Director

As the agency heads into the new year, we are excited to be celebrating our 75th anniversary. This year is sure to bring countless opportunities to continue advancing critically important wildlife and fisheries conservation initiatives such as habitat restoration, efforts to recover threatened species, and work to prevent and control the spread of wildlife diseases and invasive species. The 75th anniversary is also an excellent opportunity to reflect on the achievements we have seen since we were founded in 1949 by concerned hunters and anglers who cared deeply about the status of natural resources in Tennessee.

In this annual report, we share the work that took place in Fiscal Year 2022-2023 (FY23). It was a year of both challenges and successes, but through it all, our 750 TWRA employees showed unwavering commitment and dedication to protecting and preserving the rich land and biodiversity that makes our state so special. We also worked diligently to provide high quality outdoor recreation opportunities across the state. In addition to our traditional hunting and fishing opportunities, we partnered with other state agencies to launch the Bill Dance Signature Lakes trail, developed programs to introduce new constituents to outdoor opportunities, and made progress on expanding our shooting sports and ranges. We welcome all Tennesseans to join us as we go outdoors and share our commitment to conservation.

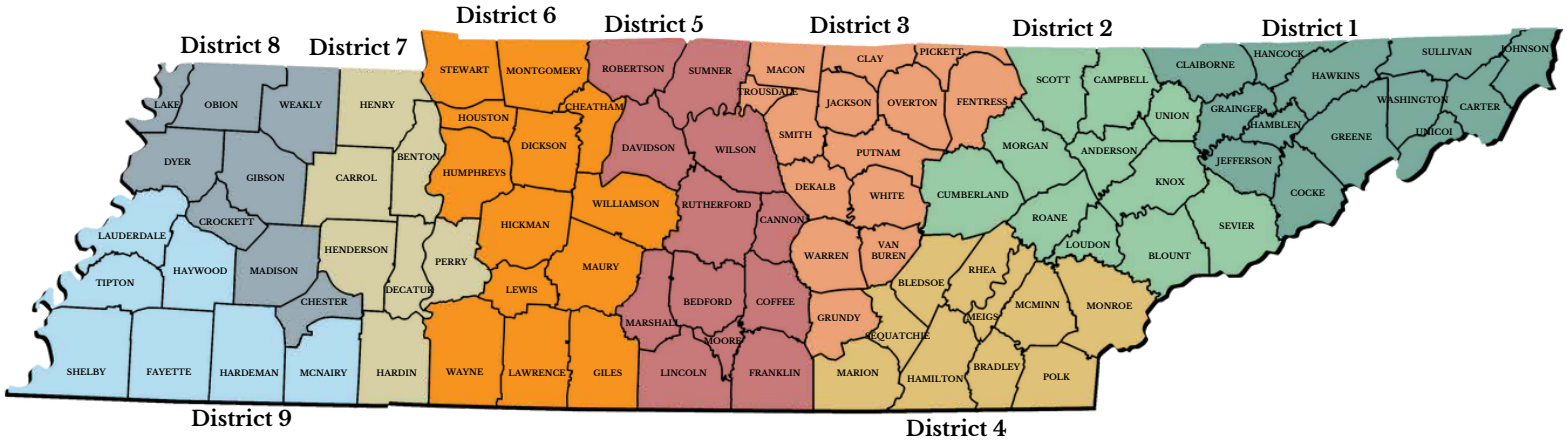
Jason B. Maxedon

Jason Maxedon
Executive Director
Tennessee Wildlife Resources Agency

Tennessee Fish and Wildlife Commission



TWRA's governing body is the 13-member Tennessee Fish and Wildlife Commission. Members receive four or six-year appointments from the Governor, Lt. Governor, and Speaker of the House. The Governor, Commissioner of Agriculture, and Commissioner of Environment and Conservation also serve as ex-officio members. Commissioners are non-salaried public servants who spend countless hours corresponding with constituents and engaging on outdoor and wildlife public issues.



Tommy Woods
Chairman
District 1



Jimmy Granbery
Vice Chair
District 5



Chris Devaney
Secretary
District 4



Kent Woods
District 2



Rhonda Moody
District 3



Stan Butt Sr.
District 6



Monte Belew
District 7



Brad Box
District 8



Dr. Hank Wright
District 9



Wally Childress
Statewide



Bill Cox
Statewide



Greg Davenport
Statewide



Chip Saltsman
Statewide

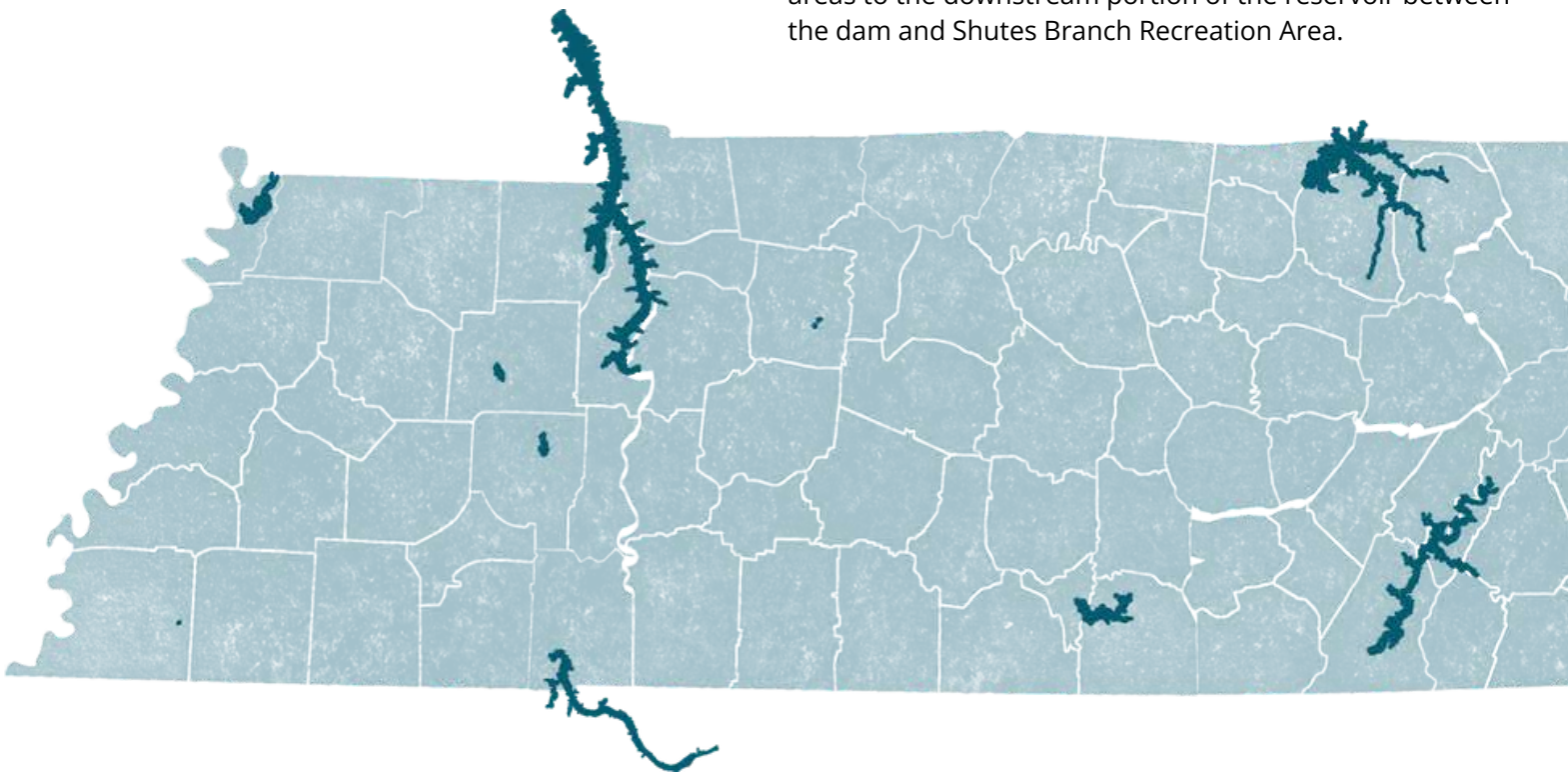
Lakes, Reservoirs, and Fishing

West Tennessee Reservoirs:

Anglers fished an estimated 1,259,465 hours and made 187,317 fishing trips on Kentucky, Barkley, and Pickwick reservoirs and Reelfoot Lake in FY23. Black bass, crappie, and catfish were the three most sought after species. Economic data showed total trip expenditures were \$8,173,500 and anglers were willing to expend an additional \$3,966,090 to fish these four bodies of water.

Old Hickory Reservoir:

Anglers spent 518,000 hours and made 107,000 trips to fish Old Hickory Reservoir this year. To continue supporting anglers, TWRA was awarded a \$121,100 fish habitat improvement grant from Bass Pro Shops in FY23. Since impoundment of the reservoir in 1954, woody habitat has undergone a constant decay, resulting in less fish habitat as time passes. To help combat the reservoir aging process and improve fishing opportunities for anglers, reservoir managers added 32 new fish habitat areas to the downstream portion of the reservoir between the dam and Shutes Branch Recreation Area.



Lake Halford:

At the start of FY23, TWRA was given management of Carroll County 1,000 Acre Lake from the Carroll County Watershed Authority. During the transition, the Tennessee General Assembly renamed it Lake Halford. Throughout the course of the year, TWRA hired three staffers to manage the lake, made infrastructure improvements to the property, and established additional permitting and budget requirements needed for management. To support the quality of the fishery, sampling was conducted, 250 habitat structures were added, and approximately 75,000 forage fish were stocked.

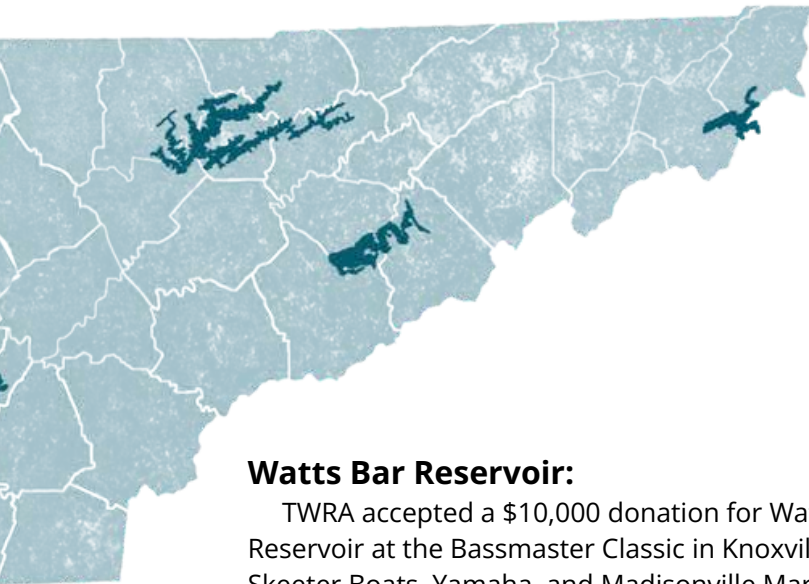
J. Percy Priest Reservoir:

J. Percy Priest Reservoir provides a variety of fishing opportunities. Anglers spent a total of 452,000 hours and made 82,000 trips fishing J. Percy Priest Reservoir. Targeted fishing efforts for crappie and largemouth bass were most popular followed by hybrid striped bass.

Across Tennessee

Cordell Hull Reservoir:

TWRA inventoried fish attractor sites on Cordell Hull Reservoir and replaced anchors at each site if existing ones were damaged, installed new hardware, and placed new buoys where needed. The TWRA reservoir crew then partnered with Jackson County High School to build habitat structures for Cordell Hull Reservoir. A total of 400 stake buckets and 25 Shelbyville cubes were constructed by the school shop class, and these structures were placed at 10 fish attractor sites and 12 unmarked locations on Cordell Hull.



Watts Bar Reservoir:

TWRA accepted a \$10,000 donation for Watts Bar Reservoir at the Bassmaster Classic in Knoxville from Skeeter Boats, Yamaha, and Madisonville Marine. All stocking sites on Watts Bar Reservoir have block and pipe structures (about 20 at each site) for fingerling fish habitat.

Kids Fishing Events:

Many avid anglers fondly remember a time from their youth when a parent or grandparent took them fishing for the first time. To support young people and help recruit new families to outdoor recreation, TWRA helps stock youth fishing events and community fishing lakes statewide. In FY23, approximately 55,000 pounds of channel catfish were stocked in 82 waterbodies statewide. Youth fishing events were held at 78 of the stocked waterbodies and an estimated 11,500 youth participated. Approximately 70 percent of the youth caught at least one fish, and these waterbodies continued to provide fishing opportunities for months after the event.

