



State Director Mike Fuhr with staff and volunteers planting trees at Oka' Yanahli Preserve

OUR MISSION is to conserve the lands and waters on which all life depends.

107,425

ACRES of conservation easements in Oklahoma that we monitor every year.

MILES of Oklahoma's freshwater resources that we prioritize for monitoring and protection.

ECOREGIONS in Oklahoma where we work to protect our state's native plant and wildlife diversity.

Dear Friends,

Yet another year has passed and I'm happy to share that thanks to your generosity and love of nature, we have made significant advances in conservation. We are excited to share some of these successes with you throughout this impact report about restoration.

Restoration is a hefty word and one that encompasses a lot of what we do at our preserves. It's also one that always makes me think of the quote by Nelson Henderson: "The true meaning of life is to plant trees under whose shade you do not expect to sit." This sentiment will always remind me that despite my wishes otherwise in conservation, we are in it for the long haul. We will not be successful overnight or even over the course of a year. Conservation success is about building on one positive step at a time, working in tandem with the natural world.

Henderson's quote is appropriate for this annual report where one of the conservation success stories we share is focused on the expansive restoration project along several tributaries of the Blue River at the Oka' Yanahli Preserve. So much was accomplished across this restoration site, including the work of a mighty group of volunteers and staff who planted thousands of trees. Even so, we know that with each step forward, the reality is that we still have so much more to do at this preserve and others across the state. Onward and upward!

Sincerely,

With the

Mike Fuhr, State Director



ON THE COVER: Aerial view of TNC's Blue River restoration project in southern Oklahoma. © Going West Productions

THE NATURE CONSERVANCY OF OKLAHOMA

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2021 at a GLANCE

High Plains

GAVE HEALTH CHECKUPS TO 2,186 BISON IN THE **FLINT HILLS.** TNC conducted the annual Bison Roundup at the Joseph H. Williams Tallgrass Prairie Preserve. See page 9.

Wichita

Mountains

SEARCHING FOR RINGED SALAMANDERS IN THE OZARKS. Researchers at Oklahoma State University studied the range extension and population density of this Tier II species of concern in Oklahoma at the J.T. Nickel Family Nature & Wildlife Preserve. See page 5.

Joseph H. Williams

Tallgrass Prairie Preserve

39,650 acres

Tulsa

Pontotoc Ridge

860 acres

Hottonia

Preserve

030 acres

Bottoms ____

Preserve

Creek

Quachita Mountains

Boehler

Seeps &

Sandhills

Preserve

Kiamichi River

Illinois River

Cucumber Creek Preserve

3,629 acres

Glover

River

Keystone Ancient

Blue River

Preserve

Forest Preserve

1,276 acres

CONDUCTED A CONTROLLED BURN ON 1,023 ACRES. The

Cheyenne-Arapaho Tribes assisted TNC with a burn at the J.T. Nickel Family Nature & Wildlife Preserve. See page 6.

Ozark Cave

Preserves

315 acres

Preserve 17.247 acres

J.T. Nickel Family

Nature & Wildlife

CONDUCTED BAT RESEARCH AT FOUR CANYON

Black Mesa Preserve 1.660 acres

PRESERVE. Researchers from the Sam Noble Museum conducted bat surveys at Four Canyon Preserve as part of a larger survey and monitoring effort. See page 4.

TALKED WITH OKLAHOMANS ABOUT CLIMATE

CHANGE. TNC supported collaborative climate change legislation that would assist Oklahomans with practices such as resilient agriculture as well as, shared our climate listening session findings with state leaders and others across the nation. See page 9.

GENERATED SUPPORT FOR OK PUBLIC LANDS. TNC.

led a diverse coalition of more than 30 Oklahoma groups to a huge conservation success this past March when Oklahoma's first ever Public Lands Resolution was passed. See page 15.

PLANTED 4,001 TREES ALONG THE BLUE RIVER.

TNC completed a \$3 million, multi-year project to enhance and restore the riparian zone along the Blue River at Oka' Yanahli Preserve. See page 10.

CONDUCTED A CONTROLLED BURN IN THE

ARBUCKLE PLAINS. TNC and the Bureau of Indian Affairs teamed up to burn 512 acres in the recharge zone of the Arbuckle-Simpson Aguifer. This is the first controlled burn in seven years at Pontotoc Ridge Preserve. See page 6.

CLEARED INVASIVE SPECIES IN THE CROSS TIMBERS.

To help restore the native landscape, TNC staff and volunteers cleared 160 acres of woody encroachment at Pontotoc Ridge Preserve. See page 8.

THE EASTERN ARBUCKLE-SIMPSON

SURVEYED VASCULAR PLANTS IN **SOUTHEASTERN OK.** The OK Biological Survey gathered data on more than 500 taxa in 205 families, including three rare species. See page 4.

PROTECTING THE KIAMICHI RIVER'S NATURAL FLOW. TNC is collaborating with the U.S. Army Corps of Engineers to develop a sustainable, environmental flows program that will benefit thousands of people in local communities and the wildlife that depend on it. See page 14.

INSTALLED FRESHWATER EDUCATIONAL SIGNAGE. TNC

partnered with the OK Aguarium to create educational signs about our freshwater conservation work across Oklahoma. See page 14.

STUDYING THE SUSTAINABILITY OF

Four

Canyon

Preserve

4.050 acres

AQUIFER. TNC is collaborating with landowners and other stakeholders to preserve the water supply of the Arbuckle-Simpson Aquifer. See page 14.



