

KANSAS FOREST SERVICE

ANNUAL REPORT, DECEMBER 2019



2019 Annual Report

By the Numbers



1,113 Kansans received professional forestry services

63 Forest Stewardship Management Plans provided management recommendations on **15,381** acres

463 Forestry Practice Plans provided management plans for **10,262** acres



50 sawmills and **51** timber buyers in Kansas

59 trainings, workshops and public speaking events with **3,281** attendees in Community Forestry

193 technical assists to Kansas communities



46 year partnership with Kansas Arborist Association on Arborist Training Course

7,909 hours of wildland fire training provided to **1,162** students in 2019 including fire department personnel, federal and state agency personnel, National Guard, KSU students, landowners and community managers



38 pieces of equipment issued to fire departments and districts in Kansas

28 Water Quality Advocates hosting **83** events providing **511** hours of training, outreach and course preparation



10.5 miles of riparian forest buffers planned

641,816 seeds and seedlings sold for planting across Kansas

245 of **670** land cover maps released for Kansas communities

Learn more at KansasForests.org



A parting message from Kansas State Forester, Larry Biles

With mixed emotions I'm writing my last annual report message as State Forester of the Kansas Forest Service, Kansas State University. My first professional forestry job began in February 1967 in Hiawatha, Kansas, as a watershed forester for four counties in northeast Kansas. It was here I met and married my wife of 52 years (still counting) and subsequently, through the U.S. Army, U.S. Forest Service and USDA Extension Service worked in four additional states and one foreign country.

While proud of those achievements I'm equally proud of my two children, three grandchildren, a host of wonderful job assignments and the multitude of friends and acquaintances I've made along the way.

I'm proud of the cadre of KFS employees I leave to a successor State Forester. My staff are extremely creative, talented, dedicated and innovative. In my view, they epitomize the service sector of K-State's functional areas, are significant contributors to the non-formal education function area (Extension) and have a respectable presence in applied research. Lastly, the successor will have a modest line item budget for the agency's wildfire suppression program. The first line item in Kansas forestry since the parent forestry structure, the Commissioner of Forestry, was administratively folded into Kansas State University in 1909.

Looking forward, I pray the leadership of Kansas State University and the College of Agriculture will become more engaged with state forestry and that they will be more inclusive in assigning state forestry leaders the responsibility of representing the college and the university to various state government and private sector conservation factions. Cases in point are ex officio representation to the Department of Agriculture's Division of Conservation's Commissioners, the Water Authority and the Kansas Association of Conservation Districts.

Moreover, I pray the State, university and the college will more fully support the Kansas Forest Service's legislated responsibilities as found in Kansas Statutes and Act 76-425c-f. Most specifically the legislated "powers and duties" identified in 76-425d. Here the Legislature assigns the Kansas Forest Service sixteen coordination, cooperation and technical assistance leadership roles but only provides fiscal resources for 2.85 positions.

Lastly, I wish the Kansas Forest Service, Kansas State University and the State great economic, social, political and conservation stability. With declining water quantity and quality, declining farmland, declining rural populations, declining harmony on hundreds of social and political issues and uncertain national direction on markets and sundry other issues, challenges will abound. May sound judgement and good will prevail on all fronts.

Sincerely,

A handwritten signature in cursive script that reads "Larry Biles".

Grant Awards and Financials

The Kansas Forest Service receives funding from four major sources: federal funds through the U.S. Forest Service, competitive grants, fee generation through technical assistance and conservation plant materials sales and an allocation from the state general fund. Grants and funds described here are from the state and federal fiscal year of 2019.