WARMWATER HATCHERIES

PRODUCTION BY THE NUMBERS

HUMBOLDT: 1,018,231

Bass, Bluegill, Redear Sunfish, Catfish, Crappie, and Walleye

SPRINGFIELD: 1,218,990

Walleye, Striped Bass, Hybrid Bass, Bluegill, Redear Sunfish, Sauger, and Crappie

NORMANDY: 1,865,377

Striped Bass, Florida Bass, Crappie, and Walleye

EAGLE BEND: 1,518,136

Walleye, Striped Bass, Bluegill, Redear Sunfish, and Crappie

MORRISTOWN: 473,074

Blacknose Crappie, Striped Bass, Hybrid Bass, Redear Sunfish, Sauger, and Walleye

Hiwassee: 339,187

Largemouth Bass, Crappie, and Bluegill

Sugar Creek: 120,813

Crappie

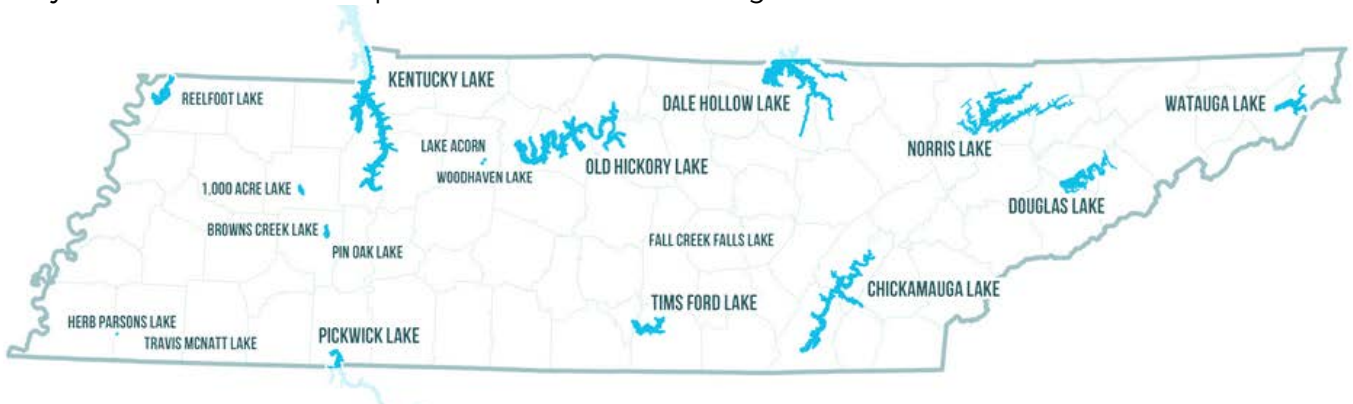




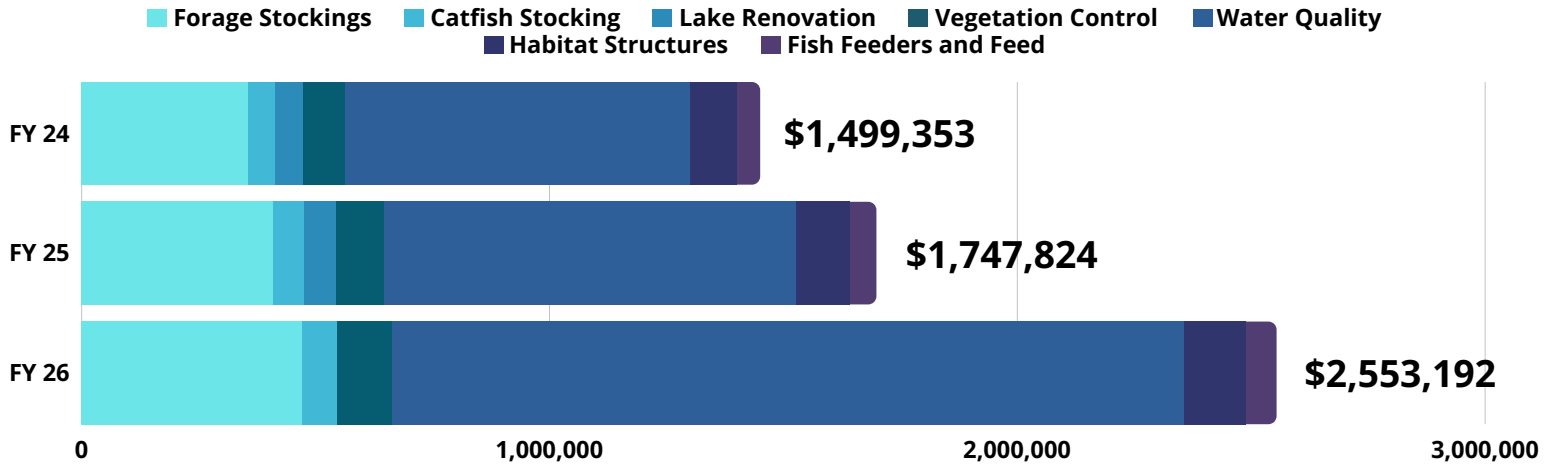
BILL DANCE SIGNATURE LAKES

Ten large reservoirs feature Bill Dance Signature Lake access points constructed to a standard of excellence endorsed and designed by Bill Dance Outdoors in collaboration with Tennessee Wildlife Resources Agency, Tennessee Department of Environment and Conservation, and Tennessee Department of Tourist Development. These ten reservoirs include “Bill Dance Signature Lake access areas” with new or improved assets driving economic activity year-round for communities. In addition, eight “small venue” lakes entice anglers of all ages to enjoy the outdoors and a high-quality fishing experience.

In 2019, TWRA committed to a \$6 million investment. Projects included six large ramps at \$300,000 each. Since then, TWRA has renovated and made investments at several of the lakes, so Tennesseans can benefit from improved facilities and enhanced habitat and fisheries management. Improvements for fishing and boating have included the construction and installation of over a thousand fish attractors, ramp development, water level adjustments to allow for dredging, and infrastructure work on ramps, parking lots, signage, restrooms and more. While inflation limited the reach of the budget, TWRA is still expecting to spend \$6.3 million by the end of 2024 for improvements at Bill Dance Signature Lakes across the state.

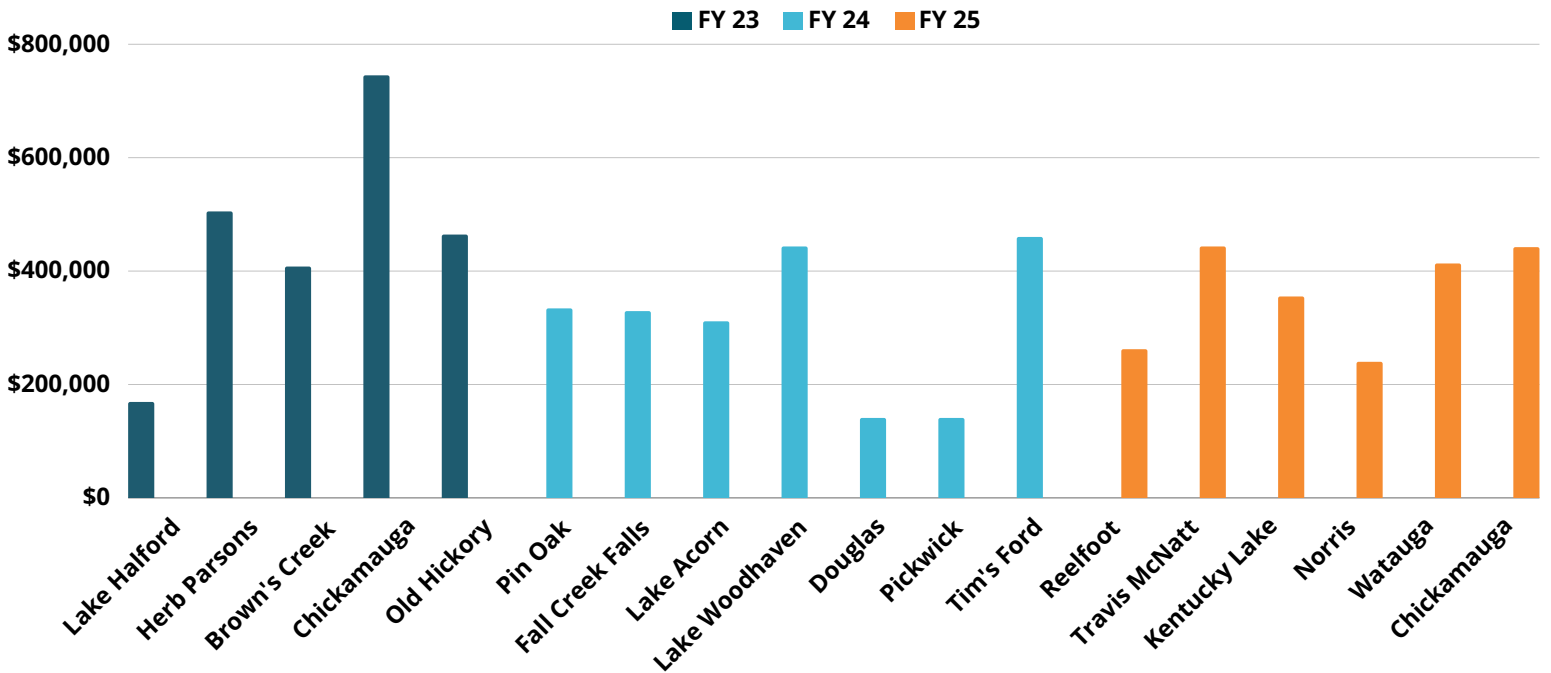


TWRA Fish Management Work - 3 Year Projection



This habitat work is being done on the 8 small lakes on the Bill Dance Signature Lakes to intensively manage these waters at a higher standard to produce quality bass fishing or family fishing with bluegill and catfish, or a high catch rate for first time fishing experiences with trout, bluegill, and catfish.

Joint Agency Engineering Work - 3 Year Projection



TWRA and TDEC are working both independently and jointly on infrastructure projects to install or upgrade boat ramps, courtesy docks, fishing docks, parking, fish feeders, restrooms, signage, picnic tables, fish cleaning stations, and more.

MANAGING FISH HABITAT AND POPULATIONS

Tennessee is home to 32 large reservoirs, three major river systems, thousands of miles of tributary rivers and streams, and dozens of smaller family fishing lakes managed by TWRA. As a state with a diversity of habitats, stretching from the cold mountain streams in the east, all the way to the Mississippi River, Tennessee has become known for trophy bass, trout, catfish, muskellunge, striped bass, and more.

Agency fisheries staff manage some fisheries by stocking from hatcheries. Nearly nine million fish are stocked each year - from fry to fingerlings, brood fish and trophies - including several species of game and non-game fish. This effort is led by TWRA biologists who monitor fish populations, angler success, and habitats to maintain the state's fisheries.

HUMBOLDT FISH HATCHERY PRODUCTION AND OUTSTANDING STAFF

Humboldt Fish Hatchery is TWRA's largest warmwater hatchery with 43 production ponds and three water supply reservoirs. Over the course of the fiscal year, Humboldt Hatchery produced 1,018,231 fingerlings to meet fish stocking demands in Tennessee. The hatchery produced several species including walleye, Florida largemouth bass, blacknose crappie, blue catfish, channel catfish, and bluegill sunfish.

This year, the TWRA Fisheries Division recognized two Humboldt Hatchery employees with awards for outstanding service. Tom Pratt, the hatchery's manager, is the Fisheries Biologist of the Year and Brandon Harrison is the Fisheries Technician of the Year.

Tom has been with TWRA since 2006 and has positively influenced fisheries throughout the state. He spent over two years as a technician at Humboldt Hatchery before promoting to the manager level. His accomplishments at the hatchery have been instrumental in developing innovative fish culture techniques and improving production of hatchery reared species. His ability to hold fish, such as trout for the winter trout program and catfish for fishing events, ensures anglers will experience quality fishing at stocked locations. In addition to his hatchery duties, Tom manages Davey Crockett Lake, and this year took on the management of Gibson County Lake.

Humboldt Hatchery is the TWRA's source for Florida largemouth bass. This year a difference was seen in spawning activity in the Florida bass at the hatchery and there was concern that the spawning season would be shortened, which would affect fish production. Tom and his staff were able to extend the spawning process by three weeks to meet statewide Florida bass fry demand. Surplus Florida largemouth bass fingerlings were produced for the third year in a row, which exceeded reservoir stocking requests and provided fingerlings for a first-time stocking at Pickwick Lake.

Brandon began working for the Agency in 2007 where he played a key role constructing Annex I and II. These efforts helped make Humboldt Hatchery the largest hatchery in the state and contributed to providing more than one million fish stocked statewide. Brandon adapted quickly to operating heavy equipment which allowed project completion, and he has taken an interest in all aspects of production at Humboldt Hatchery. He has also been instrumental in training new employees in the intricacies of fish production at Humboldt Hatchery.



Photo: (Front Row) TFWC Chairman Tommy Woods, Tom Pratt, Brandon Harrison, Hunter Henley, and Fisheries Lifetime Achievement winner Bart Carter. (Back row) Deputy Director Frank Fiss, Chief Mark Thurman, Fisheries Lifetime Achievement winner Tim Broadbent, Travis Scott, Todd St. John, and Jason Henegar.



Alligator Snapping Turtle Rearing Project:

The alligator snapping turtle is a threatened species in Tennessee. In August 2017, 296 juvenile alligator snapping turtles were obtained from Tishomingo National Fish Hatchery in Tishomingo, Oklahoma. These juveniles were housed and cared for by TWRA staff at Humboldt Hatchery. Biologists tracked growth of the turtles and prepared them for release with tracking tags. In 2022, biologists released 50 alligator snapping turtles in the Ghost River.

The agency currently has an additional 312 alligator snapping turtles at Humboldt Hatchery for future restoration releases in 2024. TWRA also assisted the U.S. Fish and Wildlife Service with Species Status Assessments, supported Illinois Department of Natural Resource's alligator snapping turtle restoration plan, and coordinated with the Nashville Zoo and Cumberland River Aquatic Center on their turtle rearing programs.



Native Brook Trout Restoration Program

The brook trout is the only trout species native to Tennessee. Historically, they once occupied all coldwater habitat in East Tennessee, but today, it is down to just 25 percent. Most of the distribution loss occurred during the late 19th and early 20th centuries as habitat alteration threatened populations. Currently, Tennessee is home to 147 miles of brook trout streams outside of the Great Smoky Mountains National Park. Approximately 70 percent of habitat can be found in the Cherokee National Forest, while another 30 percent is on private lands.

Tennessee brook trout restoration work began in the early 1980s, and the most recent statewide trout management plan is in effect through 2027. Focus areas of the plan include assessment; habitat protection, restoration and enhancement; and public outreach.

Assessment:

TWRA biologists assessed the current population of native brook trout by completing a genetics inventory. Research found 76 percent of populations were true native brook trout unaffected by historic stocking. Another eight percent were hatchery influenced populations, and 15 percent were directly related to hatchery produced trout from the Northeast which are genetically different from native species. Results have been critical for directing additional management work, including identifying potential donor populations to support restocking efforts.

Habitat Protection:

TWRA identified 81 total populations of native brook trout spread out in several watersheds including the Watauga, South Holston, Little Tennessee, French Broad, and Nolichucky. Identification of these areas and the size of populations they support allows biologists to target critical habitat work.