E.C. Springer

Prairie Preserve

40 acres

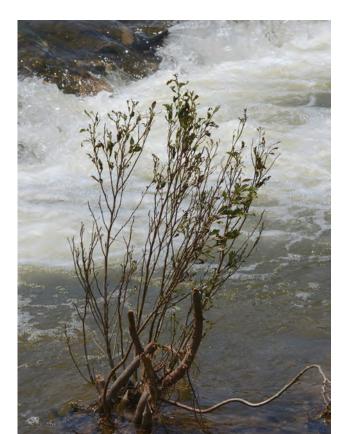
Oklahoma City

VASCULAR PLANTS SURVEYED IN SOUTHEASTERN OK

The Oklahoma Biological Survey at the University of Oklahoma conducted a survey of vascular plants at the Hottonia Bottoms and Oka' Yanahli Preserves. Near Ada in southeastern Oklahoma, the Oka' Yanahli Preserve tops the charts with 645 taxa in 109 families. Of the many species at the preserve, 14% are non-native to the United States. Despite this being a high percentage compared with similar grasslands in the state, the Oka' Yanahli Preserve protects three, very rare vegetation types: seaside alder, false indigo and seep muhly-prairie tea.

The Alnus maritima-Amorpha fruticosa, or commonly known as seaside alder, is an unusual vegetation type only found in the Blue River drainage in Pontotoc and Johnston counties. The seep muhly-prairie tea (Muhlenbergia reverchonii-Croton monathogynus) vegetation type is unique to Oklahoma found on seasonally seepy soils. During the surveys, nine other rare and tracked species were identified at the preserve, some of which hold special value to native bees.

Comparatively, the Hottonia Bottoms Preserve is home to 386 taxa in 96 families with only 6.22% being non-native. One species tracked by the Oklahoma Natural Heritage Inventory is a rare orchid called the spiked crested coralroot (*Hexalectris spicata*). And if you want to impress your friends and family, tell them that orchids in the genus Hexalectris are achlorophyllous, meaning they lack chlorophyll and use ectomycorrhizal fungi to steal nutrients from the roots of other plants.





LEVERAGING OUR LANDS for SCIENCE

BAT RESEARCH AT FOUR CANYON PRESERVE

Using acoustic detectors, researchers from the Sam Noble Oklahoma Museum of Natural History conducted bat surveys at Four Canyon Preserve in Ellis County. Last fall, 11 species of bats, including more than 400 calls of tri-colored bat, were recorded at Four Canyon. To date, studies indicate this property has the most bat diversity among TNC preserves in Oklahoma.

The bat species acoustically detected at Four Canyon include big brown, canyon, cave myotis, eastern red, hoary, Brazilian free-tailed, pallid, silver-haired, tri-colored, Townsend's big-eared and western small-footed. Previous records from Ellis County include specimens of only two bats and observations of two others.

The Sam Noble Museum surveys are part of a larger, statewide monitoring effort to document the presence and absence of white-nose syndrome and study the distribution of the tri-colored bat, a Tier II Species of Greatest Conservation Need. Thus far, researchers have conducted netting surveys at seven localities in five counties and have deployed acoustic detection equipment at 19 localities for more than 1,318 nights.

"The data found during this study will be critical for the State of Oklahoma to make decisions about the protective status of this species," says researcher Brandi Coyner. "Additionally, this data may be useful in the development of a State of Oklahoma response, management and strategic plan for white-nose syndrome."

Researchers are following up with additional surveys next summer.

LEFT: Seaside alder at the Blue River © TNC RIGHT: Tri-colored bat © Pete Pattavina/USEWS

OSU RESEARCHES RINGED SALAMANDERS IN THE OZARKS

Ringed salamanders live underground and only emerge from their burrow during the cooler weather of fall rains. That time of year is outside of the typical field season for herpetological studies that are in the summer months. In temperatures ranging from 100 degrees F during the blazing hot days of summer and 10 degrees F in the winter, researchers gathered data on the full range of the ringed salamander breeding season.

To study a small, water-bound species that live underground, researchers need many survey and capture methods. OSU researchers used drift fencing with minnow and bucket traps, visual encounter surveys and road cruising to capture the adult salamanders. From there, each salamander caught is weighed, measured, photographed and marked using an injectable dye.

The study will also incorporate an eDNA, or environmental DNA component. Researchers will take water samples from ponds and then, using a filtration process, extract DNA which will determine if salamanders are present in the pond. This surveying method, as opposed to those mentioned previously, is much less invasive and can be done without the need to visually encounter a salamander.

This research and data collection will be completed in the fall of 2023. The findings will provide current species population data and be used to determine best management practices as well as, contribute to conservation status decisions made by the Oklahoma Department of Wildlife Conservation.

"This project has been a great success so far," says Taylor Carson, an Oklahoma State University graduate student leading this project under Dr. Stanley Fox's and Dr. Elisa Cabrera-Guzmán's direction. "It has been used to fund graduate student research, two seasonal field technicians each year and exposed many undergraduate student volunteers to not only the salamanders, but also to general ecological concepts, basic camping skills and fruitful research experiences gathering and managing data with hands-on application."

Places like the J.T. Nickel Family Nature & Wildlife Preserve are unique for the plants and wildlife they protect, but also for the invaluable research opportunities they offer. Research projects like these highlight the importance and need for consistent conservation work to better understand our relationship with and impact on the natural world.

OUT OF 10 surveyed ponds at J.T. Nickel Family Nature & Wildlife Preserve yielded adult ringed salamanders.

of THE 1,731 ringed salamanders captured between 2018-2020 were from J.T. Nickel Preserve.

7K RESEARCHER HOURS have been dedicated to this research project during the fall seasons of 2018-2020.

TAKE A HIKE AT J.T. NICKEL PRESERVE.
 Plan a trip to this diverse place in the
 Ozarks by visiting nature.org/jtnickel





TOP: Ringed salamander just before being released. © Taylor Carson BOTTOM: Hundreds of egg masses in a pond at J.T. Nickel Preserve. © Taylor Carson



s the sun rises over the thick,
Ozark forest early one spring
morning, Jeremy is eager to get
to work. After designing the burn plan and
waiting for the weather to cooperate, today
is the day he can safely use his drip torch to
implement one of the greatest conservation
tools we have for restoration and resiliency: a
controlled burn.

This burn, also called a prescribed fire, in spring 2021 was led by Jeremy Tubbs, burn boss and director of the J.T. Nickel Family Nature & Wildlife Preserve near Tahlequah with the support of seven staff and volunteers from The Nature Conservancy (TNC) in Oklahoma and three members from the Cheyenne and Arapaho Tribes' Fire Management Team.