Federal funding is based on the federal fiscal year: October 1, 2018 - September 30, 2019
State funding is based on the State of Kansas fiscal year: July 1, 2019 - June 30, 2020

Consolidated Payment Grant 2019 USDA Forest Service \$1,519,115

U.S. Forest Service provides annually funding to KFS through the Cooperative Forestry Assistance Program. The funding is intended to assist in the advancement of forest resources management; encouragement of the production of timber; control of insects and diseases affecting trees and forests; the control of rural fires; efficient utilization of wood and wood residues, including the recycling of wood fiber; improvement and maintenance of fish and wildlife habitat; and planning and conduct of urban and community forestry programs.

Forest Health Management	\$141,013
Forest Health Monitoring	\$25,000
Survey & Technical Assistance	\$52,000
Great Plains Forest Health	\$25,000
Invasives	\$5,000
Callery Pear	\$34,013
Cooperative Fire Assistance	\$584,858
Volunteer Fire Assistance	\$375,044
Forest Stewardship	\$174,000
Urban/Community Forestry	\$244,200

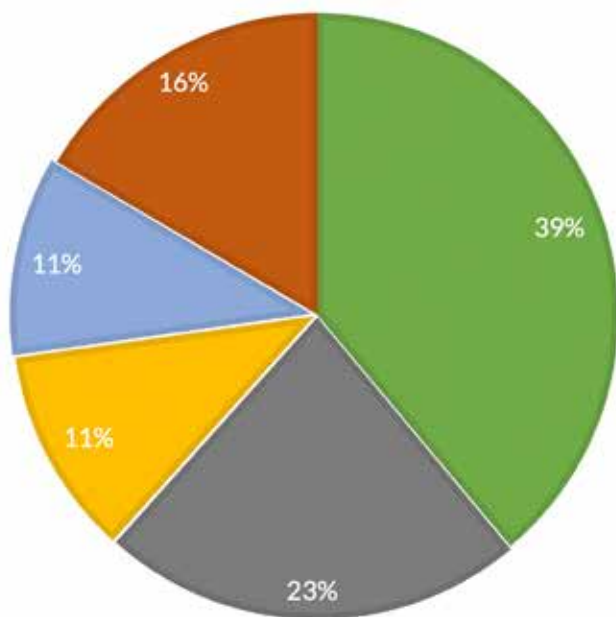
Conservation Reserve Program USDA Forest Service \$10,420

The goal of this program is to reduce soil erosion on cropland and in riparian areas through planning and implementing forestry conservation tree planting practices on private lands. Forestry expertise is needed to prepare conservation tree planting plans and assist other natural resource agencies, primarily the Natural Resource Conservation Service field personnel, in plan preparation and follow up practice inspection. Forestry expertise in Kansas is limited or nonexistent in other natural resource agencies.

Cross-Boundary Landscape Forest Stewardship Landscape Scale Restoration \$300,000

This project restores at-risk forests to healthy condition with Landscape Forest Stewardship and brings wildlife managers and private landowners together to plan and implement forestry practices in high priority areas. Thirteen Landscape Forest Stewardship plans are developed on 2,000 acres, restoring 500 acres of forest to historic conditions.

Kansas Forest Service 2019/2020 Budget



- FY19 Federal Funds, \$1,529,536
- FY19 Competitive Grants, \$892,758
- FY19 Fee Generation & Tree & Shrub Sales, \$438,348
- FY20 State General Funds, \$419,114.00
- FY20 State Wildfire Suppression, \$650,000

Total: \$3,929,755

High Resolution Land Cover and Windbreak Assessment Products of Kansas

USDA Forest Service

\$93,879

The Kansas Forest Service GIS Specialist and GIS students were contracted by the U.S. Forest Service Northern Research Station to conduct GIS analysis of land cover in incorporated areas of Kansas. Once incorporated areas have been mapped, the GIS team will transition to mapping windbreaks, considered to be trees outside of forests, which have not previously been mapped in the state.

Regional Conservation Partnership Program Landscape Scale Restoration

\$300,000

This initiative provides funding through the Regional Conservation Partnership Program and the Environmental Quality Incentives Program to reduce farmland lost to streambank erosion, and improve the health and productivity of woodlands in priority watersheds. The program seeks to improve water quality and reduce the sedimentation of federal reservoirs through tree planting and forest stand improvement.