Restoration and Enhancement:

The primary goal of TWRA trout biologists is to increase native brook trout distribution by 15 stream miles by 2027 and to restore trout where populations have been lost. Projects include removing wild rainbow trout which compete with native brook trout. Once rainbow trout are removed, native brook trout can then be moved into streams that have been identified as quality habitat. Standard restoration projects typically require moving 200-300 fish per mile of stream for the new population to be successful.

When donor streams do not have large enough populations to support moving that many fish, the agency uses propagation as a tool for species recovery. This work primarily occurs at the Tellico Brook Trout Hatchery and the Tennessee Aquarium Conservation Institute. Since 2017, TWRA has successfully restored almost 11 miles of native brook trout streams which represents the completion of 82 percent of the 2027 goal.

Tennessee Trout Hatcheries

Erwin State Fish Hatchery:

Erwin State Fish Hatchery starts its typical production cycle with five-inch rainbow trout in June. Trout are grown for up to 18 months until they are ready for stocking in nearby streams. Adult rainbow trout stocking typically begins in February and continues through July, with fish delivered to about 28 waters in Cocke, Greene, Carter, Unicoi, Johnson, and Sullivan Counties. Annually, more than 70,000 adult rainbow trout are delivered. This year, hatchery staff acquired 10,000 West Virginia golden trout eggs from the Petersburg, West Virginia Hatchery to diversify trout fishing opportunities in upper East Tennessee. Approximately 64 West Virginia golden trout, also known as Palomino trout, were stocked in East Tennessee streams and reservoirs in FY23. Additional Palominos were held at the hatchery to continue production for spring 2024 stockings. The agency also recently acquired the half-acre property containing the springs that are Erwin Hatchery's water source to protect this resource.

Buffalo Springs Hatchery:

Each year, Buffalo Springs Hatchery obtains nearly 800,000 rainbow trout eggs from the Erwin National Fish Hatchery and Mantua Hatchery in Utah. This year, Buffalo Springs distributed 148,087 adult and fingerling rainbow trout to support fisheries in 20 East Tennessee streams during the spring and fall, as well as the Tennessee Valley Authority's (TVA) Norris and Cherokee tailwaters and South Holston and Watauga reservoirs. Adult rainbow trout are also provided annually for three Winter Trout Program waters, as well as special events for kids and other outreach groups such as Project Healing Waters and Casting for Recovery. Trout eggs are also provided to Trout Unlimited for distribution to area schools that have 'Trout in the Classroom' programs.

Dale Hollow National Fish Hatchery:

TWRA works collaboratively with the U.S. Fish and Wildlife Service to produce and distribute 100,000 pounds of trout from the Dale Hollow National Fish Hatchery. The hatchery also supports recreation opportunities and offers an aquarium, visitor center, displays, and paved walking paths. The hatchery public fishing area, featuring an accessible pier, is stocked with rainbow trout on a weekly basis.

Flintville Hatchery:

Flintville Hatchery distributed 161,614 rainbow and brook trout for stockings in FY23. During the winter stocking season, Flintville fish were stocked in 22 counties including Bedford, Cheatham, Davidson, Dickson, Franklin, Gibson, Hardeman, Henderson, Lawrence, Lincoln, Madison, Marshall, Maury, Montgomery, Obion, Robertson, Rutherford, Shelby, Tipton, Van Buren, Weakley, and Williamson. During the spring, an additional 34 streams in 18 counties were stocked.



Don't Move A Mussel!



STOP AQUATIC HITCHHIKERS!™

Be A Good Steward.
Clean. Drain. Dry.

StopAquaticHitchhikers.org

Stop the transport of invasive species:

- **CLEAN:** boots, gear, boat, trailer & truck of plants, fish, animals & mud.
- **DRAIN:** bilge, ballast, wells & buckets before you leave the area.
- **DRY:** equipment before launching watercraft into another body of water.



Fighting Invasive

Aquatic invasive species pose an ongoing threat to the environment, economy, recreation, and human health. These species are a direct driver of biodiversity loss, hinder economic development, spread disease, decrease the aesthetic value of nature, and prevent recreational activities.

Aquatic invasive species can also kill large numbers of native species. They may prey upon them, compete with them for food and space, interbreed with them, or introduce harmful pathogens and parasites.

Zebra Mussels:

Zebra mussels can filter important plankton out of the water, which are a necessary part of the food chain that supports other native species. Zebra mussels also attach to boat motors and boat hulls, reducing performance and efficiency. The sharp shells cover rocks, swim rafts, and ladders – creating a safety hazard to unprotected feet.

Alabama Bass:

As many states in the southeast are realizing, the introduction of Alabama bass outside its native range can be devastating. Alabama bass have recently been detected in Tennessee waters and can impact popular species like largemouth or smallmouth bass. In other states where they were introduced, Alabama bass populations developed quickly and for a short period of time produced some large fish. However, this rapidly changed as the population increased and became overcrowded, resulting in high numbers of small fish.

Do Not Move Bass! In order to be successful at stopping the spread of Alabama bass, the responsibility lies among those who transport live fish away from the water where they are caught. In most instances, those fish are used as food, but in some cases might be released into other water bodies. **Always remember that it is illegal to intentionally release live fish into any public water in Tennessee away from where they were harvested.** Alabama bass are very difficult to distinguish from spotted bass; observations of illegal stocking should be reported to your local TWRA Regional Office.



Aquatic Species

Invasive Carp Management:

There are four species of invasive carp in Tennessee: bighead carp, silver carp, black carp, and grass carp. These species were first found in the Mississippi River and migrated into Tennessee waters via locks at Kentucky and Barkley dams. Invasive carp compete with native fish species and are destructive to aquatic vegetation.

The management of invasive carp is a national effort. TWRA works with experts at the U.S. Fish and Wildlife Service, Tennessee Valley Authority, Army Corps of Engineers, the U.S. Geological Survey, and other state agencies to develop and implement extensive strategies for planning, monitoring, and research. TWRA policy is based on the U.S. Fish and Wildlife's *Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States* strategic plan. The plan was developed by the Invasive Carp Working Group of the Aquatic Nuisance Species Task Force and is built around seven core goals that are operationalized through 48 step-down strategies and 131 recommendations to manage and control invasive carp. All funding for management actions is authorized through the U.S. Fish and Wildlife Service with oversight from the Invasive Carp Advisory Committee.

Monitoring and Research:

Each year, TWRA fisheries staff conduct extensive sampling to monitor invasive carp, including seasonal gillnetting, electrofishing, electrified dozer trawls, and commercial market surveys.

TWRA also partnered with Tennessee Tech University to monitor population characteristics of invasive carp in Kentucky, Pickwick, Barkley, and Cheatham reservoirs and tracking movement within the sub-basin. Combined amongst state and federal partners, more than 1,400 silver carp have acoustic tags in the Tennessee and Cumberland River Basin, and stationary receivers have been maintained at dams throughout the year.

TWRA also collects larval stage fish annually to monitor for carp spawning success. Since this tracking started in 2016, no evidence of successful carp spawning has been found in the Tennessee or Cumberland River systems.

Invasive Carp Removal:

TWRA continued to implement the Tennessee Carp Harvest Incentive Program (TCHIP). This year, 23 commercial fishermen were signed up for the TCHIP program through contracted wholesale fish dealers. Wholesale dealers then purchased 8.1 million pounds of carp from commercial fishermen. Since the program was founded in 2018, nearly 30 million pounds of invasive carp have been removed from Tennessee waterways.

Photo: Aquatic Nuisance Species Coordinator Cole Harty captures a silver carp for research.



Habitat Conservation

TWRA is committed to protecting and conserving wildlife habitat across the state. To preserve land for generations to come, the agency works diligently to identify and secure properties in critical locations that adjoin existing state properties, provide connectivity, support the rich biodiversity of the state, or otherwise enhance habitat and outdoor recreation. In FY23, the agency added nearly 3,000 acres of land to state properties.

TWRA also works to maintain an accurate GIS mapping database for land management and hunting status of land tracts, identifying habitat for threatened and endangered species, and providing interactive mapping services for hunters, anglers, and outdoor enthusiasts. In FY23, TWRA added 849 surveyed acres of wetlands to the database and 1,951 surveyed upland acres.

Wildlife and Forestry Outstanding Staff:

TWRA Wildlife and Forestry staff exemplify the passion and hard work needed to manage habitat. In 2023, Mitch Clure and Chris Harris were named the TWRA Wildlife Biologist of the Year and Wildlife Technician of the Year, respectively. Clure serves as a Wildlife Manager at Tellico Lake and South Cherokee Wildlife Management Areas (WMA). The Tellico Lake and South Cherokee WMAs are more than 308,000 acres combined, with portions owned by the U.S. Forest Service and the Tennessee Valley Authority.

Harris works hard to research and find the optimum way to improve management in his areas. Bringing his trade and technical skills, he has helped make significant improvements to critical infrastructure at both Yuchi Wildlife Refuge and North Chickamauga WMA including improvements to dove fields and early successional habitat.

Above: Mitch Clure pictured with Deputy Director Brandon Wear, Executive Director Jason Maxedon, Wildlife and Forestry Chief Joe Benedict, and TFWC Chairman Tommy Woods.

Below: Chris Harris pictured with Executive Director Jason Maxedon, his wife, Tiffany, Wildlife and Forestry Chief Joe Benedict, and TFWC Chairman Tommy Woods.

7
Upland acres in Jackson County at Blackburn Fork WMA

1,741
Upland acres in Cumberland County at Catoosa WMA

2.9
Upland acres in Hancock County for river access on the Clinch River

168
Wetland acres in Chester County at Tull Bottom WMA

12
Upland acres in Benton County at Big Sandy WMA

355
Wetland acres in Madison County at Colonel Forrest V. Durand WMA

92
Upland acres in Overton County at Skinner Mtn. WMA

194
Wetland acres in Dyer County at Tigrett WMA

96
Upland acres in Campbell County at the Sunquist Unit at NCWMA

132
Wetland acres in Montgomery County at Shelton Ferry WMA



Photo: Tracye Simmon
Bobwhite Quail



Tennessee Land Management

Across the state, the Tennessee Wildlife Resources Agency manages more than one million acres of land to provide high quality habitat to support both game and non-game wildlife species. Staff manage a diverse range of habitat types including wetlands, grasslands, forests, and early successional habitat. This diversity ensures wildlife species are supported from birth to maturity. Tennessee citizens also benefit from TWRA's land management work. WMAs provide an opportunity to enjoy the outdoors in a wide array of activities including hunting, fishing, birdwatching, hiking, camping, and more.

Acres of TWRA Managed Land in FY23

REGION	TWRA LAND	ACTIVELY MANAGED LAND	ACTIVELY MANAGED GRASSLAND	ACTIVELY MANAGED FORESTLAND	ACTIVELY MANAGED WETLAND
1	196,909	19,320	6,262	162	12,896
2	130,935	3,594	2,845	20	729
3	529,078	38,859	9,568	18,161	11,130
4	439,805	1,658	1,152	89	417
TOTAL	1,296,727	63,431	19,827	18,432	25,172



Prescribed Fire for Land Management:

Many wildlife organizations use prescribed fire as a habitat management tool. Prescribed fire mimics naturally occurring fires on the landscape which encourages new growth of native vegetation, increases the biodiversity of plant species, minimizes the spread of pest insects and disease, and recycles nutrients back into the soil. Prescribed fire also improves wildlife habitat for both game and non-game species, especially areas left for nesting and cover.

TWRA has partnered with the University of Tennessee for nearly a decade to establish a fire demonstration area at Bridgestone-Firestone WMA. The area allows students and the public to see the benefits of prescribed fire as vegetation regrows.

Statewide Prescribed Fire in FY23: 25,156 acres

Forestry Management:

TWRA foresters and biologists follow best practices for forest management to maximize wildlife habitat and ensure the health of Tennessee forests for generations to come. With over 18,000 acres of forestland actively managed in FY23, the agency was able to complete several key projects across the state.

Restoring West Tennessee Bottomlands:

In West Tennessee, land managers work to support wetlands with reforestation. This year, TWRA was awarded \$23,544 for the purchase of more than 52,000 high quality oak seedlings from East Tennessee State Nursery which were planted on the 160-acre Middle Fork Project. An additional 40 acres were planted at West Sandy WMA. To ensure high quality genetics for seedlings, 772 pounds of hard mast acorns were sent back to the East Tennessee State Nursery for future reforestation projects. Work was also completed to promote healthy forests including the removal of woody stems from mature fields at Tumbleweed WMA and Horns Bluff Refuge to create early successional habitat. Staff also completed prescribed burns at Tumbleweed, Bogota, and Shelby Forest WMAs.