"We would not have been able to conduct this controlled burn without the support of the Cheyenne and Arapaho Tribes," says Tubbs. "We needed a 10-person crew and with their three fire team members we had the capacity to conduct this 1,023 acre burn."

A few months later and a few hundred miles south, TNC partnered with the Chickasaw Nation and the Bureau of Indian Affairs (BIA) to conduct a burn at Pontotoc Ridge Preserve near Ada.

"We are pleased to join in this effort to protect and preserve the natural resources vital to the environmental health and economic prosperity of our local communities for generations to come," says Chickasaw Nation Governor Anoatubby. "As Chickasaws, we have always valued our close connection to nature and our responsibility to exercise responsible stewardship over our resources."

"We believe that TNC's mission of safeguarding nature and advancing science is a nice complement to our work here as their resources bring a body of knowledge, expertise and educational resources that benefit all partners," says Robyn Broyles, public affairs specialist with the BIA.

THE GREATEST CONSERVATION TOOL

Indigenous Nations have long known and utilized fire to stimulate the land and wildlife, but Phillip Daw, assistant fire management officer for the Cheyenne and Arapaho Tribes, expands fire's importance beyond land management and explains that "we use it and need it for everything we do."

LEFT: TNC staff and members of the Cheyenne and Arapaho Tribes during a controlled burn at the J.T. Nickel Preserve. © Chris Hise/TNC

"Like water, fire is life," says Daw. "From keeping us warm to cooking our food. The tribes view fire as a living being. It needs to eat and breathe. It has a personality by being good and bad. The tribes have always had a great respect for fire, and we know the power it has."

"In modern day, fire is considered bad and is underutilized," says Daw. Conservation stewards and fire practitioners "are trying to show that fire can be good if properly managed along with healthy land management practices and are actively promoting good fire in modern times as a resource tool," says Daw.

Every region across the state requires varying frequency of fire or disturbance. The J.T. Nickel Family Nature & Wildlife Preserve in the Ozarks needs regularly controlled burns to reduce leaf litter and other vegetative debris that collects on the forest floor. All this debris in large quantities sitting untouched and drying out is dangerous fuel for catastrophic wildfires like those increasingly seen dotting the west coast. Burns also support the native plant life and keep more invasive species like the highly flammable eastern redcedar tree from becoming dominant throughout the landscape.

At the Pontotoc Ridge Preserve, closer to central Oklahoma in the cross timbers and southern tallgrass prairie regions, this biologically diverse habitat, when managed with fire, is more likely to be resilient to extreme weather events, provide refuge for native wildlife and in turn support a range of human benefits like protecting the Arbuckle-Simpson Aquifer—the precious water



supply for thousands of people in Ada, Sulphur, Davis, Tishomingo and Durant

"Controlled fire has been inconsistent at our preserves in the Arbuckle Plains," says Jeanine Lackey, director of the Pontotoc Ridge Preserve. "Because of these valuable partnerships, we can increase the conservation successes in the entire region and position ecosystems to thrive under future climate conditions by restoring areas likely to remain suitable as the climate changes."

WORKING TOGETHER TO DO MORE

Each controlled burn requires precise coordination, where an agile fire team can operate in tandem to conduct the burn safely and effectively. But that's only half the process. Before lighting the fire, burn bosses at each preserve spend weeks planning, organizing, coordinating, and then waiting on a 24-hour call notice for the right weather conditions. If you've been in Oklahoma long, you know that the weather can be unpredictable which makes managing a group of 10 to 20 people traveling from each corner of the state a trophy-worthy accomplishment of its own.

Daw along with Nokuse Scott and Nathaniel Charley, fire practitioners of the Chevenne and Arapaho Tribes, traveled more than 200 miles from tribal headquarters in Canadian county to eastern Oklahoma near Tahlequah, and 23 BIA practitioners made their way from as far as Oregon, Washington and Colorado to Pontotoc Ridge Preserve. Each crew brought multiple fire engines and truckloads of various equipment.

Additional TNC staff who participated in the controlled burn include Bob Hamilton from Joseph H. Williams Tallgrass Prairie Preserve in Osage County, Chris Hise from Four Canyon Preserve in Ellis County, and Jeanine Lackey and Lane Ketterman from Pontotoc Ridge Preserve in Pontotoc County. But the work doesn't end after one day of burning. TNC staff and tribal partners overnighted at the preserves to manage post-burn mop up operations. This is where the fire crew patrols the burn site extinguishing any lingering hot coals to ensure the fire is completely out.

Many hands make light work. Collaborative partnerships and programmatic resources like the Reserved Treaty Rights Lands (RTRL) provide a system to incorporate Tribal Nations' priorities of reducing wildfire risk and promoting ecosystem health with conservation work conducted by local entities.

Lasting conservation success depends on collaboration. Learnings from rigorous science paired with generational knowledge and wisdom from Tribal Nations are pillars in understanding, respecting and managing the natural world.



WANT TO SAFELY BURN ON YOUR LAND?

Join forces with your local Prescribed Burn Association at ok-pba.org



CLEARING INVASIVE SPECIES IN THE CROSS TIMBERS

Many of Oklahoma's prairies, shrublands and forests are out of balance. Fire suppression and subsequent encroachment of invasive species over the past 100 years have altered more than the plant life. Carbon storage, river flows and wildlife populations have also changed.

Throughout the cross timbers ecoregion, home to the Pontotoc Ridge Preserve, the infrequent fire patterns have created conditions that favor homogenization, meaning a severe lack in species diversity, of these forest communities. This lack of diversity puts the entire ecoregion at risk.

In the fall of 2020, TNC was awarded grant funding from the Oklahoma Department of Wildlife Conservation and the Wildlife Conservation Society Climate Adaptation to combat more than 25 years of infrequent and inconsistent prescribed fire regimes at the Pontotoc Ridge Preserve. In addition to establishing an adaptive fire program, these grant funds will support implementing a forest selective thinning program and eradicating invasive species. These restoration projects will increase plant and wildlife diversity, benefiting 19 Species of Greatest Conservation Need, while making the landscape more resilient to extreme weather events driven by climate change.