Managing Carbon with Healthy Forests and Forest Products in the Southern Great Plains: A Workshop for Resilient Ecosystems and Economies in a Changing Climate

USDA Agricultural Research Service

\$50,000

Funds secured through the grant will provide support for a regional workshop. This workshop will explore science and management recommendations for the use and demonstration of bio-based technologies and science and management practices to enhance carbon storage in the forest and woodlands of the Southern Great Plains, within the context of climate change projections and impacts.

Forest Service State Allocation State of Kansas

\$419,114

The State of Kansas provides an annual allocation to the Kansas Forest Service to support the pursuit of 16 allocated duties outlined in 76-425d. of the statute establishing the Kansas Forest Service.

Volunteer Firefighters

The Volunteer Fire Assistance Grant program provides a 50% match to Kansas volunteer fire departments to purchase wildland fire equipment, personal protective equipment, communication equipment and other equipment. The program supports the improved safety and operating capabilities of volunteer firefighters to effectively fight fire in Kansas. Administered by the Kansas Forest Service, the VFA Grant program is funded by the U.S. Forest Service.

County	Fire Department	Approval Amount	County	Fire Department	Approval Amount
Allen	Allen County Rural VFD	\$3,160.00	Dickinson	Sherman Twp FD	\$1,350.00
Anderson	Anderson Co RFD 1	\$4,500.00	Edwards	Kinsley FD	\$3,852.91
Brown	Bourbon Co RFD 3	\$2,500.00	Elk	Grenola FD	\$4,000.00
Brown	Powhattan FD	\$1,400.00	Ellis	Ellis Co RFD 1	\$3,112.50
Brown	Robinson FD	\$2,587.50	Gove	Grainfield FD	\$4,125.00
Barton	Clafin Fire District 1	\$1,300.00	Greenwood	Eureka VFD	\$4,500.00
Barton	Ellinwood FD	\$2,700.00	Greenwood	Greenwood Co RFD 1	\$4,500.00
Butler	Andover Fire and Rescue	\$2,473.75	Harper	Harper FD	\$2,455.00
Clark	Englewood RFD	\$4,500.00	Harvey	Newton Fire/EMS	\$4,500.00
Clark	Clark Co RFD 1	\$2,040.00	Harvey	Burrton Consolidated FD 5	\$3,486.92
Cloud	Cloud Co RFD 3	\$3,500.00	Harvey	Halstead Fire/EMS	\$3,381.32
Cherokee	Columbus FD	\$4,500.00	Harvey	Hesston Fire Dept	\$4,500.00
Cherokee	Galena VFD	\$2,493.38	Harvey	Harvey Co RFD 1	\$3,079.17
Cherokee	Cherokee Co RFD 1	\$2,527.50	Harvey	City of Sedgwick VFD	\$3,271.00
Cowley	Cowley Co RFD 2	\$1,180.50	Jackson	Hoyt RFD 3	\$3,232.00
Comanche	Comanche Co RFD	\$2,047.50	Jefferson	Jefferson Co RFD 5	\$4,500.00
Crawford	Mulberry FD	\$2,520.00	Johnson	Fire District 1 Jo Co	\$3,585.43
Crawford	Crawford Co RFD 4	\$3,190.00	Jewell	Jewell Co RFD	\$3,364.23
Crawford	Osage Township FD	\$1,556.87	Kingman	Kingman City Fire Dept	\$4,500.00
Douglas	Eudora Fire and EMS	\$1,529.23	Kingman	Nashville & Liberty Twp FS	\$4,200.00
Douglas	Clinton Twp FD	\$3,145.00	Labette	Neosho Twn FD	\$3,040.00
Douglas	Lecompton Fire Rescue 1	\$1,830.00	Leavenworth	City of Tonganoxie FD	\$2,130.00
Douglas	Palmyra RFD 2	\$2,705.64	Leavenworth	Tonganoxie RFD	\$3,332.50
Dickinson	Abilene FD	\$4,500.00	Leavenworth	Fairmount TWP FD	\$3,517.00
Dickinson	Herington FD	\$2,280.00	Leavenworth	Kickapoo Twp FD	\$4,500.00
Dickinson	Dickinson Co RFD 2	\$2,694.00	Leavenworth	Reno Twp FD	\$4,500.00

