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This Is What We Do: Annual Report 2016

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ANNUAL REPORT

≡ *this is* ≡

**WHAT
WE DO**

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Tennessee Dept. of Environment & Conservation



Citizens of Tennessee:

I'm pleased to share our department's Fiscal Year 2016 Annual Report with you.

This year's annual report adopts the "This is What We Do" theme from Governor Bill Haslam's 2016 State of the State Address. Throughout this document you will find stories reflecting how our department's actions make Tennessee a better place to live, work and play every day. I trust you will find these stories both interesting and meaningful.

"Who" we are at TDEC is one of the key reasons we are able to do so much for Tennessee. The public servants in our department represent accountants, attorneys, engineers, geologists, inspectors, interpretive specialists, programmers, park rangers, and scientists they perform a variety of daily activities to protect our natural resources and improve our overall quality of life. These dedicated professionals are distinguished by their character, competence and customer service commitment. Our entire staff is driven by the department's stewardship mission and the opportunity to make a real and lasting difference through public service and rewarding work.

From conducting watershed outreach events to hosting a variety of outdoor events at our parks and supporting improved public health, TDEC staff are engaged, energized, and out in the community. Our staff knows that the people who benefit from our programs and the betterment of current and future generations of Tennesseans are at the heart of everything we do.

Fiscal Year 2016 was a special year for us, marking 25 years since the Tennessee Department of Environment and Conservation was established in February 1991 by then-Governor Ned McWherter. Our Silver Anniversary celebration allowed us to promote the important connection between conserving natural resources and protecting human health and the environment. I hope you enjoy our Silver Anniversary retrospective in this report and see how the connection exists still today – from brownfield redevelopment that transforms previously blighted properties to stream restoration and flood control work that creates greener spaces and healthier places for Tennessee.

Twenty-five years since our founding, TDEC remains a vibrant part of state government. We take our responsibility for Tennessee's "quality of life" just as seriously as when we began. Our work remains directed at producing cleaner air and water, better protected natural resources, and enhanced recreational opportunities for all. However, we know our most significant accomplishments for Tennessee's environment are really shared successes that reflect efforts across business, local government, communities, and non-profit organizations. Thank you for your commitment, creativity and partnership as we all work together to make Tennessee an even greater state to live, work and play.



Bob Martineau

Commissioner

A handwritten signature in black ink that reads "Bob".

Commissioner, Tennessee Department of Environment & Conservation

Our Mission

The Tennessee Department of Environment and Conservation exists to enhance the quality of life for citizens of Tennessee and to be stewards of our natural environment by:

- Protecting and improving the quality of Tennessee's air, land, and water through a responsible regulatory system;
- Protecting and promoting human health and safety;
- Conserving and promoting natural, cultural and historic resources;
- Providing a variety of quality outdoor recreational experiences.





Twenty-five
FOR
25

We proudly celebrated 25 years of environmental progress and conservation achievements for Tennessee in 2016. Here are some highlights from our silver anniversary retrospective.

1991

- Passage of the Solid Waste Management Act addresses the need for a professional, integrated solid waste management system in Tennessee and creates the Solid Waste Management Fund. To date, more than \$300 million has been distributed in grants.
- The General Assembly ensures the long-term viability of TDEC's environmental programs by creating the Environmental Protection Fund as a repository for the fees, civil penalties, and damages collected pursuant to state environmental statutes.
- The General Assembly authorizes a real estate transfer tax to purchase land for state parks and natural areas; fund improvements at local parks; clean up streams; and protect wetlands. TDEC has managed the Local Parks and Recreation Fund and State Lands Acquisition Fund since then.

1993

- Proceeds from the sale of Iris Fund license plates begin supporting native plant landscaping and exotic plant removal projects at Tennessee State Parks and Natural Areas.

1996

- Bicentennial Capitol Mall State Park opens on Independence Day with Vice-President Al Gore and Governor Don Sundquist in attendance. The investment is a catalyst for the rejuvenation of the Jefferson Street and Germantown communities and preserves unobstructed views of the state capitol.
- Hiwassee-Ocoee Rivers State Park hosts whitewater sports events for the 1996 Olympic Games.
- TDEC begins using a Watershed Approach framework for decision making, outreach, and coordination to improve water quality. The August 2016 lifting of a water contact advisory for Oostanaula Creek is a recent success of the approach, addressing a variety of issues including treated effluent from a wastewater treatment plant, urban stormwater runoff, collection system overflows, and livestock concerns.

1998

- Cumberland Trail State Park becomes Tennessee's first linear state park. When complete, it will stretch 330 miles from the TN-AL-GA border near Chattanooga to the TN-KY-VA border at the Cumberland Gap following a line of pristine high ridges and deep gorges lying along Tennessee's Cumberland Plateau.

2000

- The Division of Archaeology responds after unusual formations are observed during road widening for State Route 75 in Gray, Tennessee. The Gray Fossil Site is now home to the ETSU Natural History Museum – both an important research institution and a popular tourist destination. Thousands of fossil specimens representing an entire ecosystem have already been found even though less than 2% of the site has been excavated.
- Passage of the Tennessee Inter Basin Water Transfer Act authorizes TDEC to regulate proposals for the diversion of water from one river basin to another.

2001

- Duck River achieves Scenic River designation. The Duck River was featured in the February 2010 issue of National Geographic as one of the most biologically diverse places on the planet.

2005

- Tennessee Heritage Conservation Trust Fund is established to permanently conserve and preserve tracts of land to promote tourism and recreation; to protect, conserve and restore the state's physical, cultural, archaeological, historical and environmental resources; and to preserve working landscapes.

2007

- The American Academy for Park and Recreation Administration awards the national Gold Medal for Excellence to Tennessee State Parks.
- Using a public-private partnership, the 127,000-acre "Connecting the Cumberlands" conservation acquisition protects 200 square miles of forestland in Anderson, Campbell, Morgan, and Scott counties.

2010

- LEED Silver certified cabins open at David Crockett State Park – the first for any state park system in the nation.

2011

- Volkswagen Group of America opens a new manufacturing plant at Enterprise South in Chattanooga, a major brownfield redevelopment of the former Volunteer Army Ammunition Plant.
- Tennessee Coneflower (*Echinacea tennesseensis*) is delisted from the Federal Endangered Species Act (ESA). The Tennessee coneflower was one of the first species listed on the ESA in 1979 and is just one of five plant species to be delisted. Colonies from sustainable populations protected in 10 Tennessee State Natural Areas are a major reason for the delisting.