Crews began removing eastern redcedar trees and mulching other woodland species like winged elm and honey locust. TNC staff returned months later to spot-treat any new sprouts and control *sericea lespedeza* in cleared areas. Thus far, 160 acres of woody encroachment has been removed at the Pontotoc Ridge Preserve this year. This restoration process will continue for the next two years.

Before and after photos showing results from invasive species treatment and removal at Pontotoc Ridge Preserve. © Jeanine Lackey/ I NC

NATURAL CLIMATE SOLUTIONS

ACRES burned at Pontotoc Ridge Preserve in 2021

ACRES of invasive species treated and removed at Pontotoc Ridge Preserve in 2021





Experience the 360-degree, breathtaking views of Pontotoc Ridge Preserve at **nature.org/OK360**.







Bison being herded in at the 2020 Bison Roundup © Michael Werner/PBS

BISON AT TALLGRASS PRAIRIE PRESERVE HELP BATTLE CLIMATE CHANGE

Acting as a powerful carbon storage container, or sink, the grasslands are a vital component in nature's fight against climate change. Figures vary, but one study estimates that tallgrass can capture up to 1.7 metric tons of carbon per acre per year. In Oklahoma alone, protected grasslands mitigate nearly four metric tons of carbon dioxide per year—the equivalent of taking 4 million cars off the road.

Bison play an instrumental role in the conservation of prairie grasslands. The herd of 2,200 at Joseph H. Williams Tallgrass Prairie Preserve near Pawhuska grazes on a majority of the preserve, playing an important part in enhancing the prairie.

Each fall, the bison are rounded up for their annual checkup to receive vaccinations, weight checks and are treated for a variety of parasites and diseases. In 2020, despite no power on the prairie after an ice storm, staff and hired contractors utilized generators to power the corrals and work 2,186 bison. All the while, special guest Michael Werner and his wife Katie watched from the sky as they filmed an aerial view of the bison roundup for a PBS documentary episode.

New in 2020, TNC staff broadcasted live from Bison Roundup sharing the event with more than 1,032 registrants representing 44 states and 11 countries as part of the virtual Nature Connects Us webinar series.

TALKING WITH OKLAHOMANS ABOUT CLIMATE CHANGE

Over the past year, TNC supported collaborative climate change legislation that would assist Oklahomans on practices such as resilient agriculture. This effort was a huge success establishing TNC as a leading voice with our Congressional delegation in advocating for climate solutions that work for Oklahoma. Beyond these new collaborations, several of our legislators have become members of the new Conservative Climate Caucus in Congress. We look forward to working closely with Rep. Frank Lucas, Rep. Stephanie Bice and Rep. Markwayne Mullin on climate change initiatives.

We also had the opportunity to present our climate listening session findings and how to talk climate change approach with state and national leaders including the Secretary of Energy and Environment Ken Wagner, the Inter-Tribal Environmental Council—a group of 45 tribes from five states—and hundreds of meteorologists with The National Weather Association.

There is still much for us to tackle, but TNC is leading as a nonpartisan, science-based resource on climate engagement, policy and solutions.

LEFT: Staff working bison at 2020 Bison Roundup. © Katie Hawk/TNC

WATCH THE 2020 BISON ROUNDUP ONLINE



- Experience an eagle-eye view of the 2020 Bison Roundup through the aerial lens of drone videographer Michael Werner in this PBS episode at youtu.be/HuYGSrGLeZE
 - Watch TNC's first-ever live broadcast of Bison Roundup at: bit.ly/NatureConnectsUs

RESTORING THE BLUE RIVER through COLLABORATIVE CONSERVATION



Instead, the view through binoculars shows unnatural white structures, standing erect, concentrated most heavily near the river with ranks that snake up to hillside stands of timber. Like sentinels in sinuous formation trailing through the tall grass, 4,001 white perforated tubes guard the river's future, rooted inside.

The tubes are, for now, the immediately visible indicator of what The Nature Conservancy (TNC) Blue River restoration project is all about. They guard a variety of 14 native trees and shrubs like bur oak, cottonwood, American sycamore, Eastern redbud, buttonbush, and false indigo that for now peek through the tube tops and perforations but will grow to solidify a project destined for wide impact.

Their formations show the future of restored critical stream sinuosity—or the winding squiggles that flowing water paints on the land. Carefully engineered grades, curves, riffles and pools, the wetland features that hold, soak, filter and guide rainfall from the green hills to the river, hang on the future of these anchors. The trees and shrubs and their offspring, plus native species waiting in the existing seed bank, are poised to make a transformation.

Like a person who has found a way to defeat the source of an unhealthy habit or damaging diet, this piece of land is meant to become a replenishing, nourishing acreage not just for the waters of the Blue River but for the land, all living things in this

66

Just imagine it in 10 or 15 or even 50 years, as these trees grow. We are essentially trying to give Mother Nature a head start helping the trees grow instead of waiting for them to come back only from seeds spread by birds and other wildlife.

- Mike Fuhr, state director

place over the Arbuckle-Simpson Aquifer, and for people who come to witness the transformation.

Unchecked soil erosion and stream sedimentation will slow, soil health will improve, and the landscape will thrive with more life, from deer, Northern bobwhites, Prothonatory warblers, bobcats, wild turkeys and bald eagles to fish, freshwater invertebrates and microorganisms. It will grow more resilient to a changing climate and stand stronger against flooding, drought and heat.

CLEAR, FLOWING WATERS

Oka' Yanahli, the Chickasaw word for flowing waters, is the name of the 3,598-acre preserve along the banks of the Blue River, which is one of TNC's five priority Oklahoma watersheds. TNC, the Chickasaw Nation and private donors teamed up to purchase the initial 3,108 acres in 2011.