Catoosa Wildlife Management Area:

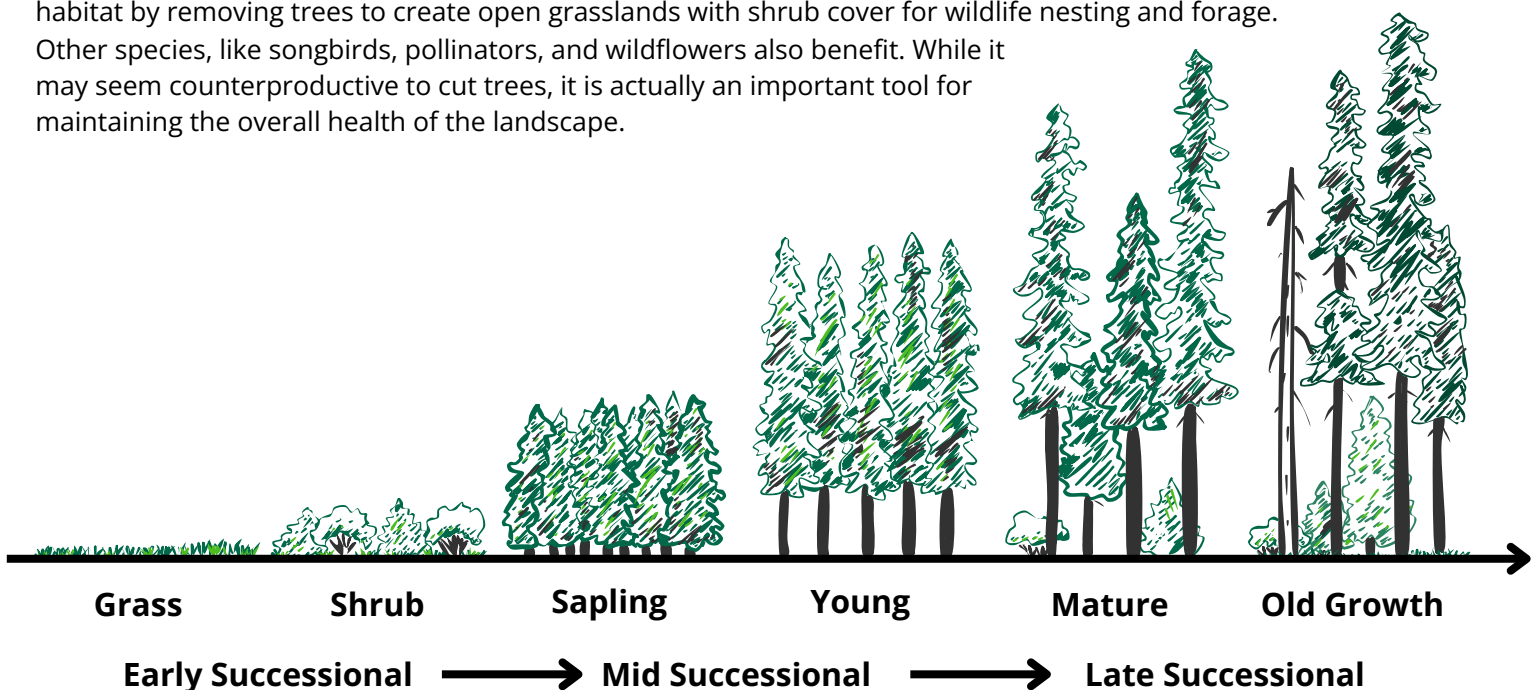
Forestry work at Catoosa WMA was designed to increase the quality and quantity of deer, turkey, and other wildlife habitat. The project included a thorough forest inventory of nearly 4,000 acres. Natural regeneration took place on 512 acres and 35 acres were planted. Prescribed burns took place on 290 acres in six compartments, and crop tree release occurred on 99 acres.

North Cumberland Wildlife Management Area:

Another priority for TWRA biologists was increasing the quality and quantity of habitat for ruffed grouse, turkey, and other wildlife at the North Cumberland and Cove Creek Wildlife Management Areas. Forest management took place on a total of 3,968 acres including timber sales valued at \$134,315. During this fiscal year, TWRA adopted the Tennessee Department of Agriculture Forestry Division's procedure for timber sales across the state. This ensures a consistent and transparent approach to timber sales across all government agencies. Proceeds from timber sales are reinvested in future habitat and forestry work as a sustainable funding model for wildlife conservation.

Forest Growth Stages and Wildlife Habitat:

Grass, shrubs, saplings, young and old forests all provide different types of cover and habitat for wildlife. Over time, open grasslands can be lost to densely packed forests, and biodiversity will be lost if wildlife managers do not intervene. TWRA biologists across the state are focused on restoring "Early Successional" habitat by removing trees to create open grasslands with shrub cover for wildlife nesting and forage. Other species, like songbirds, pollinators, and wildflowers also benefit. While it may seem counterproductive to cut trees, it is actually an important tool for maintaining the overall health of the landscape.



WILD TURKEY MANAGEMENT

TWRA biologists work hard to ensure wild turkey populations are healthy, abundant, and provide hunting opportunities for Tennesseans. The middle of the 20th century saw wild turkey populations at their lowest across the state. Today, it is estimated there are around 250,000 birds across all 95 counties. However, turkey population growth is varied across different regions of the state which can also contribute to regional hunter success rates. In 2023, hunters reported 31,802 turkeys harvested, a six percent increase from the previous year.

In FY23, TWRA continued critical partnerships with universities and partner groups to advance wild turkey research which can be used to guide management work.



Wild Turkey Banding:

TWRA staff partnered with Tennessee Tech University (TTU) for the third year of a Wild Turkey Banding Project to gather data and research turkey harvest rates. TTU and TWRA worked together to trap and band 282 male turkeys at 39 unique trap locations, 36 percent of which were on public land. Of the 282 banded birds, 78 received reward bands. Since the agency began trapping, 668 total turkeys have been captured and banded across the state.

This year, 99 bands were recovered and reported. Twenty-six of the reported bands were reward bands, and individuals received a \$75 gift card to one of two outdoor sporting goods stores, compliments of the Tennessee Chapter of the National Wild Turkey Federation.

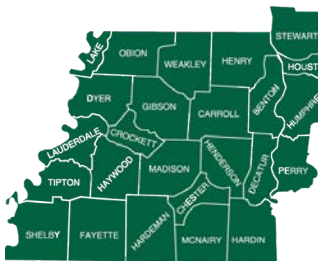
Wild Turkey Research:

TWRA has also partnered with the University of Tennessee for a 7-year study on turkey reproduction and population demographics. The project is also investigating the relationship between predator abundance and turkey productivity and survival. During the final year of the project, 61 female turkeys were trapped and tagged with radio transmitters to bring the total number of monitored hens to 82 birds. Poults from successful nests were captured, equipped with radio transmitters, and monitored. Eggs from abandoned nests and unhatched eggs from successful nests were collected and examined for fertility.



2023 Total Spring Harvest

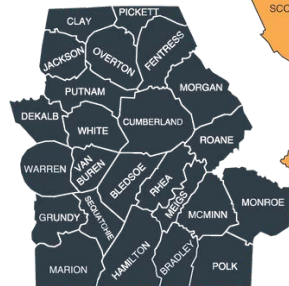
31,801



**Region 1
Harvest
7,832**



**Region 2
Harvest
11,662**



**Region 3
Harvest
6,157**



**Region 4
Harvest
6,150**

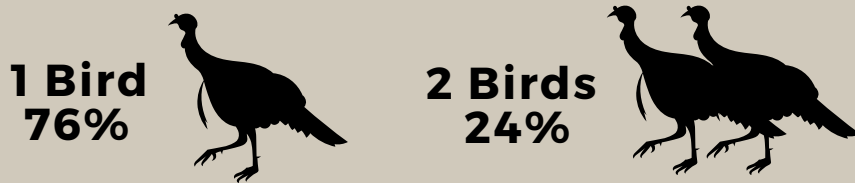
Wild Turkey Habitat Development:

Thanks to the generous support of the National Wild Turkey Federation, TWRA completed several turkey habitat projects across the state. TWRA staff established food plots on 90 acres at Prentice Cooper WMA and cleared 18 acres to establish annual food plots on Holly Fork WMA. At South Cherokee WMA, TWRA cleared woody growth, downed trees and unwanted vegetation along 50 miles of trails and acquired a flex-wing rotary mulching head mower for roadside maintenance. Tools and equipment for prescribed burning and herbicide application were acquired for the Lower Obion Wetland Complex WMAs, and staff conducted aerial herbicide application on 114 acres of West Tennessee WMAs to control unwanted woody growth and establish early successional vegetation.

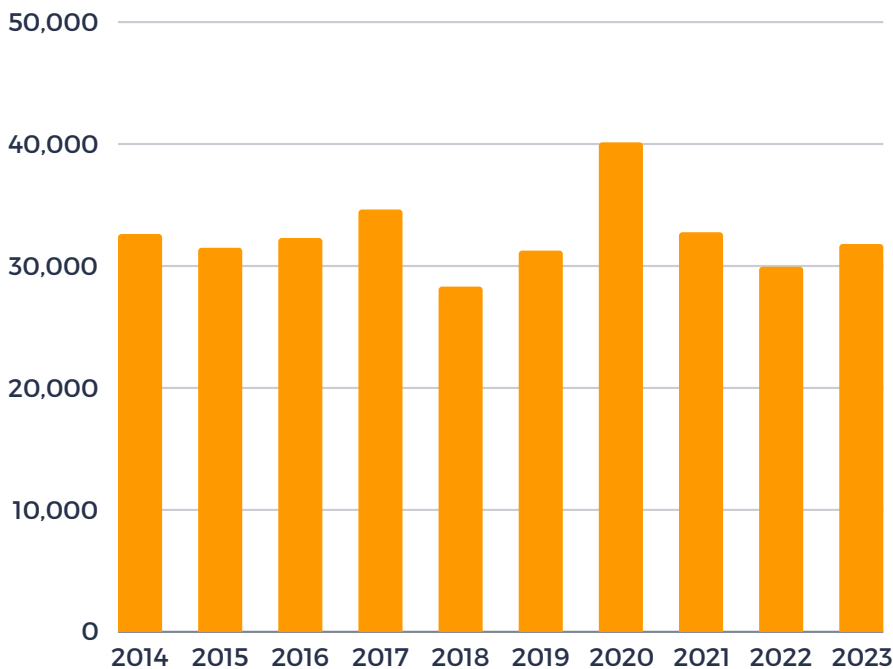
TURKEY MANAGEMENT OBJECTIVES:

- Maximize the abundance of turkeys in appropriate habitat
- Maximize management within budget
- Maximize stakeholder satisfaction

Number of Birds Bagged by Successful Hunters



ANNUAL WILD TURKEY SPRING HARVEST



DEER MANAGEMENT OBJECTIVES:

- Maintain a healthy deer population
- Maximize hunting opportunity
- Maximize stakeholder satisfaction
- Maximize the number of active deer hunters

WHITE-TAILED

Among our state's greatest success stories is the restoration of species that had been threatened or even eliminated by the loss of habitat, overhunting, or environmental issues. Today, our state's deer herd is stable at an estimated 1.6 million, but it hasn't always been that way. Thanks to TWRA conservation efforts, the population has recovered from just 1,000 deer in the 1940s.

2022-23 TOTAL HARVEST 163,154

RIFLE
117,768



42% Female

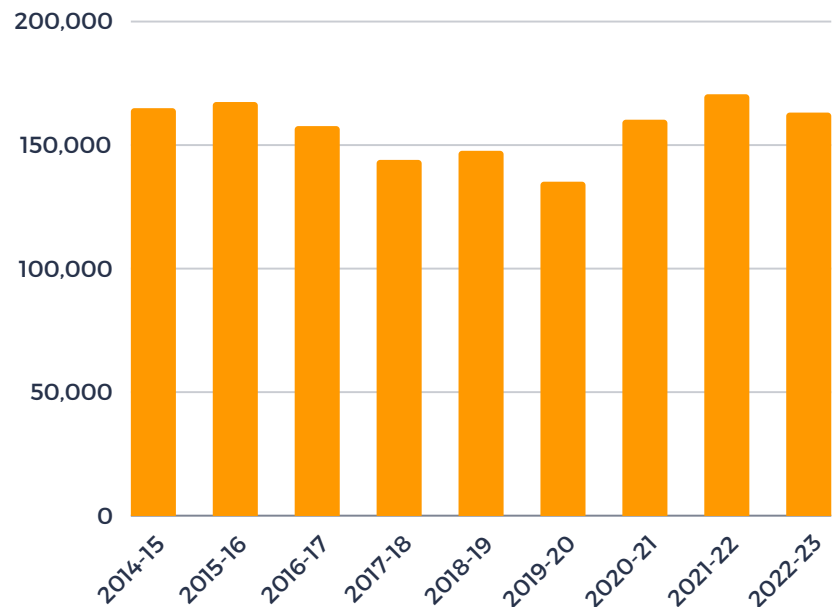
ARCHERY
21,077



MUZZLELOADER
24,309

58% Male

ANNUAL DEER HARVEST



DEER MANAGEMENT

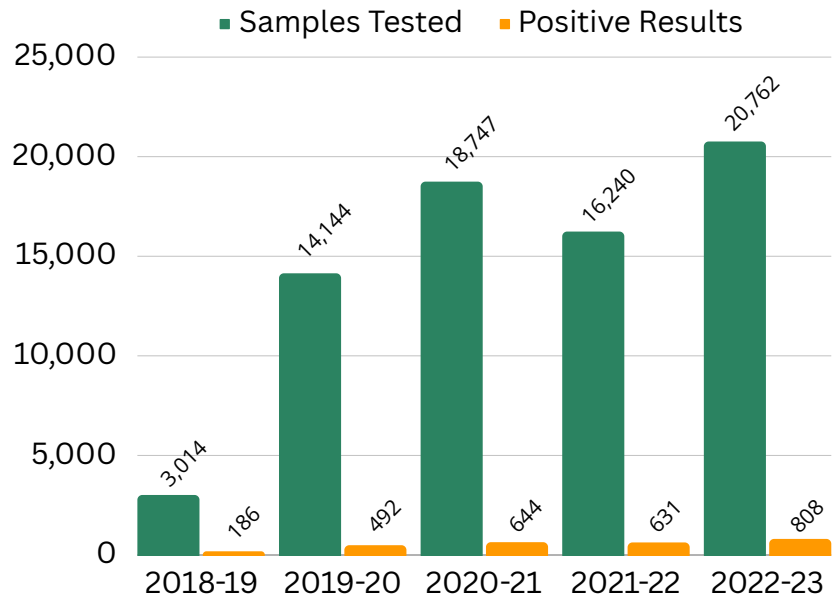
Disease Management:

Chronic Wasting Disease (CWD) is a fatal neurological disease in cervids including white-tailed deer. Since it was discovered in Tennessee in 2018, TWRA has worked diligently to monitor, manage, and slow the spread of the disease through a rigorous protocol of testing, research, and hunter education.