2012

- Cummins Falls State Park is established in Jackson County, providing public access to a nationally renowned swimming hole.

2014

- Two new Tennessee State Parks open in one year – Seven Islands State Birding Park in Knox County and Rocky Fork State Park in Unicoi County.

2015

- EPA declares completion of the third and final phase of the TVA Kingston Ash Spill cleanup and restoration. The spill occurred on December 22, 2008 when a dike failed at the TVA Kingston Fossil Plant in Roane County releasing 5.4 million cubic yards of coal ash from an on-site landfill, covering more than 300 acres of surrounding land and water.
- Chiefs of the three federally recognized Cherokee tribes meet at Red Clay State Historic Park for the first time in more than 175 years.
- Tennessee has the fewest number of leaking underground storage tank sites since 1989 and the lowest number of leaking tank sites for any state our size in the nation.
- Pickett Civilian Conservation Corps Memorial State Park achieves International Dark Sky Park designation.
- Air quality across Tennessee meets all federal ozone and fine particulate matter standards.

2016

- Bald eagles are now reported in 40 different Tennessee State Parks – from Meeman-Shelby to Roan Mountain. Twenty-five years ago, bald eagles were only found at Reelfoot Lake.

THIS IS WHAT WE DO – TRANSFORM COMMUNITIES

Former Brownfield Becomes World-Class Music Venue

TDEC’s Division of Remediation played an important role in transforming blighted properties into many of Nashville’s most popular spots. Using voluntary programs to address both real and perceived contamination, valuable community assets like the Gulch, Ascend Amphitheater, and the new Sounds stadium replaced underutilized spaces.

Ascend Amphitheater is a great example of bringing a once unusable space back to life. The 11-acre park started as freight yard and later became the site of the nation’s first waste-to-energy facility. Nashville Thermal Transfer Plant was established in 1972 to utilize energy from incinerating waste to heat and cool downtown buildings. Due to escalating operating costs and citizen concerns, the plant was phased out in the early 2000s.

The lot sat vacant for nearly a decade while Nashville began rediscovering the riverfront. The prime location warranted careful consideration to maximize its potential, and as a former railyard and waste processing location the site had potential issues. In 2013 Metro Nashville unveiled an open space plan with the site reimagined as an open air venue, anchoring West Riverfront Park. TDEC would have a vital role in bringing the project from concept to reality as Ascend Amphitheater.

The Brownfield Redevelopment Program assists in the re-use and revitalization of brownfields like the “Thermal” site. EPA defines brownfields as real property which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties protects the environment, reduces blight, and takes development pressures off greenspaces and working lands.

In all, Tennessee’s Brownfield program worked with 190 individual properties totaling more than 2,900 acres between 2010 and 2016. The properties have been transformed into baseball stadiums, public greenways, apartment complexes, and even returned to other industrial and manufacturing uses. Using EPA statistics, rehabilitating 2,900 acres of in-fill translates to saving between 5,800 to 11,600 acres of greenspace. Using existing sites allows better use of resources like roads, utilities, and transit.

Steve Goins, Director of the Division of Remediation, offers his perspective. “Our work is helping move Nashville forward and allowing the ‘It’ city to develop sustainable, connected spaces and vibrant neighborhoods. Many of the cranes that have become such a staple in the Nashville skyline can be connected to projects that started with our programs.”



Ascend Amphitheater opened July 30, 2015.

THIS IS WHAT WE DO – BRING NEW LIFE TO OLD SITES

Jackson Kayak Reopens Plant

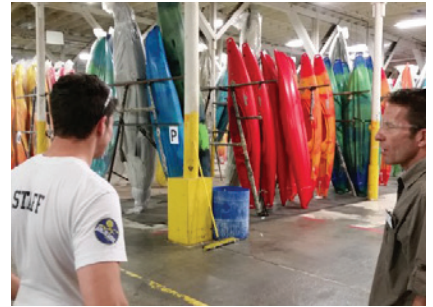
When Philips Luminaires closed its Sparta factory in 2012, 284 people lost their jobs, but the Division of Remediation is helping to bring important reinvestment back to the rural community by making a brownfield site available for redevelopment. Eric Jackson, owner of the Tennessee brand of paddle sports products, Jackson Kayak, is happy to explain the draw of White County, citing the scenic beauty and outdoor recreation. “Why do I live in Rock Island? This is a very easy question for me to answer. The whitewater is amazing! The fishing is amazing! The beauty of the landscape is breathtaking. It is one of the most beautiful places in the world!”

In 2003 he selected Sparta as the location for his factory when the production of the popular line of kayaks first began. Ten years later, as demand was outpacing the capacity of their production facility, Jackson Kayak explored options for expansion, but hoped to remain in Sparta. The Upper Cumberland Development District (UCDD) was eager to retain the business and pitched the benefits of utilizing the former Philips Luminaires location a 43-acre site with an existing 300,000 sq ft production facility. It had all the potential of an ideal location – spacious, well-maintained, and with existing utilities and highway access.

The location was once considered by many to be the center of economic activity in White County. It was a key employer, manufacturing industrial lighting fixtures since the 60’s, most recently as Philips Luminaires. There was just was one major hurdle. The site was contaminated with high concentrations of industrial compounds including volatile organic compounds, polychlorinated biphenyls, and heavy metals. It was the textbook definition of a brownfield.

The UCDD utilized EPA Brownfields Community Wide Assessments grants to conduct Phase I and II Environmental Site Assessments and better understand the potential contamination and concerns. The assessments aided Jackson Kayak in entering into a Brownfield Voluntary Agreement with the Division of Remediation. The agreement called for sampling, cleaning up the worst polluted areas, and installing a vapor barrier to protect indoor air quality. By completing the agreed activities, Jackson Kayak would be able to renovate and occupy the plant without assuming any of Philips’ liability for the contamination.

With a location secured, Jackson Kayak plans at total investment of over \$6.5 million in White County to expand kayak production and launch a new line of high-end cooler products, Orion Coolers. Most importantly, though, for the Sparta community of just 5,000, the expansion will employ 250 new people. The breathtaking natural beauty of White County, incredible whitewater at Rock Island State Park, and liability protection from the Division of Remediation combined to bring them back. Without TDEC and its programs, the jobs might have been lost forever.