As one of only two Oklahoma rivers that remain unimpeded by dams, the Blue River is both a rare, sparkling jewel and a vital breadbasket. It supports agriculture, manufacturing, tourism and recreation and is a water source for more than 150,000 people in cities like Ada. Sulphur and Durant.

TNC turned to a budding field of study called ecosystem economics which calculates the value of a river in terms of cultural, natural and physical values, says Fuhr.

"It helps us gain a better understanding of the relationship between a healthy environment, a resilient economy and a thriving community," says Fuhr. "We found that the natural capital or the dollar value of the Blue River watershed contributes \$928 million to \$1.7 billion in ecosystem benefits each year."

Fuhr and Chickasaw Nation Director of Natural Resources Kris Patton found a spot to admire the restoration project on a hillside that offered a welcomed breeze on a humid early summer day, not long after a heavy rain. From this viewpoint the winding paths marked by the white tubes between them, and the river brought the full scope of the sinuosity involved into perspective. A low bank above them indicated what used to be a pond dam from a former cattle ranch on what's known as the "Oka' East" side of the preserve.

This location likely was a damp spot below a pond populated with cattle standing belly deep in the waters to stay cool in years past. But on this day, they stood below a shallow embankment with a wetland developing behind it. Tall willows that recently found new life bent in the light breeze behind them and crystal-clear water flowed in a stream past their boots.

"I think the clearness of your water tells the story right here," says



Patton, as he admires the relatively deep bend in the new, winding stream. Below the water's surface grains of sand and pebbles sparkled clearly as if they sat atop a mirror.

This was a feature returned to the landscape through no small effort. Like many acreages across Oklahoma the history of this area traces to the late 1800s, when European settlers began clearing forests in favor of land for crops and grazing. As time passed, equipment improved, and market needs increased which left the remaining trees in many areas populating only the least favorable lands.

People did what they needed to do to survive and raise their families, but winding woodland streams and seasonal wetlands faded into memory, replaced with straightened channels or seasonally damp spots in pastures where ghosts of old streams appeared only during heavy rains as muddy rivulets trailing toward the Blue. The diverse prairies were planted with exotic grass for haying and cattle ranching.



KEEP READING: Story continues on the next page.



Volunteers and staff at one of several work days to plant 4,001 trees along the Blue River. © Jeanine Lackey/TNC

The Blue River now turns brown during heavy rains and it carves steep muddy banks where riparian zone protection is scant. Century-old trees that once made up this protective, riparian zone are now undermined and topple helplessly into the current.

But even after several days of heavy rain, the water ran crystal clear in all three winding streams now reclaimed on Oka' East at the restoration site. Patton says this was what he hoped to see. If rains turned the river brown with mud the source was not this property.

PROFITABLE PARTNERSHIPS

Completed in three phases from 2018 to 2021, the full extent of this restoration project likely falls beyond the scope of most landowners, but Patton says the model provides the pieces and parts that will show different landowners with different challenges just what can be accomplished with help and guidance from organizations like TNC.

While mornings on Oka' East now carry the songs of dickcissels, tufted titmice and Northern cardinals, and raccoon tracks line the wetland areas, two years ago it was for a short time a rumbling landscape inhabited by what Fuhr called "huge yellow beasts."

He chuckled at the memory of a phone call from a concerned resident who wanted to make sure TNC had not decided to go into the quarry business.

It was a mining operation, in a sense, as historic survey maps from 1871 and 1899 were consulted, and aerial photos were used to determine a layout and re-carve the historic routes of the three

winding feeder creeks along this section of the Blue River. More than \$3 million in mitigation funds were approved to create this restoration project under a U.S. Army Corps of Engineers program. The Corps in Oklahoma requires mitigation for impacts to streams and wetlands on a linear-foot and acre-to-acre basis for necessary construction projects within a given drainage or watershed.

With needed overpass work and other highway improvements planned for the area, the opportunity arose for TNC's first cooperative project with the Oklahoma Department of Transportation (ODOT).

More than 4,800 linear feet of stream enhancement, 5,300 linear feet of stream restoration, and nearly 12 acres of wetlands restoration are included. The 28-acre project total scarcely reflects the wider impact across the breadth of three creek drainages and riverfront involved.

Jerod Bechtol, an environmental programs manager for ODOT, looked over the project from the same headwaters spot where Fuhr and Patton stood earlier and said what would come naturally to any onlooker. "This already looks really impressive."

His division contracts with consultants who will inspect the project two or three times a year and examine it under several metrics, including a percentage survival of those 4,001 trees and shrubs.

They will do well to keep up with Oka' Yanahli Preserve Manager Jeanine Lackey, who patrols the area regularly, shovel, loppers

and hammer at-the-ready to remove pesky invasive plants like waxy-leaf privet and Eastern redcedar, or to set straight the occasional saplings or staked tubes hit by flooding debris or disturbed by wildlife.

Hundreds, probably thousands, of privet and redcedar have fallen to loppers wielded by her and her small staff and the volunteer crews who organized to erect all those tubes and stakes in a matter of a few days in the fall of 2020.

Not every mitigation project has the kind of volunteer help atthe-ready or on-site staffing like the Oka' Yanahli Preserve, says Bechtol.

To complete the long-term restoration of the acreage, TNC plans to design and implement the removal of the remaining exotic pasture/hay fields and replace with highly diverse native grass and forbs. Diversity of native grass and flowers promotes diverse soil structure, which attracts more soil microbes, helping to keep the soil intact, reducing erosion, and promoting water quality.

"This is one of those projects that is a win-win," says Bechtol. "There are metrics that a project has to meet but everyone understands it's a natural environment and a lot of common sense comes into play. You go out and make sure that the trees are looking good but obviously you're not going to count 4,001 trees every time. You go out and you see that the project is functioning. Right now, this is looking very good, very, very good."

AERIAL VIEW of the BLUE

5,300 LINEAR FEET of stream restoration along the Blue River

4,800 LINEAR FEET of stream enhancement along the Blue River

3,598 ACRES privately-owned by TNC along two miles of the Blue River

520 **SQUARE MILES** of land channels rainfall into the Blue River

MILES long, the Blue River flows through five counties in southern Oklahoma

Our missions are aligned for conservation and for restoring wetlands.