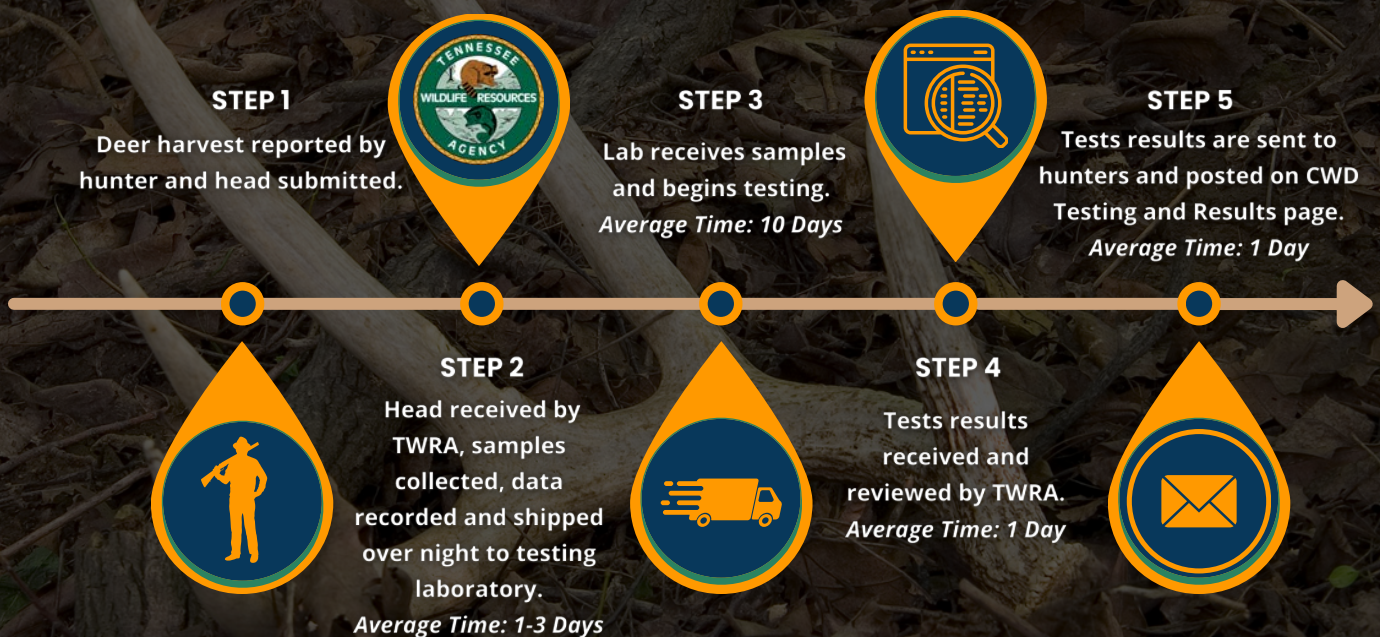
To manage the growing number of hunter-harvested deer to be sampled, the TFWC funded a CWD work base and incinerator at a cost of \$2.5 million in Jackson, Tennessee. Construction and planning continued through 2022, culminating in a finished site for 2023. The workbase now includes a wet lab, dry lab, walk-in cooler, offices, vehicle and equipment storage, and incinerator. This location is where the majority of CWD sampling will occur for West Tennessee. The site will also host training events for CWD sampling to ensure the agency continues to implement best practices for disease management.

In FY23, 20,762 CWD samples were tested at partner laboratories with positive results found in 808 samples.

ANNUAL STATEWIDE CWD TESTING



CWD TESTING STEPS & AVERAGE TIME



ADAPTIVE HARVEST MANAGEMENT: A NEW APPROACH FOR DEER AND TURKEY HUNTING

White-tailed deer and wild turkeys are two of the most important game species in Tennessee, and TWRA biologists work hard to ensure their populations are healthy, abundant, and in balance with stakeholder desires. Part of the challenge for developing effective wildlife management strategies is balancing competing public desires and complex population dynamics. Because wildlife is a public resource, understanding the values of the people interested in wildlife populations is one of the core responsibilities of wildlife conservation professionals.

Additionally, wildlife habitats and landscapes are constantly changing due to diseases, human development, land use changes, invasive species, and changing weather patterns. In the face of constantly evolving challenges, TWRA staff have been exploring new and transparent methods to best address these growing complexities and to better meet stakeholder desires.

Starting in 2021, TWRA biologists partnered with researchers at TTU to develop a new approach for managing deer and turkeys in Tennessee. This adaptive management approach starts by setting objectives then develops management options (season packages) to meet biological population needs and stakeholder values. This method will use annual population data and priority recommendations to best meet stakeholder values.

The plan is being implemented in two phases. Phase one included the development of new biologically based deer and turkey management units that allow TWRA biologists to better manage deer and turkey from the ground up. Phase two includes the development of an adaptive approach to deer and turkey management that will allow TWRA biologists to better track whether hunting regulations are meeting the desired objectives for populations of deer and turkey in each management unit.

To set management objectives, TWRA and TTU worked with six focus groups made up of sportsman's groups like Backcountry Hunters and Anglers, National Wild Turkey Federation, Tennessee Wildlife Federation, agricultural and landowner groups, and other agency partners. Together with TWRA staff, they helped outline and prioritize the values, opinions, and attitudes of deer and turkey hunters, landowners, and residents throughout Tennessee.

In addition to input from the focus groups, TWRA and TTU are modeling data from multiple sources, such as public surveys and annual harvest histories, to determine if specific sets of hunting regulations will achieve specified objectives for deer and turkey populations within each management unit. Once complete, this transparent process will provide the public with sound justification as to why a specific set of regulations were recommended in their unit.

Throughout FY23 and leading into 2024, the agency worked to unveil this new management approach to the public. TWRA staff travelled across the state holding public meetings to get input on the proposed hunting packages that could be used to meet the objectives in each unit and provide more detailed information about the new management approach.

Based on the information gathered and compiled as part of this new approach, in Spring 2024, TWRA will propose new deer and turkey hunting regulations to the Tennessee Fish and Wildlife Commission for each of the new management units during the annual season setting process. While the management unit maps will be new to hunters, the agency is optimistic about how this new management framework will improve transparency, prioritize stakeholder values and advance science-driven goals that will greatly benefit the conservation of both deer and turkey in Tennessee far into the future.



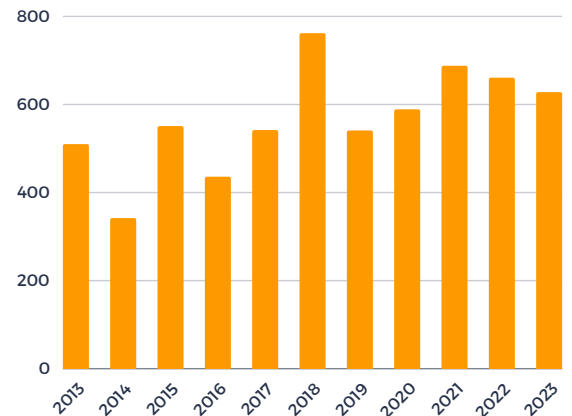
Tennessee Black Bears

Once found from Memphis to Mountain City, black bears were reduced to the remote mountainous areas of East Tennessee following the chestnut blight, land use changes, and unregulated harvest. Were it not for the creation of the Great Smoky Mountains National Park (GSMNP) and the Cherokee National Forest (CNF) in the 1930s, bears might have been eradicated from the state. The establishment of the Tennessee Game and Fish Commission (TGFC) in 1949 created stricter hunting laws but the population continued to diminish. The earliest Tennessee bear harvest on record was in 1951 when hunters reported harvesting 29 bears, while the lowest recorded harvest was 7 bears in 1962. By the end of the decade, it is believed there were as few as 50 bears within GSMNP borders. The TGFC closed bear hunting from 1970–1972 hoping the population would recover but when the season resumed in 1973, only 16 bears were harvested.

Efforts to prevent poaching, protect female bears, and provide sanctuaries produced a continuously growing Tennessee black bear population now estimated at 6,500 individuals and a record harvest of 782 taken in 2018. The GSMNP continues to harbor multitudes of black bears with a population estimated at 1,900 residing within the park's 800 square mile boundary. Last season, hunters harvested 628 black bears in Tennessee, slightly higher than the 5-year average.

As populations grow, so do wildlife and human conflicts. Last year, the TWRA bear team received over 1,200 conflict calls related to unsecured attractants like garbage, pet food, and bird feeders. Staff continue to promote coexistence by providing technical assistance that focuses on long-term solutions to properly secure these attractants. In 2024, the agency will offer grants to begin building bear resistant container infrastructures in communities. The City of Gatlinburg plans to deploy over 400 new bear proof dumpsters to help reduce unintentional feeding. TWRA also continues to be a leader in the American Fish and Wildlife Association BearWise outreach program which works to educate and promote living responsibility with bears.

Statewide Black Bear Harvest



Black Bear Research:

This year, TWRA worked with the University of Tennessee-Knoxville (UTK) to conduct a survey of Tennessee residents to understand their relationship and experiences with bears, and their attitude and beliefs towards black bear management to minimize human-bear conflicts. The survey found 93 percent of Tennesseans enjoy seeing bears and know they are important to the ecosystem. Eighty-eight percent of respondents understand that bears accessing unintentional feeding sources contributes to human bear conflicts, and 76 percent felt preventative action must be taken. Support of general laws and ordinances to address challenges with bears was supported by 69 percent of respondents, while 88 percent would support specific laws and ordinances to prevent intentional feeding of bears.

TWRA also has an on-going partnership with UTK to study road crossing behaviors of bears along Interstate 40 and the interactions between relocated and resident bears. Last year, 14 bears were captured and equipped with GPS collars to track movement patterns and crossings. Researchers expect to complete the project in 2024.



MANAGING MIGRATORY BIRDS: DOVES, DUCK & GEESE

There is a variety of public land hunting in Tennessee for dove and waterfowl, and TWRA continues to look for opportunities to improve access and quality. TWRA biologists also collect annual data to manage migratory gamebird populations and to set hunting seasons. TWRA coordinates gamebird banding projects which help biologists assess hunting pressure and estimate productivity and survival. This year, staff and volunteers banded 505 mourning doves, nearly 1,500 wood ducks, and 3,589 Canada geese.

DOVE HARVEST

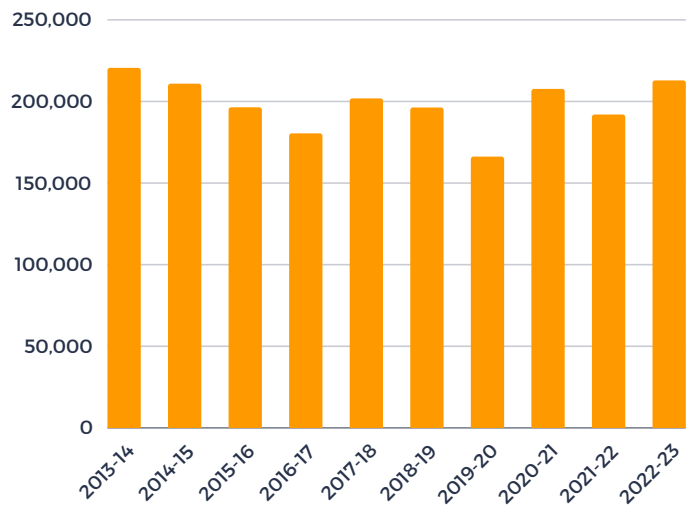
Annually, TWRA leases private fields for dove hunting. A minimum of three days is contracted, including September 1 and two weekend days. Most fields leased are harvested grain fields and many are top sown with wheat. On the September opening day, 27 leased fields provided 1,096 acres of dove hunting opportunity for 1,811 dove hunters. Hunters on leased fields harvested 3,301 doves, while 2,264 hunters on WMA fields harvested 6,882 doves.

The Federal Harvest Information Program (HIP) survey for Tennessee estimated 21,700 dove hunters harvested 307,000 doves during the 2022-23 season. Tennessee dove hunters spent 47,500 days afield with an average seasonal harvest of 14 doves per hunter.

DUCK HARVEST

Tennessee's waterfowl harvest is highly dependent on wetland conditions in the state, duck populations, and severity of the winter, particularly extent of snow cover. The HIP survey estimated there were 20,300 adult duck hunters during the 2022-23 hunting season who harvested 212,900 ducks, up slightly from the previous year.

Annual Statewide Duck Harvest



GOOSE HARVEST

There were an estimated 7,300 goose hunters in Tennessee who harvested 16,600 geese including Canada, snow, Ross's, and greater white-fronted geese.

Mallard Telemetry Project:

The mallard telemetry project in partnership with Tennessee Tech University (TTU), University of Tennessee-Knoxville (UTK), and the U.S. Fish and Wildlife Service is investigating movements, space-use, and resource selection by mallards in Tennessee. Additionally, the project is exploring the effects of hunting, disturbances, and the importance of sanctuary for wintering mallards.

Previous research indicated movements of wintering mallards in West Tennessee were highly restricted to state and federal refuges. Generally, 71 percent of the time, mallards remained within 1.5 miles of a waterfowl refuge, 70 percent of ducks used only one refuge the entire winter, and ducks had only a 10 percent probability of switching refuges on any given day; this probability dramatically decreased with increasing distance from one refuge to another.

Solar power backpack-style trackers were deployed on 171 mallards and seven American black ducks captured across state and federal waterfowl sanctuaries in West Tennessee. Monitoring these ducks will allow biologists to measure the effectiveness of rest areas and duck movement along highly disturbed river systems in West Tennessee. Additionally, unmanned aerial vehicles were used to estimate the number of ducks using the rest areas.

The project also involves working with local private landowners to establish undisturbed rest areas along the Mississippi, Obion, and Forked Deer rivers to serve as “stepping stones” of safe habitat. These rest areas will range in size from 80 to 300 acres and comprise a variety of habitat types.

WOOD DUCK HABITAT AND OUTREACH:

Wood ducks were hunted to near extinction at the end of the early 1900s. Management efforts have been successful and there are now more than a million wood ducks in North America. The most common nesting duck in Tennessee, they are found in forested wetlands, riparian habitats, and freshwater marshes. The wood duck is a cavity nester and where cavities are scarce, it readily accepts nest boxes.

Each year, wildlife officers look for opportunities to engage the community in conservation. This year, TWRA, Delta Waterfowl and local Wilson County businesses partnered to build wood duck boxes for habitat around Old Hickory Lake. Wilson County wildlife officer Hunter Daniels noticed that many of the existing wood duck boxes in the area needed to be replaced.

“Scott Marcin with Delta Waterfowl loved the idea and donated 15 boxes. TWRA also loved the idea, and Mark Wooten, shop teacher at Lebanon High School, wanted to do the work. The project seemed like a perfect opportunity to intermingle possible new hunter recruitment with sound wildlife management techniques, and community involvement between Wilson County youth and TWRA employees.” -Wilson County Wildlife Officer Hunter Daniels

A group of teens taking shop at Lebanon High School took the raw wood and a set of plans to complete the cutting and constructing of 50 wood duck boxes. The new nesting boxes were installed at locations on the lake in February 2023.