er Awards

In 2019, the Kansas Forest Service awarded **\$322,770.75** to fire departments across Kansas.

County	Fire Department	Approval Amount
Leavenworth	Stranger Twp VFD	\$1,966.00
Lyon	Lyon Co RFD 3	\$2,000.00
Mitchell	Tipton City FD	\$662.50
Mitchell	Mitchell-Cloud-Ottawa RFD 1	\$3,000.00
Mitchell	Mitchell Co RFD 2	\$522.50
Montgomery	Montgomery Co RFD 1	\$4,500.00
Marion	Florence FD	\$2,769.50
Marion	Marion Co RFD 5	\$4,359.50
Marion	Marion Co RFD 2	\$4,500.00
McPherson	McPherson FD	\$4,500.00
McPherson	McPherson Co RFD 1	\$2,944.73
McPherson	McPherson Co RFD 9	\$4,500.00
Morris	Council Grove FD	\$4,500.00
Marshall	Marysville FD	\$2,009.00
Marshall	Marshall Co RFD 8	\$4,500.00
Marshall	Marshall Co RFD 7	\$4,500.00
Marshall	Frankfort FD	\$4,082.00
Marshall	Marshall Co RFD 5	\$3,375.00
Marshall	Summerfield FD	\$2,258.00
Marshall	Marshall Co RFD 3	\$4,498.90
Marshall	Marshall Co RFD 9	\$2,167.08
Nemaha	Nemaha Co RFD 5	\$2,700.00
Norton	Chanute FD	\$2,600.00
Osage	Osage Co RFD 6	\$4,545.32
Osage	Osage Co RFD 1	\$1,524.00
Osage	Osage Co RFD 3	\$4,500.00

County	Fire Department	Approval Amount
Osage	Osage Co RFD 5	\$2,666.50
Pawnee	Larned FD	\$4,500.00
Pratt	Pratt Co RFD 6	\$3,500.00
Pottawatomie	Westmoreland FD	\$3,241.50
Pottawatomie	Wamego FD	\$4,500.00
Reno	Hutchinson FD	\$3,500.00
Reno	Reno-Kingman Joint FD 1	\$2,049.50
Reno	South Hutchinson FD	\$4,562.00
Russell	Russell Fire Dept	\$2,226.00
Russell	Russell Co RFD 4	\$4,500.00
Russell	Lincoln Twp FD	\$1,212.22
Sedgwick	Valley Center FD	\$2,367.00
Sedgwick	Cheney VFD	\$4,500.00
Shawnee	Mission Twp FD	\$4,500.00
Shawnee	Shawnee Co RFD 1	\$2,738.00
Shawnee	Shawnee Heights RFD	\$2,600.00
Sumner	Wellington FD	\$489.50
Sumner	Sumner Co RFD 3	\$2,508.50
Sumner	Sumner Co RFD 12	\$4,218.00
Sumner	Sumner Co RFD 9	\$4,500.00
Wabaunsee	Wabaunsee Co RFD 3	\$3,328.75
Wabaunsee	Wabaunsee Co RFD 4	\$1,065.00
Washington	Washington Co RFD 9	\$2,240.00
Washington	Washington Co RFD 10	\$1,642.45
Wyandotte	Edwardsville FD	\$1,755.95



Equipment Issued in FY2019

The Federal Excess Property Program and Firefighter Property Program are administered by Kansas Forest Service across the state of Kansas. Both programs allow KFS to obtain equipment from other state and federal agencies for disbursement to Kansas fire departments.