This project could become a key focal point for the whole

Blue River area as a model for landowners.

- Kris Patton, Chickasaw Nation director of natural resources



EASTERN ARBUCKLE SIMPSON AQUIFER STUDY

TNC is collaborating with landowners and other stakeholders to preserve the water supply of the Arbuckle-Simpson Aquifer and promote economic growth through sustainable practices. Because the Oka' Yanahli Preserve sits atop this irreplaceable aquifer in southern Oklahoma, it lends itself perfectly to host an interest-driven study and serve as a sampling site for groundwater well monitoring. The Eastern Arbuckle-Simpson Aquifer study is a \$5 million project that will be conducted over eight years. This project will build on the phase one study conducted from 2003-2013 which determined the maximum annual yield, or how much can sustainably be removed from the aquifer each year. The project will begin by monitoring springs, streams and wells to better understand the hydrological framework of the area. Then, data collected over time will be compiled to create hydrological models that stakeholders can use in determining the future use and health of



the aquifer. This study is being conducted by the United States Geological Survey along with multiple partners to better understand water availability in the eastern portion of the aquifer. This data will serve as the definitive tool for all who rely on this aquifer for water. The groundwater model built from the phase one study will be refined to look at site-specific water management. The placement of groundwater wells and their influence on a nearby stream will be assessed. This study is important because it sets the stage for understanding how much water is available and how multiple uses of the water can impact the aquifer. It will guide how best to use the water the aquifer provides while protecting the environment.

PROTECTING THE KIAMICHI RIVER'S NATURAL FLOW

In 2020 the Kiamichi River was the first river in Oklahoma to be included in the national Sustainable Rivers Program, a collaborative effort between TNC and the Army Corps of Engineers. Throughout 2020, TNC collaborated with the Army Corps of Engineers to understand the biology and hydrology of the Kiamichi River Watershed. The first year was the exploratory phase, which established a foundation with partners and the scope of the need. In 2021 the second phase of the program began, which includes an intensive evaluation of the existing science and any gaps that may need to be addressed. An Interagency Personnel Agreement (IPA) will be conducted with TNC staff participating and learning about Army Corps of Engineers dam management in the watershed. A stakeholder workshop will be held this winter to analyze the data collected thus far. This

BEYOND our **PRESERVES**

LEFT: Staff use freshwater monitoring equipment to gather data on the flow of the Blue River. © TNC

stakeholder workshop will focus on technical experts who have worked in the watershed. Eventually we will incorporate all stakeholders including technical, business, industry and local interests. The goal is to develop updated dam flow releases that mimic natural water fluctuations. This will benefit the thousands of people in the local communities and the unique wildlife that depend on a healthy Kiamichi watershed.

EDUCATIONAL SIGNAGE AT AQUARIUM

Have you visited the Oklahoma Aquarium in Jenks recently? If not, we've got a great excuse for you to take a road trip. TNC partnered with the aquarium to create educational signs about our freshwater conservation work across Oklahoma. These colorful panels showcase unique species found in Oklahoma's rivers and lakes like the whirligig beetle, juvenile banded water snake and bluegill fish. Can you guess what type of habitat these swimmers all need? You'll find those fun trivia facts and more on these special signs. When you visit the aquarium, tag us in a selfie with the educational signs and tell us your favorite freshwater fact!



VISIT THE AQUARIUM. Take the kids for a unique freshwater adventure at the Oklahoma Aquarium in Jenks. Not only will they will learn about native species, but you will all stay dry! Visit **okaquarium.org**.

INTERNATIONAL WOMEN'S DAY WITH STATE PARKS

TNC teamed up with Oklahoma State Parks to celebrate International Women's Day with a week-long Instagram takeover to highlight leaders across the state as they share their love for parks and the natural world. Through creative digital storytelling, Angelina Stancampiano gave us a behind the scenes look at Sequoyah State Park and explored the area's history with local indigenous tribes. Next stop in the state park tour was at the Bernice Area of Grand Lake State Park with Amanda Markey. Bonnie Farris at Lake Murray State Park shared breathtaking views of the clear waters and all the turtles at home in the park's visitor center, while Emily Hale showed viewers how they can get involved with park activities. Jo Reese, also with Sequoyah State Park and Women Who Hike ambassador, ended the week with hiking tips for women looking to get outdoors. This project reached more than 10,500 people receiving several thousand views helping to broaden and diversify TNC's constituency and generate support for public lands. "This project is such a great example of social media at its best," says Larissa Balzer, digital marketing specialist at TNC. "Not all Oklahomans have the means to access these special places so these virtual tours can foster a love for Oklahoma's distinctive geography and wildlife while celebrating the incredible women in science and conservation across the state."



State Parks
employee
Emily Hale at
Alabaster Caverns
State Park in
northwestern
Oklahoma.
© Courtesy of
Emily Hale

GENERATING SUPPORT FOR OKLAHOMA'S PUBLIC LANDS

TNC led a diverse coalition of more than 30 Oklahoma groups to a huge conservation success this past March when Oklahoma's first ever Public Lands Resolution was passed. The Senate supported the measure with unanimous consent, and the House overwhelming voted in favor with a 57-13 vote. Senator Brenda Stanley, R-Midwest City, sponsored SR8, and Representative John Talley, R-Stillwater, authored House Resolution 1002. Talley noted that a 100 percent increase in use of public lands during the pandemic reinforces how essential they are are for Oklahomans' mental and physical health. Oklahoma's public lands also sustain a large portion of the state's economy, generating an estimated \$10.6 billion in consumer spending and supporting more than 97,000 jobs. Beyond economic benefits, Oklahoma's public lands provide recreational opportunities for hunting, fishing, kayaking, riding all-terrain vehicles, wildlife viewing, photography, backpacking, cycling, sightseeing and numerous other outdoor activities that ensure mental and physical health for every Oklahoman. Continued protection of these lands helps promote biodiversity beyond TNC preserve borders.