THIS IS WHAT WE DO – ANSWER THE CALL

Ranger Petty Rescues Young Boy

Tennessee State Park rangers work every day to protect the people of Tennessee and Chief Ranger Shane Petty answered the call on September 30, 2015. This particular news making event reinforces the role the Tennessee State Park Ranger Service has in public safety. A 4-year-old boy was kidnapped in Bedford County, taken from his home by a friend of the family, and the local police needed assistance.

Shelbyville Police officers had chased the suspect down but when the chase got too dangerous, they backed off and called in Ranger Petty and his trusty bloodhound, Copper. Ranger Petty and Copper were able to track down the child in only 10 minutes thanks to Copper's incredible nose.

To begin, Ranger Petty put Copper in the car where he knew the scent of the young boy would be. Soon after, Copper was on the hunt. He tracked the child's scent to a box van truck at a salvage shop in Bedford County. When Ranger Petty and Copper looked in the truck, the child was cowering inside with the man who had kidnapped him. They were surrounded by car parts and debris, a setting where they could have easily been hurt.

When the child saw Ranger Petty and Copper, he was very relieved and came out hugging. The man who kidnapped him was arrested and the little boy was happy to spend the afternoon playing with Copper. Mike Robertson, Director of Park Operations for Tennessee State Park sums it up. "Our park rangers do incredible work every day and on this day they helped save a young life."



Shane Petty is the Chief Ranger for the Tennessee State Parks Ranger Service. He is based out of Henry Horton State Park where he trains rangers, horses for mounted patrol, and blood hounds. He has performed 383 rescues over the course of his career.

Ranger Service Training (below) is key to positive to outcomes.



THIS IS WHAT WE DO – RALLY SUPPORT

Cookeville Field Office Coordinates Resources to Assist Family

A serious issue in Warren County was resolved by not just assessing the condition of the system but also considering the people involved.

In May 2016, Kyle Philips, an inspector from the Cookeville Field Office, witnessed a year’s worth of complaints and compromises come to a full resolution with the installation of a new \$6,500 septic system at the home of a disabled man and his family of five. Kyle’s compassion and persistence to organize a few generous donors in the groundwater community made this amazing outcome possible.

Over the previous year, the family’s system teetered on the brink of failure. Numerous complaints from a neighbor had brought Kyle out to the home numerous times and he quickly found himself in the middle of a contentious situation. Tensions soared and solutions seemed out of reach as the family made multiple attempts to fix the system. After several months of complete system failure, Kyle knew that the case was headed to court and the likely outcome would be unsatisfying and unfortunate for the family. He then decided to pursue another course of action.

Recognizing the need for assistance, he thought creatively and called an old friend Kent Taylor, former director of TDEC’s groundwater program. Kent is now the Area Sales Representative at Infiltrator Water Technologies, a company using a new design to improve the infiltrative capacity and installation of septic systems. By using the installation as a training opportunity, Kent was able to arrange for the family to have a new tank and 100 feet of infiltrator lines.

Having secured the necessary equipment, Kyle then went to work to locate a funding source to install the new system. He contacted Tonya Dulworth at Pacesetters, a private not-for-profit located in Cookeville that provides services and support to individuals with disabilities. Pacesetters contributed \$3,000 to pay Cantrell’s Backhoe Service. When those funds fell a bit short, Chuck Cantrell generously absorbed the extra cost and even donated another 100 feet of Infiltrator lines to the project.

Now the family has a new, first-class septic system that should last them a lifetime. Kyle humbly describes his role. “All I did was make a couple calls. The real thanks should go to Tonya Dulworth, Kent Taylor, and Chuck Cantrell.”



THIS IS WHAT WE DO - FOCUS ON RESULTS

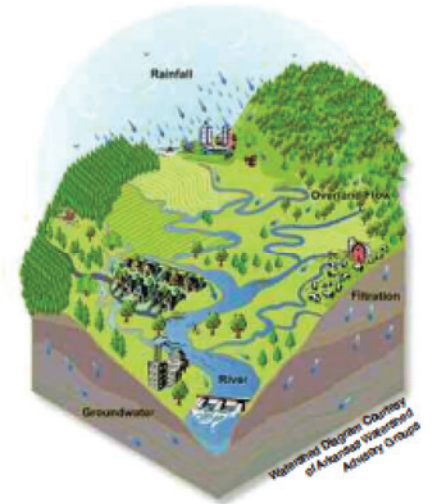
Integrated Approach Improves Water Quality

Everyone lives in a watershed and our individual actions can impact the watershed. A watershed is all the land area that drains into a given body of water such as river, wetland, or aquifer. Small watersheds combine to become big watersheds, sometimes called basins. Tennessee recognizes 55 distinct watersheds and maintains an extensive program to monitor and assess water quality in each. TDEC began using watersheds as framework for decision making, outreach, and coordination in 1996.

Watersheds are a logical way to think about the connection between the land and the quality of water that supports a variety of uses like swimming, fishing, irrigation, aquatic species habitat, and drinking water supply. The approach is based on the concept that many water quality problems, such as the accumulation of pollutants, are best addressed at the watershed level. Focusing on a whole watershed can help identify the most cost-effective pollution control strategies to meet clean water goals.