A total of 38 pieces of equipment were issued during the 2019 federal fiscal year. The addition of a full-time mechanic brought the fire shop back to full staff with two mechanics, resulting in shorter wait times for fire departments.

In 2019, the Kansas Forest Service issued **\$3,826,188** in equipment to fire departments across Kansas.

Federal Excess Property Program Equipment Issued

Fire Department	Equipment	Replacement Value	Issue Date
Riley Co Fire Dist. #1	d6d dozer	\$80,173	11/15/18
Thayer Fire Department	deuce	\$46,750	11/20/18
Osawatomie State Hospital Fd	pickup	10,000.00	4/2/19
Ottawa Co Fire Dist #6	m923	\$67,139	9/10/19

Firefighter Property Program Equipment Issued

Fire Department	Equipment	Replacement Value	Issue Date
McPherson Co. Fire Dist #2	LMTV	\$104,626	10/12/18
Grainfield Fire Department	MTV	\$134,047	10/29/18
Rice Co. Fire Department #1	MTV tractor	\$167,746	11/6/18
Holyrood Fire Department	MTV tractor	\$167,746	11/9/18
Jackson Co. Fire District #6	Mule	\$10,000	11/15/18
Cunningham Fire Department	MTV 5 ton	\$128,076	12/5/18
Chase Volunteer Fire Department	LMTV	\$104,626	12/10/18
Jefferson Co. Fire District #10	UTV/mule	\$6,450	12/14/18
McPherson Co. Fire District #1	LMTV	\$104,626	12/14/18
Sherman Co. Rural Fire Department	LMTV	\$104,626	12/14/18
Atchison Co. Rural Fire District #2	5 ton MTV	\$184,333.00	1/4/19
Jewell Co. Fire District #5	2.5 LMTV	\$104,626.00	1/4/19
Solomon Fire Department	Fire Safety Trailer	\$9,850.00	1/15/19
Satanta & Dudley Township Fire Department	5 ton MTV	\$128,070.00	1/16/19
Norton Co. Rural Fire District #2	5 ton MTV	\$184,333.00	1/24/19
Halstead Fire/Ems	LMTV	\$104,626.00	3/17/19
Woodson Wildlife Area	LMTV	\$104,626.00	3/17/19
Seneca Fire Department	LMTV	\$149,600.00	3/21/19
Butler Co. Fire District #6	Tank Trailer	\$90,610.00	4/1/19
Towanda Fire/Rescue	Tank Trailer	\$90,610.00	4/1/19
Cheyenne Co. Fire District #1	AED x4	\$37,432.00	4/3/19
Marshall Co Fire District #5	AED x2	\$18,000.00	4/5/19
Burrton Co. Fire District #5	gator	\$15,000.00	4/8/19
Pottawatomie Co. Fire District #5-Blue Township	Jaws Power Unit	\$9,244.00	4/24/19
Osawatomie State Hospital Fire Department	Packs And Sleeping Bags	\$2,000.00	5/7/19
Offerle City, Trenton & Jackson Fire Department	Type 6	\$14,141.00	5/17/19
Jefferson County Fire District #3	HEMTT	\$396,130.00	5/17/19
Towanda Fire/Rescue	MTV tractor	\$167,746.00	5/30/19
Santana & Dudley Township Fire Department	LMTV	\$104,626	6/4/19
Kansas Prescribed Burn Association	LMTV	\$176,428	6/5/19
Iola Rural Volunteer Fire Dept	LMTV	\$176,428	7/1/19
El Dorado Fire Dept	LMTV	\$176,428	7/1/19
Dwight Rural Fire Department #6	M929	\$72,425	8/6/19
Butler County Fire District #7	M929 w/o bed	\$72,245	9/10/19

Wildfire Suppres

For the first time in state history, the Kansas Legislature appropriated funds to the Kansas Forest Service for statewide wildfire suppression and mitigation efforts.