MONARCH LICENSE PLATE VOTED BEST IN AMERICA



In 2020, Oklahoma received the America's Best License Plate Award from the Automobile License Plate Collectors Association's for the Save the Monarchs license plate designed by Rick Sinnett on behalf of TNC. The monarch license plate was developed to raise awareness about the decline of the monarch butterfly population and generate revenue to increase pollinator habitat across the state at schools, libraries, ranches, roadsides, solar farms, churches, residential areas and more. From each license plate sold and renewed, \$20 goes back to TNC to support pollinator outreach projects in Oklahoma. Not only does the license plate reach new audiences, but it also helps increase the use of conservation best practices on non-TNC lands. This is the 50th year of the award and the fourth time Oklahoma has received it. In 1989 Oklahoma's general issue Osage Battle Shield license plate tied with Nova Scotia, followed by the State Parks Pavilion plate in 2004 and the general issue Indian Archer plate in 2009.

PARTNERS joined with TNC to rally for the support of the Oklahoma Public Lands

OUT OF 149 LEGISLATORS

were contacted by Oklahoma residents through TNC's online action form.

OK RESIDENTS contacted their legislators utilizing the TNC's online action form.

\$362K

GENERATED from both bison and monarch license plate sales to support TNC's conservation and outreach efforts in Oklahoma





HONORING OUR CONSERVATION Champions

In 2021, TNC staff organized our first-ever Conservation Champions program to recognize the various ways individuals and entities have gone above and beyond to help us reach our goals. Staff submitted thoughtful submissions to the program committee made up of State Director Mike Fuhr, Board Chairman Brian Bourgeois, Great Plains Division Director Rebecca Smith, and one TNC local staff member from each department. With several stellar nominations, the following individuals were selected as our 2021 Conservation Champions!

GARY & DEBBIE HOULETTE

From stewardship tasks like invasive species removal, mowing and native seed collection, to outreach events for pollinator education and advocacy, we appreciate Gary and Debbie Houlette's voluntary contributions to our mission. They are trusted and dependable members of our conservation team and unconditionally give of themselves and their personal resources to further our goals and mission to benefit Oklahoma's land and waters.

SENATOR BRENDA STANLEY & REPRESENTATIVE JOHN TALLEY

Because of their leadership, the 2021 Public Lands Resolution was a success! Thank you to Senator Brenda Stanley and Representative John Talley for their help to communicate the importance of our state's public lands and sharing their personal connections with these places. Their efforts generated much-needed support for our public wild places and built a foundation for future collaborative conservation policy in Oklahoma.

ADDITIONAL NOMINEES

- Bill Alexander
- Southwood Landscape & Garden Center
- · Army Corps of Engineers, Tulsa District

It is because of these individuals and entities, in addition to 300 volunteers, that we are able to achieve our mission to conserve the lands and waters on which all life depends.

THANK YOU Volunteers!

TOTAL VOLUNTEER HOURS during FY21.

TOTAL DOLLAR VALUE of \$27.5 K volunteer time donated to TNC in Oklahoma during FY21.



VOLUNTEER: Want to lend a hand to nature? Sign up to volunteer with TNC at nature.org/volunteerok

Welcome NEW STAFF



ALERA ALBERTOperations & Finance Administrator

"I'm excited to work at TNC lending my operations and administrative skills to such a worthwhile mission! It means so much to me as a new mom, to be part of conserving the lands and waters for future generations. I hope to be a problem solver that makes things go more smoothly for the folks out in the field."



STEPHANIE JORDAN

Pollinator Outreach Coordinator

"I could not be prouder to be a member of this incredible team of highly skilled, passionate, environmental heroes. I have been doing this job on a much smaller scale for many years, and now I have the opportunity to use that experience to educate and inspire a very large audience at this crucial time for a species in need of help. I am honored to be entrusted with this work."



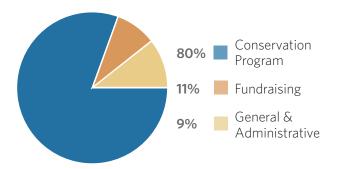
CLINT BURSON

Conservation Practitioner at J.T. Nickel Family Nature & Wildlife Preserve

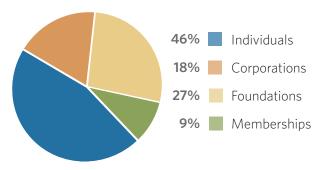
"Wildlife and habitat conservation/management has always been one of my greatest passions and was my aspired career since childhood. I knew I would always be involved with conservation to some extent, but the fact that I now get to do it for a job AND a hobby is incredibly rewarding. I grew up in the Ozark foothills near the Nickel Preserve, and I hope that during my career here I am able to make significant, meaningful and noticeable impacts in protecting and conserving the landscapes of this beautiful ecoregion and benefiting the amazing and unique species that call this part of the world home just like me."

FY21 **FINANCES**

OK PROGRAMMATICEFFICIENCY IN FY 2021



OK FUNDRAISINGBY SOURCE IN FY 2021



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These are unaudited financials for fiscal year ending on June 30, 2020, of The Nature Conservancy of Oklahoma. Audited financial statements of The Nature Conservancy can be found at **nature.org.**

MEN SE

Mrs. Barbara Van Hanken Dr. Shirley Vincent

CONTINUE THE VISION

The Legacy Club is a special group of supporters who have included The Nature Conservancy as a part of their long-term financial planning. Whether by making a specific bequest, designating a gift from an IRA or establishing an annuity or remainder trust, there is a vehicle to suit everyone's circumstances. Legacy giving isn't just for the wealthy; every gift makes a difference!