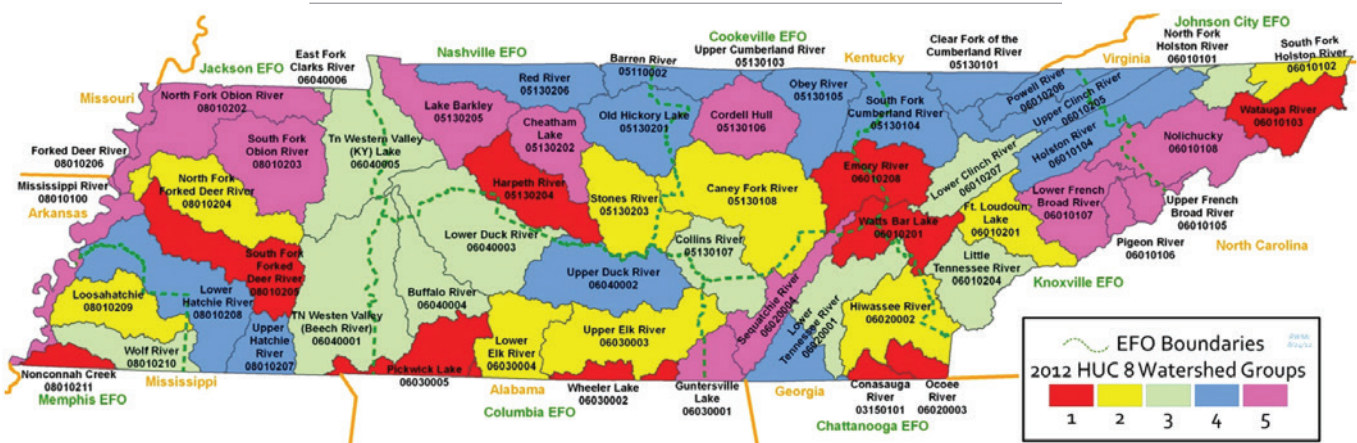
Watersheds have identifiable landscape features with readily identifiable boundaries that integrate terrestrial, aquatic, and geologic features. This information enables The Division of Water Resources to better establish permit limitations and to develop needed controls on discharges and other impacts.

The Watershed Approach represents an awareness that restoring and maintaining our waters requires crossing traditional barriers (point vs. nonpoint sources of pollution, county boundaries) when designing solutions. These solutions increasingly rely on participation by both public and private sectors, where citizens, elected officials, and technical personnel all have opportunity to participate. This integrated approach mirrors the complicated relationships in which people live, work and recreate in the watershed, and suggests a comprehensive, watershed-based and community-based approach is needed to address these concerns.



Water from rainfall that doesn't evaporate runs into ditches, streams, creeks, rivers, wetlands or lakes. A watershed is the land area from which water drains into a river, stream or lake.

Tennessee Watershed Management Groups





Town Creek



Crooked Creek



Crooked Creek

THIS IS WHAT WE DO – PARTNER FOR SUCCESS

Collaboration Results in \$45,000,000 Grant

Ten West Tennessee projects successfully competed for \$44,500,000, awarded by the U.S. Department of Housing and Urban Development through the National Disaster Resilience Competition. The grants were announced in January, continuing a journey of partnerships, capacity building, and mutual benefit.

The effective grant application resulted from a coordinated effort between TDEC, Economic and Community Development, Mississippi River Corridor Tennessee, Vanderbilt University, the Earthquake Institute, and the University of Memphis. Local communities and elected officials enhanced the application by leveraging existing resources and identifying unique needs.

The application focused on innovative and sustainable strategies to increase resiliency and manage flooding while achieving other community-focused goals like connectivity, economic development, and recreation. TDEC’s West Tennessee River Basin Authority is responsible for implementing 5 of the 10 stakeholder-driven projects. TDEC is also leading development of a web-based GIS vulnerability assessment tool that is part of the grant’s Hazard Mapping, Assessment, and Education program. Projects are expected to be completed by 2020.

The **Jackson Urban Flood Control Project** will convert invasive kudzu gully fields into stable detention structures that mimic large rain gardens featuring restored wetlands, meandering streams, and hardwood forests. The project will include miles of trails that cross the South Fork Forked Deer River and its broad floodplain improving connectivity from south Jackson to the downtown business district and fairgrounds.

The **Forked Deer Stream and Wetland Restoration Project** will restore streams and floodplains into native wetland and aquatic ecosystems along with trails, boardwalks, wildlife viewing areas, and educational kiosks.

The **Mainline Mississippi River Levee Pump Station at Tiptonville** will replace portable pumps that currently serve Tiptonville when the Mississippi River is at flood stage. Constructing a permanent pump station will protect homes and reduce the risk of a catastrophic levee failure.

The **Henning Wastewater Treatment Plant and Sewer System Rehabilitation** will reline one of Henning’s older lagoons with an HDPE liner and repair existing sewer lines with a cured-in-place treatment.

The **Cold Creek Chute Spillway Rehabilitation** will replace temporary repairs that were made to the spillway after the historic Mississippi River Flood of 2011 and allow access to the oxbow lake that is situated below the bluffs at Fort Pillow State Park.

Protecting the environment and public health can happen concurrently with economic growth

We live in interesting times. People are divided on a myriad of issues. Citizens young and old find themselves facing what many information sources – real or fake – tell them are binary choices on nearly every issue. As far as the environment goes, the decision appears to be, “Do I need to be pro-business and anti-environment, or do I need to be pro-environment and anti-business?”

The Tennessee Department of Environment and Conservation does not subscribe to either of these “either-or” options. We choose to implement a pragmatic approach to environmental protection that preserves and improves public health and protects our natural resources, but isn’t blind to the economic needs of the citizens we serve.

For example, TDEC has strategically conserved land for our citizens, including more than 27,000 additional acres for Tennessee State Parks and more than 3,000 acres for State Natural Areas since 2011. Land conservation has the practical effect of improving water quality, but it also supports jobs in agriculture, forestry, tourism and recreation, which are vital to our rural economies.

Air quality is better than it has been in a very long time in Tennessee. Today, all counties in Tennessee meet federal air quality standards. But this achievement did not come at the expense of growth. In the past 25 years, Tennessee has seen increased economic output, population and vehicle miles traveled. Tennessee also happens to lead the nation in small business job growth, according to leading payroll processor, Paychex.

Speaking of growth, how about ‘It City’? Did you know that Nashville’s Gulch neighborhood, LP Field, Ascend Amphitheatre and Rolling Mill Hill – all cornerstones of the city’s nationally acclaimed economic resurgence – were formerly blighted, contaminated properties? TDEC worked with local leaders and the development community to restore these sites to beneficial use.

The Tennessee General Assembly has also played a big part in the state’s ability to protect the environment and grow simultaneously. They have helped fund critical drinking water and wastewater infrastructure through low-interest loans all across the state. Our Clean Water and Drinking Water State Revolving Fund loan program has funded \$740 million in water and wastewater infrastructure projects in approximately 150 communities across Tennessee during this administration. These projects are critical to the environment and human health but also help attract business to our communities. In addition, the low-interest and loan forgiveness provisions help smaller community water systems save money for other important needs that improve our quality of life.