Photo: Staff and partners apply trackers to mallards



Photo: TWRA Executive Director Jason Maxedon



Photo: Wood duck boxes





Tennessee Sandhill Crane Festival

Sandhill cranes are the most numerous and wide-ranging of all worldwide crane species with a population exceeding one million. There are six distinct migratory populations of sandhill cranes across North America. Each year, more than 20,000 sandhill cranes migrate to Tennessee from northern states and Canada where they raise their young. Many of these cranes, as well as the endangered whooping crane, spend the winter at TWRA's Hiwassee Refuge before continuing further south.

The TWRA is proud to host the annual Tennessee Sandhill Crane Festival which offers a premier opportunity for the public to view these majestic cranes and learn more about wildlife conservation. In 2023, there was record attendance with more than 4,500 visitors during the weekend. The agency is grateful for the support of major event partners including the American Eagle Foundation, the International Crane Foundation, the Cherokee Removal Memorial Park, and the Birchwood Area Society Improvement Council. More than 100 volunteers support this event by providing educational presentations, live raptor shows, musical entertainment, children's crafts, Native American storytelling, and other logistical support. In addition to the festival, TWRA coordinates and hosts the Sandhill Crane Children's Day for two area schools.



BIRD CONSERVATION WORK

To ensure the conservation of Tennessee's beautiful bird species, TWRA biologists conduct monitoring and research, develop conservation plans for priority species, and work with partners including the Mississippi Flyway Council, Partners in Flight and other bird habitat joint ventures.

Golden-winged Warbler Conservation:

Golden-winged Warblers (GWWA) are a state listed threatened species, and their population continues to decline in Tennessee and throughout the Appalachian Mountain region. This year, TWRA staff partnered with the University of Tennessee Knoxville (UTK) to deploy tracking tags on GWWA as part of a collaborative project led by the University of Maine. This technology will help determine the return rate and migration paths of GWWA by finding the birds when they return in the spring. Survey work also occurred on state owned properties to better understand population status and habitat.

Swainson's Warbler Distribution and Habitat Use:

The agency also worked with UTK to further define the distribution and abundance of Swainson's Warbler (SWWA) in the Southern Appalachian region. Little is known about this species and its habitat use. Surveys for the SWWA were conducted on the southern Cherokee National Forest, and it found a well-established population in the region.

Loggerhead Shrike Population Study:

TWRA is partnering with the Southeast Avian Research Group and the Nashville Zoo to trap and band Loggerhead Shrikes in Tennessee. This is a part of a larger effort throughout the eastern U.S. to document the distribution and movements of this species. Once population viability analyses are developed, targeted conservation can begin to stabilize and reduce declines in this species.

Double-crested Cormorant and Colonial Waterbird Surveys:

Double-crested Cormorants (DCCO) have rapidly expanded throughout Tennessee. TWRA is participating in the development of a national monitoring and management plan for the DCCO and colonial waterbirds. Information gathered through this effort will estimate DCCO populations and inform future management.

Secretive Marshbird Surveys:

TWRA is partnering with Tennessee Tech University for a focal study on the King Rail and the Least Bittern. This season, TWRA identified emergent wetlands east of the Tennessee River and surveyed for secretive marshbirds using point counts and audio recording surveys. This will lead to the development of a secretive marshbird monitoring program for the State of Tennessee.

Urban Bird Treaty in Nashville:

This year, TWRA supported the City of Nashville's work to become the first city in Tennessee and the 31st in the United States to be designated by the U.S. Fish and Wildlife Service as an Urban Bird Treaty City. The Urban Bird Treaty program is a unique, collaborative effort to help alleviate bird population declines and create connected conservation communities by conserving habitat, reducing urban hazards, and educating communities.



Photo: Mike Todd
Swainson's Warbler



Photo: Dave Hawkins
Loggerhead Shrike



Photo: James Hurt
Least Bittern



Photo: Urban Bird Treaty

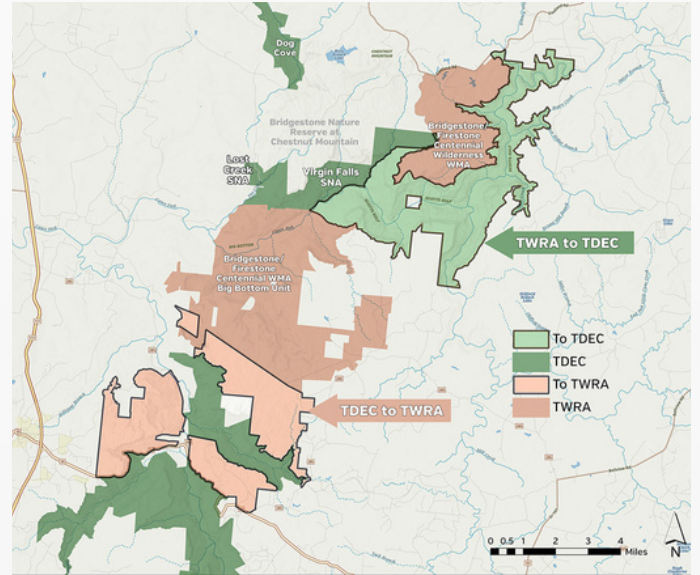
BALANCING RESOURCES AND

This year, the Tennessee Department of Environment and Conservation (TDEC) and the Tennessee Wildlife Resources Agency worked together to transfer land in White County to increase huntable land by almost 5,000 acres at the Bridgestone-Firestone Centennial Wilderness Wildlife Management Area and what will ultimately become the new Scott's Gulf Wilderness State Park.

"After the area is developed into a park we look forward to welcoming visitors to an extraordinary example of the natural and scenic beauty of the Upper Cumberland and provide a park experience that delivers the very best of Tennessee outdoors with activities like hiking, fishing, wildlife viewing, and primitive camping," said Greer Tidwell, Deputy Commissioner of the Bureau of Conservation at TDEC. The park will have limited buildings and infrastructure to retain the 'wilderness' nature of the site."

TWRA will also conduct ecosystem restoration, habitat management, and wildlife enhancement work on Bridgestone-Firestone Centennial Wilderness WMA. These efforts will support rare plant species and wildlife that are dependent on open forest and grassland ecosystems that naturally occur on south and west facing slopes on the Cumberland Plateau.

"This transfer is a win-win for hunters, conservationists, and those who enjoy outdoor recreation," said Brandon Wear, TWRA Deputy Director of Field Operations. "TWRA is grateful for the opportunity to partner with TDEC on this whole of government approach to conservation, and we look forward to completing critical habitat restoration work that will ensure these ecosystems are here in the community for generations to come."



"Scott's Gulf Wilderness State Park will be a welcomed addition to the robust and beautiful state park system in our region," said Tennessee Senator Paul Bailey. "The new park will increase tourism and economic development in our rural area as well as provide more opportunities for Tennessee families and visitors to enjoy the unique natural resources of these lands. I look forward to its opening next year and appreciate the work of the TWRA, TDEC and other government officials to create the new park."

Scott's Gulf Wilderness State Park will be one of four new state parks created through the leadership of Governor Bill Lee and the Tennessee General Assembly in 2023.

Bridgestone-Firestone Centennial Wilderness WMA is a 10,000-acre TWRA property with hunting, hiking, and watchable wildlife opportunities.



OUTDOOR RECREATION

North Cumberland Wildlife Management Area (NCWMA) is the largest actively managed state-owned WMA in Tennessee. With almost 200,000 acres of mountainous terrain across five East Tennessee Counties, its steep slopes, vast ridges, winding creeks, and streams make it home to various terrestrial and aquatic wildlife species. The habitat ranges from mixed upland hardwood forests to early successional vegetation openings. In recent years, it has become a popular tourist destination for off highway vehicle (OHV) riders. However, the large increases in OHV use have resulted in increased erosion, land degradation, and impacts to wildlife species.

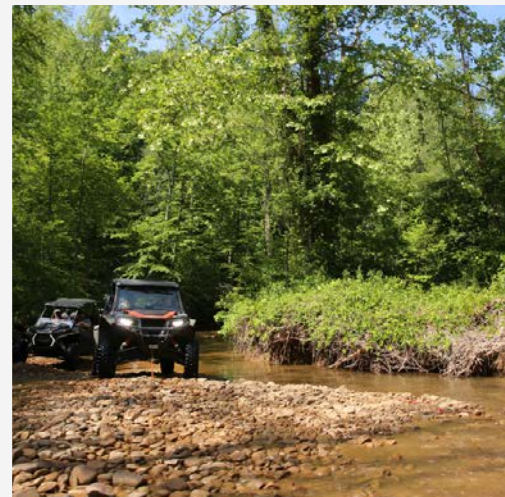
In 2004, the Tennessee General Assembly passed the Tennessee OHV Act which recognized the increasing OHV use and environmental impacts. It authorized TWRA to establish and implement an OHV program and set fees, safety requirements, and other regulations. As the program continues being developed, the agency has taken steps to better protect these valuable resources from OHV damages by committing more employee resources to enforcing regulations, partnering with local law authorities and community groups to educate the public, and implementing new rules banning the use of alcohol on all WMAs which was contributing to a concerning increase in OHV accidents and fatalities.

To support responsible outdoor recreation, additional management is also in the works for new trails, safety regulations, and mapping initiatives. The agency is currently developing 100 miles of new trails in the New River Unit and 100 miles of new trails on the Ed Carter Unit of NCWMA. More than 80 miles of the New River trails are already complete, and work has begun on the remaining 20 miles. New River trail work is expected to be complete by 2025. TWRA is partnering with The Nature Conservancy (TNC) to lay out the Ed Carter Unit trails, and a management plan is in place between the agency and TNC which allows for a maximum of 150 miles of trails and roads. Trails may be closed during periods of maintenance or for safety concerns.

There are currently 100 miles of managed trails on the Sundquist Unit of the WMA, and the new additions are expected to expand total trail access on the WMA to approximately 300 miles. TWRA also received grant funding to create a 20-mile connector trail through the Royal Blue Unit that links the Sundquist Unit with the New River Unit, with work on the project to begin next year. Due to disruptions caused by recreational OHV riding during hunting season, some historic trails will be converted to seasonal hunter access trails to better accommodate all user groups. Other trails currently being used by OHV riders will remain open but no longer receive the same maintenance currently being implemented.

“Our goal is to have a sustainable, managed trail system that can be enjoyed by all users for years to come while focusing on the primary objective of the WMA, which is wildlife management. It is always the priority of TWRA to place the safety of our sportsmen, conservation of our lands, and the well-being of our wildlife resources at the forefront of our efforts.” - NCWMA Manager Keith Thomas.

Trail maintenance costs average close to \$500,000 annually. In 2024, TWRA will need to implement changes to fees and rules to better fund much-needed restoration work, trail management, and law enforcement. Revenue generated from fees will be directed specifically to OHV management. Agency leadership is optimistic about developing an effective path forward for OHV use which will support local economic development and tourism without jeopardizing the integrity and sustainability of the natural resources the TWRA is mandated to protect and preserve.



Hellbender Headstart and Release Program

The Eastern Hellbender is Tennessee's largest salamander and occurs sporadically throughout the eastern half of the state. This once abundant species has declined through much of its range and is now a state listed endangered species. TWRA has partnered with the Nashville Zoo and Tennessee State University on the Hellbender Headstart and Release Project since 2015 in an effort to restore the species.

This year, 24 Eastern Hellbenders were released back into the wild after being collected as eggs from streams in Middle Tennessee in 2018 to be raised at the Nashville Zoo. The hellbenders were implanted with trackers for identification before being released in Big Swan Creek. Prior to their release, TWRA staff collected water from the release location to deliver to the zoo so the captive raised hellbenders could build resistance to wild pathogens.

TWRA staff also collected crayfish to feed captive animals and helped select release and nestbox sites. Following the release, staff have continued monitoring efforts through radio telemetry. The data gathered will provide information on the success of releasing captive raised hellbenders, as well as habitat selection, predation on hellbenders, and hellbender site fidelity.







Cumberland River Aquatic Center

Tennessee historically harbored 140 known mussel species with at least 72 species from the Duck River watershed. However, the Duck River, like many North American river basins has undergone substantial declines in species with four now presumed extinct and nine species presumed extirpated. At least 16 of the historically known species from the Duck River watershed have been listed as Endangered or Threatened under the U.S. Endangered Species Act, and six additional species have been petitioned for listing.

Despite challenges, the Duck River continues to maintain high diversity of freshwater mussels. Conservation and recovery of listed mussel species is greatly enhanced through the propagation and reintroduction of mussels. The Cumberland River Aquatic Center (C-RAC) was established to propagate rare mussel species. These efforts require collection of broodstock and host fish from rivers and streams to allow propagation to occur under controlled settings. Once propagated mussels reach the desired size, they are transported and reintroduced into streams. TWRA biologists continue to monitor reintroduced mussels to ensure growth and survivorship are within the established goals.

This year, nearly 73,000 juvenile mussels, including 11 federally endangered species, were produced at C-RAC. The successful application of in-vitro culture for mussel glochidia continued in 2023, resulting in the production of 28,503 juvenile mussels, encompassing five endangered species of freshwater mussels. Juvenile Cumberland monkeyface mussels were also produced through in-vitro culture for the first time.

Following successful propagation, more than 4,000 juvenile mussels, including three critically endangered species, were released into the Buffalo River, Duck River, and Lick Creek in Tennessee. To facilitate future monitoring of the released population through mark-recapture initiatives, the size of each mussel was measured, and mussels were individually tagged for tracking.

Managing The Biodiversity of Tennessee

Tennessee is one of the most biodiverse states in the nation. Currently, there are 325 species of fish, 89 mammals, 61 reptiles, 70 amphibians, and 340 birds known to inhabit or migrate through Tennessee. The number of invertebrate species, many of which are endemic to Tennessee, is equally impressive with 256 land snails, 99 aquatic snails, 120 mussels, 95 crayfish, and a multitude of insects.