LINDA AND BRIAN BOURGEOIS | COLLINSVILLE, OK



iggl A Nature has been a constant in our lives—always there in all its grandeur, wonderment and beauty. Nature always over-delivers. John Muir said it best, "In every walk with nature one receives far more than he seeks." Some of the things that attracted us to The Nature Conservancy are:

- 1. TNC's common-sense, science-based approach to decision making.
- 2. Since we also own farms, TNC's recognition that conserving nature and good business are not mutually exclusive.
- 3. TNC's ability to significantly leverage donations and its impact on nature through partnerships with like-minded organizations.
- 4. Most importantly—TNC's people and culture. They are "owners, not free agents." It's not a job—it is a calling. We see and feel it every time we interact with the Oklahoma staff.

In the end, we thought one of the greatest legacies we could leave is the gift of nature, and for that, there is no better partner than TNC. This is why we joined the Legacy Club.

WAYS OF GIVING

THINKING ABOUT A YEAR-END GIFT?

Did you know that you can help protect the lands and waters you love while meeting your own financial and charitable goals?

BENEFITS OF THE CARES ACT EXTENSION

With the Coronavirus Aid, Relief and Economic Security Act (CARES Act) extended due to the pandemic, donors may take a 100 percent adjusted gross income deduction for cash gifts to TNC. For 2020 and 2021, donors who give generously to charity are able to utilize a higher amount of their deduction for charitable cash gifts in those respective years. This is especially attractive for donors who'd like to make substantial gifts using qualified retirement funds. Qualified retirement plans are retirement plans recognized by the IRS where investment income accumulates tax-deferred. Common examples include individual retirement accounts (IRAs), pension plans and Keogh plans.

Donors who will not itemize on their taxes for 2021 may claim a deduction of up to \$300 (\$600 for married filing jointly) for cash gifts to TNC.

GIFTS OF SECURITIES & REAL ESTATE

With the markets at or near all-time highs, gifts of securities and real estate also remain attractive options for many donors at and beyond the end of 2021.



WANT TO KNOW MORE? WE CAN HELP!

There are many ways to give to TNC. To learn more about making a gift to support our conservation work in Oklahoma, please contact Stephanie Vogel, Director of Philanthropy, at 405.269.4207 or stephanie.vogel@tnc.org, or Barry Maxwell, Associate Director of Philanthropy, at 918.639.6129 or barry.maxwell@tnc.org.

*The Nature Conservancy does not provide legal, tax or accounting advice. Please consult your accountant or legal advisor.

CONSERVATION VISIONARIES

The Nature Conservancy of Oklahoma is honored to recognize the following individuals, corporations, foundations and organizations whose contributions have supported our work between July 1, 2020 and June 30, 2021. We deeply appreciate every gift and regret that space constraints prevent us from listing all donors. Thank you for your generous contributions.

\$100,000 & ABOVE

David B. Waters Charitable Foundation Delores and Jerry Etter Ms. Elise Kilpatrick and Mr. Gary Kuck Macklanburg Foundation ONEOK Caroline and Guy Patton WCS Climate Adaptation Fund

\$50.000-\$99.999

Anonymous ConocoPhillips Dolese Bros. Co. H. A. & Mary K. Chapman Charitable Trust Helmerich Trust Sunday Williams Companies. Inc.

\$25,000-\$49,999

Anonymous
Chickasaw Nation
Devon Energy Corporation
E. L. and Thelma Gaylord
Foundation
Mr. Rudy Herrmann and
Mrs. Deborah Herrmann
OGE Energy Corp
Stone Family Foundation
YOT Full Circle Foundation

\$10 000-\$21 990

Anonymous (2)
The Anne and Henry Zarrow Foundation
The Oklahoma City Zoo
The Thomas & Sally Wood Family Foundation
Dr. Craig Abbott and Mrs. Maria Abbott
Bank of Oklahoma
Brinkley Family Foundation
Cherokee Nation Business
Corp
Mr. Kenneth Fahrenholtz and Mrs. Susan Fahrenholtz
Helmerich & Payne

Jerome Westheimer Family

Foundation

Mr. Jenk Jones Jr. Dr. George Kamp and Mrs. Martha Kamp Mr. J. Larry Nichols and Mrs. Polly Nichols Oklahoma City Zoological Park Norman and Margaret Posto Raymond George & Ruth Bitner Fisher Foundation Mr. Barry Redlinger and Mrs. Melanie Redlinger Mr. John Seldenrust and Mrs. Rita Seldenrust Superior Linen Service Mrs. Janice Talbert and Mr. Michael Talbert Wells Family Charitable Trust Western Farmers Electric Cooperative Renee and Clifton Wiggins

\$2,500-\$9,999

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Mrs. Christa Midkiff

Mrs. Kathleen Milby Mr. John P. Morgridge NextEra Energy Foundation. Inc. Mr. John Nickel and Mrs. Julie Nickel The Oxley Foundation Pavcom Pavroll, LLC Mr. Martin E. Peerson Mrs. Jolene Ingram Mr. Calum Raffle and Mrs. Piper Raffle Martin and Beth Rooney Dr. Brook Scott and Mrs. Paula Scott Ms. Emelia Seubert **Betty Shaull** Shawnee Milling Company Stephen Slawson Mr. Joseph H. Williams and Mrs. Teresa Williams Ms. Helen Wolford

\$500_\$2.400

American Heritage Bank & Trust Anchor Stone Company Dr. David Bailev and Mrs. Janis Bailev Lvdia Bare Mr. Keenan Barnard and Mrs. Starre Barnard Benton Land & Cattle, LP Mr. Stuart Bohart Mrs. Dorothy Buck Burgess Building Company Central National Bank Closebend, Inc. Thomas and Rhonda Coon Karen and Steven Cruce Mrs. John Detrick Dr. Nancy Hiatt Dilley Kathrvn Doolev Mr. Doyle Dow Environmental Management, Matt and Jill Epperson Dr. Andrew Frost and Mrs. Diana Frost Mary Ann Gilmore Caffrey

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David Glenn

Grand Bank

Green Country Energy, LLC

Greenleaf Nursery Co.



The Nature Conservancy of Oklahoma

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we envision an Oklahoma where our rich natural heritage is valued and protected, and people are inspired to conserve nature for future generations.