TDEC’s Clean Tennessee Energy Grant program has provided financial assistance to municipal governments, county governments and utility districts for developing innovative energy efficiency projects. These programs help local governments reduce expenses and operating costs. The grants also fund important air quality improvement projects that help us breathe easier and make our communities more livable, which is attractive to prospective employers.

TDEC has done all of this work to protect our environment at a time when, as Governor Bill Haslam noted in his “State of the State” address, more Tennesseans have a job today than ever before in the history of our state and our median household income has grown at the second fastest rate in the country. Protecting public health and the environment and promoting economic growth is not an “either-or” choice. We do both in Tennessee, and we have no intent to change.



Shari Meghreblian, PhD

*Deputy Commissioner
Bureau of Environment*

Staying Relevant

Two years ago, all 56 Tennessee State Park Managers met with our Bureau of Parks and Conservation leadership team to share successes and develop our plan for the coming year. That day, I told my team this: “Whatever you do, do it well. Do it so well that when people see you do it, they will want to come back and see you do it again, and they will want to bring others and show them how well you do what you do.” Walt Disney said this; he was a person who knew a great deal about storytelling. Tennessee State Parks has been doing the same for nearly 80 years, but it’s time to renew our relevance. By renewing our commitment to our mission and our customers, we can refocus on the great stories and quality experiences that have been our legacy to generations of Tennesseans.

To tackle our challenge to “do it well,” our park rangers and support staff have responded magnificently. In addition to our five free annual signature hikes, all of our parks now offer programming led by subject matter experts from our State Parks, State Natural Areas and Archaeology Divisions. Tour packages routinely include waterfalls and birding weekends. An array of kayaks and stand-up-paddle boards complement our water recreation offerings.

Our improved website presence and social media outreach has brought our scenic vistas, creative programming and talented park staff closer to the rest of the world. Our online reservation system for campsites, cabins and golf tee-times now includes picnic shelters, in-park events and open space venues.

This work doesn’t happen alone. Here is what we’ve been able to accomplish with the help of local and statewide partners:

- Over 1,000 Tennessee Promise students have achieved their volunteer service goals in state parks;
- The Governor’s Imagination Library program has partnered with Long Hunter State Park to do a pre-school story book hiking trail;
- Tennessee State Parks manages 24 middle school Run Clubs in partnership with the Department of Health;
- During the recent Governor’s Capitol Campout, two dozen kids and their families pitched their tents on the Executive Residence lawn for a night of stargazing and s’mores; and
- We now have 43 charitable Friends group that support our parks and the work we do.

As I reflect on the focus of that meeting and the resulting outcomes of the past year, I feel incredibly grateful and blessed with the continuing evolution of our organizational culture and increased customer focus. New investments in our people, our built environment and the storytelling opportunities in our parks have created a multitude of enhanced experiences for guests to enjoy.

Tennessee State Parks is a recognizable brand with a positive identity. As we continue to develop unique and meaningful outdoor experiences, we further understand that our commitment to our customers is also a commitment to ourselves to be the best we can be, and to always strive to “do it well.”



Brock Hill

*Deputy Commissioner
Bureau of Parks & Conservation*

TDEC Increases Efficiency and Effectiveness

TDEC’s appropriation from the State of Tennessee’s General Fund, which is made up of revenues collected by the State, was approximately \$88 million in FY 2016. The Bureau of Parks and Conservation accounts for 59 percent of the department’s general fund state appropriations. This includes the operations and maintenance of all State Parks, the Division of Natural Areas and Recreation Education Services. The Bureau of Environment (BOE) accounts for 27 percent of the department’s total state appropriations. The majority of BOE state funding is being used to meet our statutory Environmental Protection Fund which requires the state to fund portions of environmental programs along with collections from fees associated with users of the programs. Four percent is required to match the federal Clean Water and Drinking Water Revolving Fund grants to communities. Meanwhile, three percent of state appropriations fund the Tennessee Historical Commission, which is administratively attached to TDEC. Eight percent funds the department’s Administrative Services, including Fiscal Services, the Office of General Counsel, External Affairs, Information Systems, etc. The remaining two percent is used to fund the Office of Sustainable Practices and the Office of Energy Programs.

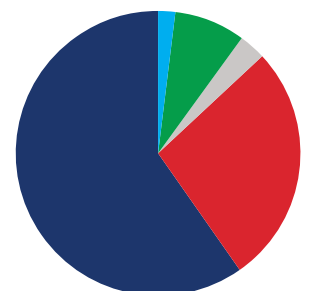
Did you know that almost a third of TDEC’s funding is generated by TDEC programs? The following are a few successes within our State Parks system where we have increased revenue that we generate from prior fiscal year:



These improvements are just an example of our efforts across the department to generate additional revenue while reducing operating costs. TDEC will continue to pursue innovative ways to cut costs and grow revenues through partnerships with community organizers and local businesses, leveraging funding resources and technical expertise from sister agencies and brainstorming creative ways to do more with less.

TDEC FY2016 Budget

	General Fund State Appropriations	Percentage of General Fund
Bureau of Parks & Conservation	\$52,139,500	59%
Bureau of Environment	\$23,955,000	27%
Historical Commission	\$3,011,100	3%
Administrative Services	\$7,071,200	8%
Sustainable Practices & Energy Programs	\$1,839,800	2%
	\$88,016,600	100%



THIS IS WHAT WE DO – MAKE LIFELONG CONNECTIONS

Parks and Students Both Benefit from Volunteer Days

More than a thousand students participated in TN Promise Saturday events hosted by Tennessee State Parks. The events were a success on many levels- the students were given a fun and social way to complete their scholarship obligations, the parks received valuable volunteer hours, and everyone left with an enhanced feeling of community and memorable experiences.

“TN Promise Saturday is a way for our parks to connect students to the outdoor opportunities available here in Tennessee while supporting their academic goals,” said Brock Hill, Deputy Commissioner of Parks and Conservation. “We’re excited to get as many students as possible outdoors and involved in hands-on activities.”

Tennessee Promise is a scholarship and mentoring program focused on increasing the number of students who attend college in our state. It provides students a last-dollar scholarship to cover tuition and fees not covered by the Pell grant, the HOPE scholarship, or state student assistance funds. Students utilizing the program must complete eight hours of community service per semester. The first TN Promise Saturday was conceived when John LeCroy learned that many students were at risk of losing their scholarships because they had not completed the requisite community service commitment.