TWRA is committed to conserving this assemblage of biodiversity in the wake of economic growth and ever-changing landscapes. In 2023, the agency updated the state Threatened and Endangered Species Rule which details the current list of species in need of additional protection. The review includes a scoring index for each species, literature review of current research, external expert opinion, and internal staff input based on observations from the field. The agency also accounts for federal species listings by automatically adopting those species to the state list and reviewing species status when they are removed from federal threatened or endangered status. Species listings help prioritize management efforts for the agency.

Eastern Box Turtle:

TWRA Biodiversity staff designed a multi-year research project using radio telemetry to track eastern box turtles. The project is being conducted on six turtles at Ellington Agricultural Center and 11 turtles on the Nashville Zoo property. Staff also swab for diseases for testing by Tennessee State University for herpesvirus, ranavirus, and Microplasma sp. The female turtles at the Nashville Zoo were x-rayed and three females were carrying eggs. A second x-ray a month later confirmed they all had laid. This project will be ongoing and will likely continue to expand.

Eastern Spotted Skunk:

The spotted skunk is a threatened species TWRA is working to protect. Camera traps were placed on the Cherokee National Forest and TWRA property in the Paint Creek Corridor to assess populations of spotted skunks throughout Tennessee. TWRA has partnered with the University of Tennessee for the study, and traps were set according to their protocols. Six cameras were set with sardines and catfish stink bait for eight weeks. One spotted skunk was successfully trapped and fitted with a radio collar to identify den sites. The occurrence and den site selection data from this project will be used to inform future management of the species.

144

Total State Listed Species

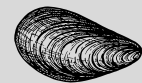
— 27 Species Removed

+ 28 Species Added

+ 22 Upgraded from "Greatest Conservation Need" Status

+ 4 Species with no previous designation

+ 2 Species adopted due to federal delisting



31 Endangered Species



47 Threatened Species



66 Species of Greatest Conservation Need

Photo: Eastern Spotted Skunk



Tennessee Game Wardens

The job of a Tennessee Game Warden is as varied as the habitats and regions of the great state, and they have a lot of ground to cover with almost 27 million acres across the state. Any given day could include wildlife and fisheries law enforcement, safety checks, search and rescue on land or water, conducting outreach programs, and more. Their work is critical to the protection of the state's natural resources.

Every TWRA officer is required to have a degree in wildlife or fisheries biology or wildlife and fisheries management. In addition to generalized law enforcement training, officers have received specialized wildlife law enforcement training to be able to identify wildlife-related violations. This training makes them among the most qualified wildlife law enforcement officers in the nation. The TWRA hires new wildlife officers once a year, and in 2023, the agency received nearly 300 applications for only 20 available positions.



TWRA Honor Guard:

The TWRA Honor Guard is a 24-member team who support the families of active and retired officers through funeral services to honor their life and dedication to their career. The team also represents TWRA, the State of Tennessee, and conservation law enforcement officers through ceremonial flag presentations.

In FY23, the Honor Guard presented the colors at Tennessee Titans football games, Nashville Predators hockey matches, the Tennessee Gubernatorial Inauguration, the National Wild Turkey Federation Veterans Breakfast, the Bassmaster Classic, and more.

This year, the TWRA Honor Guard also presented the colors at a special ceremony honoring Sgt. Lee Russell, a Tennessee State Trooper killed in the line of duty. Sgt. Russell served in the aviation division of the Tennessee Highway Patrol where he assisted with search and rescue, warrant execution, air cover, and more. In August 2022, he lost his life in a tragic helicopter crash.

Sgt. Russell was a passionate duck hunter and outdoor recreationist who showed unwavering commitment to upholding the law, protecting Tennessee citizens, and ensuring public safety. In honor of his service, the Tennessee Fish and Wildlife Commission voted to name a new 570-acre waterfowl refuge in Carroll County the Sergeant Lee Russell Refuge.

Wildlife Officer of the Year: Michael Cavins, District 41

In 2023, Officer Michael Cavins of District 41 was named the Shikar Safari Wildlife Officer of the Year. The Shikar Safari Club International was founded in 1952 to advance knowledge of wildlife of the world independently and cooperatively with zoological societies, universities, and museums. Each year the club sponsors an award in each of the 50 states and several Canadian provinces. The award honors an officer who shows outstanding performance.

Officer Cavins is well known in his community as someone with integrity, fairness, and is always ready to assist the public when called upon. He works closely with the Claiborne County school system to conduct several programs through the year which are attended by nearly 300 students. He also serves on the county's Career and Technical Education advisory committee to support natural resources education in the community.

He regularly volunteers at Farm Bureau Farm days, National Wild Turkey Federation booths, and more. Officer Cavins has taught more than 200 Hunter and Boating Education courses in addition to his regular law enforcement responsibilities. This year, he also worked with a local landowner to secure additional public dove hunting areas to increase opportunities for hunters.

Photo: TWRA Honor Guard



Photo: TWRA Executive Director Jason Maxedon with Sgt. Lee Russell's family



Photo: Officer Michael Cavins





Committed to Public Safety on Tennessee Waterways

In addition to wildlife and fisheries law enforcement, TWRA oversees boating laws and regulations. The agency patrols for Boating Under the Influence (BUI) violations and reckless operation, regulates commercial paddlecraft operations, and offers boater education programs to further public safety. This year, there were 254,741 registered vessels in Tennessee, an increase of 5,502 from the previous year. TWRA tracks reportable incidents throughout the year to analyze and develop proactive plans to reduce injuries, fatalities, and property damage.

2022 BOATING INCIDENTS:

The total number of reportable incidents in 2022 was 134, resulting in more than \$2.6 million in damages. Vessel collisions were the leading type of accident with 78 occurrences. Personal watercraft were involved in 50 of the incidents and careless and reckless operation continue to be the primary contributor to accidents. Alcohol and drug use was identified as the primary cause of incidents in four percent of cases, up from three percent the previous year. The leading age group of operators to be involved in an incident was 46 through 50 years old.

2022 BOATING FATALITIES:

In 2022, TWRA boating officers responded to 29 recreational boating fatalities, up from 22 fatalities the previous year. Both Percy Priest Reservoir and Watts Bar Reservoir had four fatalities each. A personal watercraft was involved in one fatal accident, while paddlecraft such as canoes and kayaks contributed to five fatalities.

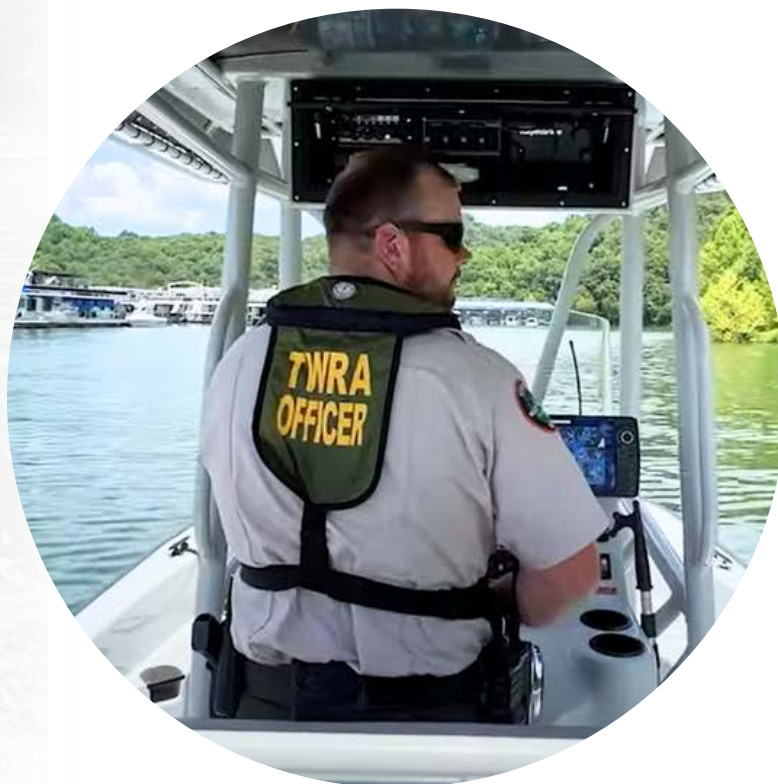
Boating Under the Influence:

A new state law went into effect establishing parity between Boating Under the Influence (BUI) and Driving Under the Influence (DUI). Sponsored by Representative Brandon Ogles (R-Williamson County), Nicholas' Law makes a prior conviction for BUI the same as a prior conviction for DUI. Now, a second offense for driving or boating under the influence in Tennessee could result in up to a year in jail, a \$3,500 fine, and a revoked license for two years. In 2022, TWRA officers made 102 BUI arrests to keep Tennessee waters safe.

TWRA BOATING OFFICER OF THE YEAR: MATT HOWARD, DISTRICT 31

Officer Matt Howard grew up walleye fishing on the lake he now patrols. He is known for his enthusiasm, drive, and leadership which sets him apart from others. Officer Howard works hard to improve conditions and safety for Tennessee boaters, and he sets a clear example for others to see what it means to be dedicated to wildlife and boating law enforcement.

"We are out here to make sure everyone is abiding by state law and regulations," said Officer Howard. "We want everyone to come out and have a good time, enjoy our natural resources in the state, but our ultimate goal is for everyone to get to go home at the end of the day safely."



Boating and Hunter Education

Boating:

The goal of the Boating Education program is to educate boaters and to increase boating safety awareness among all boaters. Formal classes are held throughout the state in schools and with the general public. In 2005 a law went into effect that required vessel operators born after January 1, 1989 to complete the TWRA issued Boating Safety Education Certificate. Students must pass a monitored exam administered by official volunteers or TWRA staff. All exams are approved by the National Association of State Boating Law Administrators (NASBLA).

200

Maintained internet testing program at more than 200 of Tennessee's public libraries.

8,865

This year, 8,865 individuals successfully completed the boating exam, bringing the total since 2005 to 102,030 students.

15

Implemented the 15th year of the "Wear It Tennessee" campaign to promote life vests.



Special thanks to Frankie Turner of Chick-fil-A of Alcoa for his contributions to safe boating. In the spirit of giving, Turner donated 4,000 gift cards for TWRA boating officers to reward boaters who were caught being safe by wearing their life jackets.

With Turner (from left) are Lt. Col. Matt Majors, Boating Education Coordinator Betsy Woods, TFWC Chairman Tommy Woods, Officer Jeff Roberson, and Executive Director Jason Maxedon.

HUNTER EDUCATION:

The basic Hunter Education course provides firearms safety training and introduces students to their responsibilities in the fields of hunter ethics and wildlife management. The main objective of the Hunter Education program is to reduce the potential for hunting accidents and ultimately reduce the number of hunting injuries. The course is taught according to standards established by the International Hunter Education Association.

During the pandemic, hunter education programs adapted by offering online courses. These programs have continued to be popular. During the fiscal year, the statewide Hunter Education Program saw a slight increase of in-person courses, and the agency plans to continue working to rebuild the program for the skills and fellowship it creates.

755

Currently, there are 755 certified and active volunteer hunter education instructors in Tennessee.

12,704

12,704 students were certified in hunter education. Since the program's inception in 1972, 815,433 students have successfully graduated.

6,521

There were 6,521 hunting apprentice licenses sold during FY23, up 59 percent from last year.

Shooting Sports and Ranges

Shooting sports support the TWRA's recruitment, retention, and reactivation (R3) efforts by welcoming hunters and non-hunters to practice their skills, experience a diverse range of equipment, and engage in competitive target shooting both at formal events and among friends. The agency continues to support initiatives to expand access and opportunity for Tennesseans across the state, including youth who are the future sportsmen and sportswomen of the state.

TWRA operates 13 shooting ranges for public use. Archery ranges and Hunter Education courses are also available at some locations. Additionally, agency staff help communities develop their own shooting sports properties by providing technical assistance and grant funding. In FY23, TWRA helped build four new archery ranges at state and city parks in Tennessee.

Shooting Sports Outreach and Programs:

Over the past year, the agency continued partnerships with the Tennessee Wildlife Resources Foundation and the Tennessee Wildlife Federation (TWF) to support shooting sports through grant funding. TWRA also became a sponsor for the Tennessee Farm Bureau Federation's Agriculture, Kids & Clays event which supports Tennessee FFA, 4-H, and Ag in the Classroom.

In 2023, TWRA continued provided funding for the Tennessee Scholastic Clay Target Program (SCTP) run by the TWF. SCTP provides Tennessee's youth, from 5th grade to college, an opportunity to compete in shotgun sports-trap,

skeet, and sporting clays-with peers throughout the state. It is one of the largest and most successful youth shooting programs in the nation and teaches skills that can apply to a lifetime of hunting. During FY23, Tennessee SCTP had 1,615 shooters enrolled with almost all competing in the state championships.

TWRA is also proud to facilitate the National Archery in the Schools program (NASP). Tennessee began NASP in 2004 with 12 pilot schools. Since then, the program has grown to more than 600 schools. This year, agency staff administered 30 Basic Archery Instructor courses across the state to certify teachers on proper archery technique and safety. The agency also awarded 12 equipment grants in the amount of \$1,000 each to new schools implementing the NASP curriculum to assist them with purchasing compound bows, arrows, targets, and other gear.

The Tennessee State NASP tournament was held in Murfreesboro with 1,614 students representing 80 schools and competing with the skills they learned while engaged in archery in schools. This year, Walker Valley High School, Stewarts Creek Middle School, and Buchanan Elementary School each took home the winning title in their respective divisions. Each student shot 30 arrows from varying distances for a score of up to 300 points.

The Tennessee State 3D Archery tournament was also hosted at TWRA's Buffalo Ridge Refuge Outreach Center where 1,400 students competed on 3D archery targets.

TWRA Public Shooting Ranges:

- Bartlett Shooting Range
- Catoosa WMA Shooting Range
- Cheatham WMA Shooting & Archery Range
- Chuck Swan WMA Shooting Range
- Crossville Shooting Sports Park
- John Sevier Hunter Education Center
- Montgomery County Shooting Complex
- Natchez Trace State Park Shooting Range
- North Cherokee WMA Ranges
- North Cumberland WMA Shooting Range
- Prentice Cooper WMA Shooting Range
- Stones River Hunter Education Center
- Yanahli WMA Shooting Range



Partnerships for R3: Recruitment, Retention, & Reactivation

Across the nation, state wildlife agencies engage in R3 programming designed to recruit new hunters and anglers, retain existing ones, and reactivate those individuals who have let their license lapse. Because the Tennessee Wildlife Resources Agency is mainly funded by license sales, these programs ensure sustainable funding for the majority of wildlife conservation work in the state.