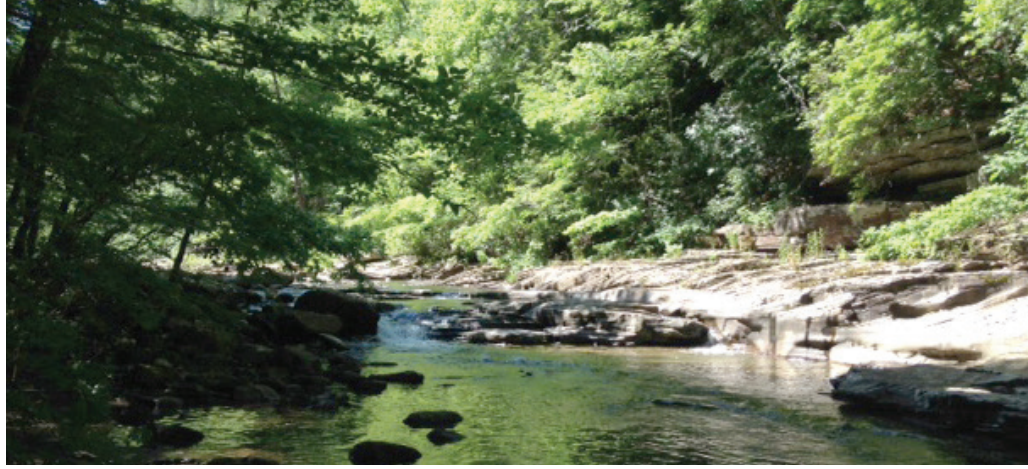
John is the Regional External Affairs Director in the Knoxville Field Office and former park manager of Panther Creek State Park. He describes the thought process. “For many of these young people, community service was a new experience. They did not know how to connect with a project to work the hours. We realized that a statewide event with a local focus would be a way to help the students overcome the hurdle. We had no idea it would make such a significant impact.”

Tennessee State Parks hosted the first TN Promise event on Saturday, July 18, 2015 and 422 students participated. From the success of the inaugural event, it was expanded in 2016 and hosted twice, on April 16th and July 23rd. In all, 1,483 total students participated in the three events and contributed 11,864 hours volunteer hours to improving state parks in their communities. For many of the participants, TN Promise Saturday was a first visit to a state park. What began as an idea has turned into an annual event. The connections made by participating in TN Promise Saturday have many benefits for Tennesseans including growing future stewards of our natural resources.

TDEC is proud to support tnAchieves and advance Governor Bill Haslam’s Drive to 55 by providing mentorship and hosting service opportunities for Tennessee Promise Scholars.



TENNESSEE
Promise



THIS IS WHAT WE DO – PRESERVE PRISTINE PLACES

Soak Creek Named Tennessee’s First Scenic River in 15 Years

After unanimous bipartisan approval by the General Assembly, Governor Bill Haslam signed legislation designating Soak Creek as a Scenic River. The Nature Conservancy, American Whitewater, and the Tennessee Parks and Greenways Foundation joined local advocates in supporting the legislation. “The Soak Creek Scenic River classification will help promote the region as an outdoor recreation area,” said Rob Bullard, director of The Nature Conservancy’s Tennessee/Cumberland Rivers Program. “We hope it will serve as a catalyst for future recreational eco-tourism.”

The broad support for the action stems from the natural beauty and important ecology of Soak Creek. The free-flowing creek is a critical habitat in an area recognized as one of the country’s best remaining examples of a major biotic community. Wildflowers – including the native dwarf milkwort and spotted geranium – are in abundance as well as old growth forests and picturesque waterfalls. Soak Creek is also known as a mecca for whitewater recreational kayaking. Kayakers rate this wilderness paddling route as one of the premier class III-IV runs in the Cumberland Mountains.

The scenic river designation provides protection to the river without impacting property rights. “As a landowner along Soak Creek and a father of kids who love nature, I am thrilled to see this amazing piece of wilderness receive the recognition it deserves,” said George Lindemann, one of many property owners who supported the project. “I believe we protect the places we experience and it just makes sense to set aside some of these incredible creeks and rivers so everyone has the chance to experience this part of Tennessee.”



Previous River Designations

- Blackburn Fork River**
1968 – Jackson County

- Buffalo River**
1968 – Lawrence County

- Clinch River**
1996 – Roane, Anderson, and Knox Counties

- Collins River**
1968 – Grundy County

- Conasauga River**
1969 – Polk County

- Duck River**
2001 – Maury County

- French Broad River**
1968 – Cocke County

- Harpeth River**
1968 – Davidson and Rutherford Counties

- Hatchie River**
1970 – Hardeman, Haywood, Lauderdale, McNairy, Madison, and Tipton Counties

- Hiwassee River**
1968 – Polk County

- Obed River**
1976 – Morgan County

- Roaring River**
1968 – Jackson and Overton Counties

- Soak Creek**
2016 – Bledsoe and Rhea Counties

- Spring Creek**
1968 – Jackson and Overton Counties

- Tuckahoe Creek**
1968 – Knox County

THIS IS WHAT WE DO – STRIVE FOR EXCELLENCE

TDEC Recognized for Process Improvements

To improve the way the agency conducts business, TDEC has examined processes and pursued increasingly advanced recognition by the Tennessee Center for Performance Excellence (TNCPE).

By looking at every level of our operations for alignment with the mission, TDEC is seeing better customer outcomes, enhanced environmental results, and improved employee engagement and satisfaction.

The Bureau of Environment was the first to begin the evaluation process. Elaine Boyd, Director of Strategy and Process Improvement, gives her perspective. “The process provided a framework for evaluating all the initiatives underway across the Bureau of Environment and then examining them to determine what changes are needed to pursue organizational excellence. It’s remarkable how much our organization has matured and improved just since our first application in 2014 by using a rigorous evaluation method.”

Casey Mahoney, Director of Customer Interface, shares one way assessment changed the way TDEC does business. “The assessment underscored our need to gather and use data to make better business decisions and guide process improvement. Recently, we standardized customer feedback tools and automated the routing process. The new approach is not only helping employees respond to customers faster, but improves our ability to track and report feedback to inform other decisions like website development and deploying digital strategies.”

Robert Dickinson, Director of Financial Responsibility, served as the team lead for the Bureau of Administration. “It’s been great working with people from across the bureau to identify our strengths and areas for improvement,” Dickinson said. “It’s ultimately all about maintaining a focus on your customers and eliminating unnecessary processes, and I can see the value already. Recent successes include fleet fuel efficiency improvements, paper use reduction, and new sustainable purchasing strategies.”

Anne Marshall, team leader and Senior Advisor to Parks and Conservation recognizes the potential for improvement through the examination process. “The biggest benefit will be to our guests at Tennessee State Parks and to the people whose quality of life is improved by our conservation programs. Ultimately, that’s the reason we all do what we do.”

Commissioner Bob Martineau sums it up. “While we’re proud of our many accomplishments in 2016, we realize that if we hope to achieve our vision of becoming a national model for environmental stewardship and of operating the best managed state park system in the country, it’s just as important to examine our plan for the future. We need to be able sustain our effectiveness year after in a constantly changing social and economic landscape.”



Tennessee Center for Performance Excellence Recognition

Bureau of Environment
Level 1 Award 2014
Level 2 Award 2016

Bureau of Administration
Level 1 Award 2015
Level 2 Award 2016

Bureau of Parks & Conservation
Level 1 Award 2016



The Visitor Center officially opened to the public in October 2015. Dignitaries and leaders from Gallatin and Sumner County attended to help launch this park in to an exciting new future.



THIS IS WHAT WE DO – MAKE HISTORY COME ALIVE

Bledsoe Creek Honors Local History

A new visitor center at Bledsoe Creek State Park sets the stage for history and community. The visitor center ties into the park's theme to celebrate Sumner County history. It features a central gallery showcasing the history of the park and surrounding area and was even modeled after nearby Wynnewood, the largest 19th Century log structure still standing in Tennessee.

The facility replaces a tiny, 40 year-old park office which was acquired with the rest of the park in 1973 from the United States Army Corps of Engineers. The 300 square foot building contained only a single restroom, a storage closet, and a small office area. It was designed to house basic park operations, not serve as the park's front door and struggled for many years to meet the needs of park visitors or staff.



Wynnewood



The new building is four times larger than the old office and provides a welcoming entrance to the park with an interpretation area, a gift shop, and an expanded parking lot. A conference room outfitted with first-class AV equipment offers both park programming and community meeting space. Public restrooms were smartly designed so that they can be accessed even when the office is closed.

The building materials and furnishings were also carefully thought out. At the ribbon cutting, Deputy Commissioner Brock Hill said, "We are proud to demonstrate our commitment to supporting Tennessee's economy. From the actual log structure to handmade chairs crafted in Red Boiling Springs by Newberry and Sons, we featured Tennessee Wood Products throughout the project."



THIS IS WHAT WE DO – BREW UP BENEFITS

Benzene to Beer Trail Expands to Include Johnson City

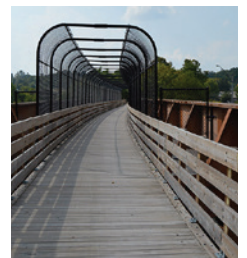
A historic Washington County property has been transformed with the help of the Division of Underground Storage Tanks. The property once served as a train depot in the 1800s and an auto center in the 1960s. Today, the Yee-Haw Brewing Company Taproom and White Duck Taco Shop occupy the refurbished location. There were many twists and turns on the path from train depot to brewery and restaurant.

The East Tennessee and Western North Carolina “Tweetsie” Railroad Company constructed the Tweetsie Railroad Depot in Johnson City in 1891 to transport passengers, iron ore, and timber from the mountains of Northeast Tennessee and Western North Carolina. The depot served the railway until passenger service stopped in the 1940s. In the 1960s, the Tweetsie Depot was acquired by the Wexler family and transformed into a full-service auto center. Four petroleum underground storage tanks were operated at this facility from 1965 until 1979.

When the auto center was closed, the tanks were taken out of service permanently and filled with foam. Ten years later in 1989, the property was being considered for condemnation and possible demolition for commercial development. After a Phase II Environmental Assessment indicated petroleum contaminant concentrations in the soil that exceeded the cleanup standards, remedial actions were taken. Subsequent activities by TDEC and the property owner determined no additional action was required.

In 2014, the City of Johnson City collaborated with the Yee-Haw Brewing Company to assist renovation through grants, utility relocation, and site assessment and development consultation with the Washington County Economic Development Council. Yee-Haw Brewing Company opened in 2015 and joins 3 other brew pubs in former gasoline dispensing locations, unofficially known as the “Benzene to Beer Trail.”

Stan Boyd, Director of the Division of Underground Storage Tanks shared his reflections on the project. “Due to UST’s historical involvement with the property and its regional historical relevance, our staff monitored construction activity throughout the renovation process. It’s exciting to see an old service center converted into a thriving business in the heart of this redevelopment.” The depot which once served freight and passengers on a rail line, now serves up brews and tacos.



The depot isn't the only railroad asset to take on a new life. The Tweetsie Trail is a 10-mile linear trail that runs along the old railbed from Johnson City to Sycamore Shoals State Park in Elizabethton.



THIS IS WHAT WE DO - ENERGIZE FUTURE GENERATIONS

Office of Energy Programs Educates Educators

In June, K-12 educators joined the Office of Energy Programs for Energy Education Camps. The five-day camps, hosted at Montgomery Bell and Pickwick Landing, drew a total of 100 educators from across the state and included training sessions and activities. Information and resources were provided to teach the science of energy and energy conservation in fun and tangible ways.

Molly Cripps, Director of the Office of Energy Programs explains why the program invests every year in offering the camps at no cost to Tennessee educators, “Energy conservation efforts reduce costs and emissions, enhancing the quality of life for Tennesseans. This is an important message to pass along to the next generation of energy consumers from both an environmental and economic standpoint.”



Teams build cardboard houses and use various recycled materials for insulation. The friendly energy house competition reinforces energy efficiency and conservation.



The creators of KitBook joined educators to demonstrate how they can be incorporated into lesson plans.

The camps demonstrate ways to create real-world situations to collect and analyze data in the classroom. This practical learning method allows students to gain a deeper understanding of science, math, and technology and to reduce their school’s energy usage. Grade-level breakout sessions ensured that participants left the camps ready to implement the curriculum the upcoming school year.