To expand reach, TWRA helps fund partner organizations. This year, TWRA committed \$500,000 to the Tennessee Wildlife Federation's Hunting and Fishing Academy which provides engaging, hands-on instruction in the art of being an outdoorsman to hunters and anglers of all skills levels, ages, races, and genders. Throughout the year, the Hunting and Fishing Academy continued its upward trend in overall participation while also diversifying program offerings.

Hunt Master experiences are designed to replicate the generational transfer of training and knowledge of hunting and fishing. It is during these experiences that families with little to no hunting or fishing experience have the opportunity to learn new skills and create bonds with their family and the outdoors. These events continue to be an excellent opportunity for parents and youth to apply newly learned skills among other new outdoorsmen and women. The Hunting and Fishing Academy produced 417 participants through its Hunt Master experiences in the fiscal year.

TWF also offers weekly virtual courses which saw a 121 percent increase in participation from the previous year. The five most popular virtual class topics were crappie fishing, antler shed hunting, finding arrowheads, bass fishing, and catching catfish.

In 2023, TWF also began offering hunting and fishing workshops that increased the variety of hunting and angling opportunities in an effort to create active, long-term participants in hunting and fishing. While all ages were welcome at the workshops, this year they were marketed toward adults since a growing number of hunters and anglers are starting later in life. Workshops provided hands on learning in the art of hunting and fishing through single day events that ranged from two to six hours. A blended approach of classroom style workshops and in-field options provided participants with numerous opportunities to learn. With a goal of 250 participants during its inaugural year of the hunting and fishing workshops, the Hunting and Fishing Academy reached 160 percent of its participation goal for FY23 with 651 participants.





Outreach Events:

Buffalo Ridge Refuge Outreach Center

The mission of Buffalo Ridge Refuge Center is to educate people by providing high quality outdoor recreation experiences that focus on hunting, fishing, shooting sports, and conservation education. The agency continues to expand outreach opportunities and provides programs for a wide variety of constituents ranging from kindergarten students to adults.

In 2023, TWRA acquired the adjoining Seven Hawks property, which added 1,700 acres to the refuge, nearly doubling the size of the property. To ensure TWRA is using the property to its full potential, the agency also developed a strategic plan for Buffalo Ridge Refuge. Future plans include a dramatic expansion of public shooting ranges, which are currently under development.

Becoming an Outdoors Woman:

In 1991, wildlife agencies across the country looked for ways to address barriers preventing women from participating in outdoor activities at the same rate as men. This initiative led to the creation of the Becoming an Outdoors Woman (BOW) workshop offered in more than 40 states. In Tennessee, BOW weekend is held each summer at Buffalo Ridge Refuge and offers 12 classes to over 100 participants.

Beyond BOW:

The agency also offers Beyond BOW events designed to help women continue learning. Many of the participants are graduates of the BOW workshops and are looking for the next step. This year, more than 100 women participated in Beyond BOW workshops including muzzleloader hunting, dove hunting, shotgun shooting, and trapping.

Youth Hunts:

TWRA is committed to developing a love of hunting, fishing, outdoor recreation, and conservation in youth across the state. Each year, the agency welcomes nearly 300 youth for deer, squirrel, dove, and turkey hunts at Buffalo Ridge Refuge. For many young people, it is their first hunting experience.

Hero Hunts:

Serving those who have served our country is another priority for TWRA. Each year, TWRA hosts Hero Hunts at Buffalo Ridge Refuge for veterans of our U.S. Armed Forces and law enforcement agencies. This year, 250 veterans participated in the TWRA Hero dove hunt, deer hunt, and turkey hunt.

VISIT:
GoOutdoorsTennessee.com
To find and register for events

Communications and Publications

The TWRA Communications and Outreach Division is committed to providing the public with the information they need. Staff published nearly 100 press releases, responded to press requests, managed social media platforms, and assisted with the production of Agency reports and publications. The division also hosted or participated in hundreds of outreach events including school career days, county fairs, conventions, and educational classes.

Publications:

The *Tennessee Wildlife Magazine* is the official publication of the Tennessee Wildlife Resources Agency with 215,000 subscribers. Published quarterly, it provides stories about all species of wildlife in our state, hunting and fishing opportunities, wild game recipes, and personal stories that warm the heart. The agency also hosts an annual wildlife photography contest to produce The *Tennessee Wildlife Calendar*.

In addition, TWRA publishes 350,000 copies of the *Tennessee Hunting & Trapping Guide* and 350,000 copies of the *Tennessee Fishing Guide* to ensure Tennesseans have the rules and regulations of hunting, fishing, and trapping.

Social Media:

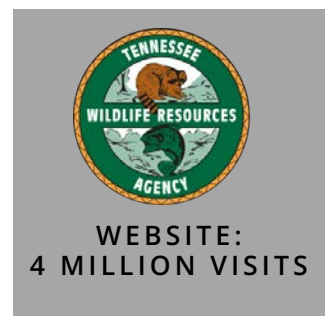
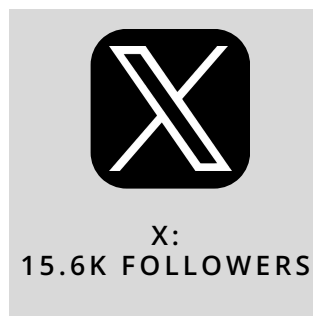
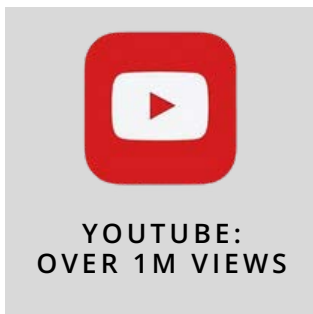
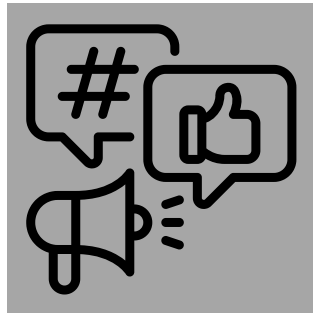
The Communications team is active on social media platforms to reach constituents wherever they are. Staff produced hundreds of videos, reels, infographics, and posts to educate, inform, and even entertain. Across all platforms, the agency added nearly 50,000 new followers from the previous year.

Podcast and Streaming:

TWRA's popular podcast, Tennessee WildCast was highly successful in FY23. Streams of the podcast on Spotify were up 28 percent from the previous year, and listeners streamed from 17 countries. Staff devoted additional time to improving the visual quality of the podcast and averaged over 1,000 views per episode on YouTube with many episodes racking up nearly 5,000 views.

The improved visuals also helped the agency secure placement on CarbonTV. Viewers can now stream Tennessee WildCast on their radio or television.

TWRA also delivers WildCast to over 30 radio stations from Bristol to Memphis. Along with the full broadcast, many of these stations include the Daily WildCast Xtra, a 5-minute version featuring fresh outdoor content each day.





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TENNESSEE WILDCAST**
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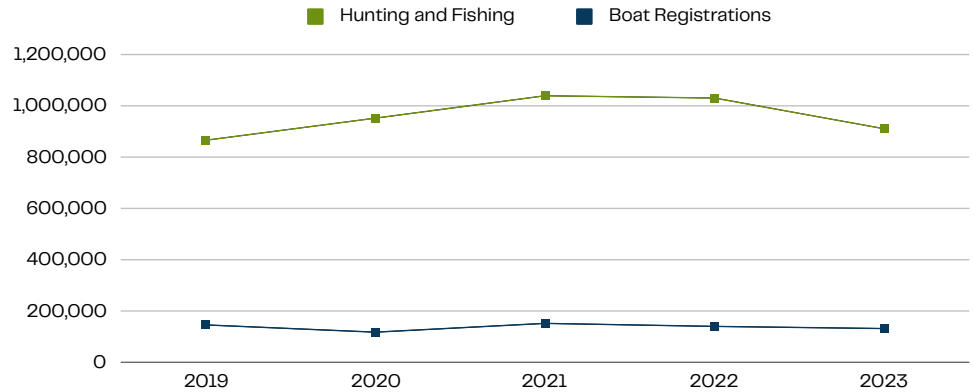
**LISTEN ON THE RADIO, ONLINE OR
YOUR FAVORITE PODCASTING APP**

LICENSE SALES AND FINANCIALS

Nearly 1 million hunters and anglers fund conservation in Tennessee with license purchases.

TWRA's Licensing Division facilitates the sales of hunting and fishing licenses as well as boating registrations. The agency coordinates with nearly 500 license agents to sell licenses at retail outlets ranging from large businesses to family-owned bait shops.

Tennessee License Sales



*License sales increased during Covid-19 but are returning to pre-pandemic levels.

FY23 License Sales and Registrations



TOTAL SYSTEM REVENUE:
\$54,346,922 **-7% FROM 2021-22**



BOAT REGISTRATIONS:
44,624 **-11% FROM 2021-22**



HARD CARDS SOLD:
218,630 **+8% FROM 2021-22**



DONATIONS:
\$193,266.10 **-10% FROM 2021-22**



Federal Grant Funding

The U.S. Fish and Wildlife Service is the main source of federal grant funding for TWRA. This funding is generated by excise taxes on firearms, ammunition, archery equipment, fishing equipment, boat motors, and a portion of the federal gasoline tax. Federal funds are distributed to states based on the number of state licenses sold and land and water area.

Wildlife Restoration Program Projects:

- Wildlife Research
- Public Hunting Access
- Wildlife Management



Sport Fish Restoration Program Projects:

- Fish Research
- Public Fishing Access
- Sport Fish Management



The current model of wildlife conservation funding in Tennessee relies on the sales of hunting and fishing licenses as well as boating registrations. TWRA receives matching federal grants from federal excise taxes on the sales of outdoor gear. Funding sources from the state general fund include a portion of the marine fuel tax, which is dedicated to boating infrastructure, and a portion of the real estate transfer tax, which can be used for the purchase of wetland properties and land maintenance. For accounting purposes and to ensure funding is used appropriately, the agency operates from three main budgets: the Wildlife Fund, the Boating Fund, and the Wetlands Fund.

Like other Tennessee state agencies, the annual operating budget for the TWRA goes through a rigorous review and oversight process to ensure fiscal responsibility. At the start of the budget process, field staff identify areas of need and submit budget proposals for review by agency leadership. The agency then prepares an official budget proposal to be presented and voted on by the Tennessee Fish and Wildlife Commission. The approved budget then heads to the General Assembly House and Senate Finance Ways and Means Committees for review and approval.

2022-2023 Annual TWRA Expenses and Funding

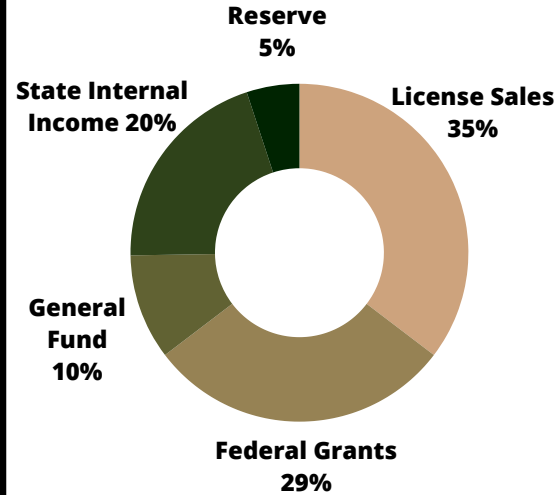
FY23 Expenses	Wildlife	Boating	Total
Employee Costs	\$56,531,245	\$6,068,987	\$62,600,232
Operating Costs	\$58,331,218*	\$5,720,660	\$64,051,878
Total Costs	\$114,862,463	\$11,789,647	\$126,652,110

FY23 Funding	Wildlife	Boating	Total
State General Fund	\$11,587,400*	\$0	\$11,587,400
License/Registration	\$40,512,662	\$10,747,669	\$51,260,331
Federal Funding	\$33,768,274	\$1,876,848	\$35,645,122
Current Services	\$5,757,161	(\$22,498)**	\$5,734,663
Interdepartmental	\$17,443,767	\$0	\$17,443,767
Reserve	\$5,793,199	(\$812,372)**	\$4,980,827
Total	\$114,862,463	\$11,789,647	\$126,652,110

* Includes one-time funding of \$11,053,900 for the transfer of jurisdiction of Lake Halford from the Carroll County Watershed Authority to the TWRA.

**Negative value reflects funds added to Boating Reserve.

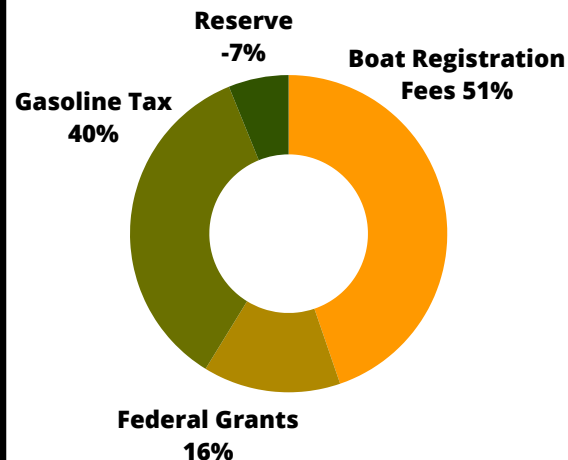
Wildlife Funding Sources



Wetlands Fund

The Wetlands Acquisition Fund was established by the General Assembly in 1986. The fund provides for the acquisition of wetlands and watershed areas. It is funded by the real estate transfer tax at a rate of \$0.0325 per \$100.

Boating Funding Sources



1949-2024

CELEBRATING



Celebrate 75 years of wildlife conservation with the Tennessee Wildlife Resources Agency in 2024 with special events, stories, giveaways, and more. Visit TNWildlife.org to stay up to date on the latest opportunities to get involved.