In addition to addressing Tennessee science curriculum standards, the camps offered “team building” energy-related activities for teachers, such as energy bingo and the construction of solar ovens , model fuel cell cars, and energy houses . Furthermore, this year’s campers received educational products to utilize in their energy-related education lessons, including Kill-A-Watt meters and Electric Circuits KitBooks.

The Electric Circuits KitBook, a Tennessee-made educational tool, merges the features of a hands-on science kit with those of a textbook in the form of a single, self-contained educational tool. With theKitBook, students are able to study electricity and simple circuits by testing what they learn in each lesson on an actual circuit board, built into the book. The curriculum supplement was designed to meet National Science Education Standards and covers basic and advanced energy topics including circuits, batteries, conductors and insulators, switches, and electromagnetism.



THIS IS WHAT WE DO – INVEST IN OUR COMMUNITIES

T. O. Fuller State Park Gets New Life with Upgrades

New investments at T. O. Fuller State Park including a new educational facility, playground, splash pad and renovated ballfields continue to honor the park’s namesake as an educator and community advocate.

First designated Shelby County Negro State Park in 1938, the name was changed to T.O. Fuller State Park in 1942 in tribute of Dr. Thomas O. Fuller who spent his life empowering and educating African Americans. It was the first state park open for African Americans east of the Mississippi River.

David Benton, Director of Facilities for Tennessee State Parks, is proud of the recent work at T. O. Fuller State Park. “While closing the underutilized golf course was the right choice, it left the park without a central feature. I’m very pleased that we were able to work with the community to identify park amenities that would capitalize on the existing resources and bring a fresh vitality to the park. The interpretive center is now a centerpiece for the park and the surrounding community.”

The old cart paths have new life as walking trails leading through native plantings, and wetlands now attract wildlife where fairways and water hazards had been. A new playground sits where the number 9 green once challenged golfers. The public pool is near the interpretive center as well. The shadeless kiddie pool has been replaced with an interactive splash pad that encourages lively play.

The interpretive center highlights the park’s rich history and ecology through interpretive panels and staff programming. The building itself makes use of both active and passive environmental controls. Features include natural heating and cooling ability made possible by a roof that reflects sunlight, an overhang around the building that prevents too much sunlight from entering the space, and walls that are resistant to changes in temperature. Rainwater collected from the roof will irrigate the landscaping around the building.

A number of distinguished Memphians were on hand for the ribbon cutting celebration including State Representative Barbara Cooper and James Alexander, a founding member of the Bar-Kays. The Clean Water Network also supported the park investments and sponsored a water fountain and bottle filling station to encourage park users to drink more water.

Park Investments

\$800,000

Interpretive Center

\$140,000

Splash Pad

\$200,000

Playground and Renovated Recreational Facilities

The Year in Review

July 2015: *THIS IS WHAT WE DO: REGULATE FOR SAFETY!*

Tennessee celebrates 50th anniversary of becoming an Agreement state with the Nuclear Regulatory Commission and is commended by the NRC Chairman for its successful efforts throughout the years in regulating the safe use of radioactive materials.

August 2015: *THIS IS WHAT WE DO: INVEST IN EFFICIENCY!*

The Tennessee College of Applied Technology at Ripley is awarded \$250,000 from the Clean Tennessee Energy Grant to upgrade lighting and replace an aging heating and cooling system. In all, more than \$20 million dollars has been awarded across Tennessee for energy efficiency and renewable energy projects.

September 2015: *THIS IS WHAT WE DO: BASK IN THE LIMELIGHT!*

Mick Jagger visits Radnor Lake State Park. His Facebook post receives nearly 140,000 likes and 13,000 shares, providing global exposure for Tennessee State Parks.

October 2015: *THIS IS WHAT WE DO: LEARN FROM THE BEST!*

TDEC Leadership attended the Tennessee Government Leadership Conference at Belmont University. The group heard from several dynamic, engaging speakers about innovative new ways to motivate staff and everyone left feeling enthusiastic about working for Tennessee Government.

November 2015: *THIS IS WHAT WE DO: REHABILITATE RAPTORS!*

Reelfoot Lake State Park nurtured a bald eagle back to health and was able to release it back out to the wild. Reelfoot Lake State Park hosts an eagle festival each year in the park drawing visitors from around the world.

December 2015: *THIS IS WHAT WE DO: PREPARE FOR THE UNEXPECTED!*

Throughout the year the Fleming Training Center hosted many training exercises to prepare for a number of scenarios ranging from floods and other natural disasters to live shooters. In December, Army personnel utilized the facility for a full-scale weapons of mass destruction scenario.



The Year in Review

January 2016: *THIS IS WHAT WE DO: RAISE AWARENESS!*

Each January, TDEC participates in Radon Action Month to educating Tennesseans about the dangers of radon exposure and promoting actions to identify and to address radon problems. This year nearly 1,700 households took advantage of free test kits to evaluate their radon risks at home.

February 2016: *THIS IS WHAT WE DO: PLANT WITH PURPOSE!*

TDEC partnered with the TN Environmental Council and the Division of Forestry to distribute more than 50,000 trees statewide. TDEC employees and their families participated in a special tree planting event at Henry Horton State Park.

March 2016: *THIS IS WHAT WE DO: NETWORK FOR KNOWLEDGE!*

TN Environmental Conference draws nearly 500 people from across Tennessee and the Southeast to network and learn on topics related to environment, economy, and health. Gary Garfield, CEO of Bridgestone Americas delivered a memorable keynote address.

April 2016: *THIS IS WHAT WE DO: SPRING INTO ACTION!*

Spring is a busy season in nature and Tennessee State Parks. All 56 state parks hosted Spring Hikes one of five annual signature hiking events. Nearly 900 took part in ranger-led hikes, park cleanups, scavenger hunts, and more fun outdoor activities to welcome spring.

May 2016: *THIS IS WHAT WE DO: GROW STRONG LEADERS!*

The TDEC Green Leadership Academy is a yearlong experience that helps leaders and future leaders develop skills like building effective teams, managing change, conducting crucial conversations, and navigating to success. Hands-on learning demonstrates some of the concepts.

June 2016: *THIS IS WHAT WE DO: EXCHANGE INFORMATION!*

TDEC partnered with EPA, U. S. Army Corps of Engineers, and other partners to host a compensatory mitigation workshop. Attendees gained a stronger understanding of programs and policies and the hosting agencies received valuable feedback on processes.





Department of
**Environment &
Conservation**