An appropriation of \$650,000 was included in the fiscal year 2020 budget proposed by the Kansas Legislature and signed by Gov. Kelly on May 20, 2019. Up to this point, all wildland fire management programs and training from Kansas Forest Service have been funded by federal grant dollars.

“The funding appropriated by the Legislature allows us to meet the demand for outreach, education and training by local fire authorities, communities and property owners,” said Mark Neely, the State Fire Management Officer.

Conditions over the last few years including drought, high-risk weather events and changes in land use have all increased the occurrence and severity of wildfires across Kansas and the Great Plains.

“Public education on mitigating the risk of wildfire and training rural and local fire departments on wildfire suppression tactics are key in preparing Kansans for inevitable future wildfires,” said Neely.

With the new state funding, KFS positioned field staff in five regions

of the state. They work directly with local fire authorities to provide wildland fire training and support in the event of a fire.

Since receiving the funding allocation from the State, KFS hired two new District Fire Management Officers in the Northwest and Eastern districts of the state and transitioned an existing staff member to District Fire Management Officer in the South Central District.

“The funding we received from the Legislature is a step in the right direction in continuing our service to local fire authorities,” said Neely. “The 13,000 volunteer firefighters across Kansas deserve quality, wildfire-specific training that is delivered on their schedule and on their home turf.”

State funding will also provide for homeowner education events like the residential wildfire preparedness workshop held in the Sandhills region northeast of Hutchinson.

The push for state funding was prompted by the 2018 Legislative Performance Audit Report; Kansas Wildfire Management: Evaluating the Adequacy of Kansas’ Wildfire Suppression System. The review

“Public education on mitigating the risk of wildfire and training rural and local fire departments on wildfire suppression tactics are key in preparing Kansans for inevitable future wildfires.”

occurred after the wildfires of 2016 and 2017, which caused over \$80 million in damage and economic losses.

The audit recommended the Legislature amend state law to designate a single state entity to lead the state’s wildfire suppression system and provide sufficient resources and funding to that entity.

“KFS looks forward to working with local fire authorities and Kansas legislators to continue improving wildland fire management across the state,” said Neely.

ision Funding



Water Quality Adv

The Water Quality Advocate Network is a group of Kansas farmers, ranchers and landowners who are dedicated to improving water quality. Advocates demonstrate and promote innovative management practices to other area producers through peer-to-peer mentoring.



Advocate hosted events across the state



Hours of training, outreach and course preparation



Advocates in the Water Quality Advocate Network

The Water Quality Advocate Network was formed in 2018 with the goal of building peer-to-peer connections between conservation-focused landowners, specifically agricultural producers, in the priority watersheds of Kansas.

Conversion of riparian forests to cropland or riparian areas that no longer function has led to streambank failure, contributing to the sedimentation of reservoirs that provide water in some manner to roughly two-thirds of Kansas' citizens.

Twenty-eight advocates were recruited and trained on USDA conservation programs, riparian forest restoration, water quality and quantity issues and

how to effectively provide outreach and training to their peers.

Through local advocates, a network has been established to grow the outreach of partnering agencies, as well as a tailored regional message and approach.

In 2019, 28 advocates hosted 46 training events and prepared 37 outreach and education pieces.

The advocates dedicated a total 511 hours in training, outreach and course material preparation.

Advocate Network

Roger Wells Water Quality Advocate & Life-Long Conservationist

Roger Wells is an avid outdoorsman and conservationist that leads by example, sharing the knowledge of his life-long career in wildlife and land management.

As an active manager of his lands, Roger has implemented the practices he has promoted to landowners for his entire career. His approach is highly innovative as he manages for wildlife habitat, soil conservation, water quality, recreation and aesthetics.

The practices he has implemented on his farm are a continuation of his life-long work spanning more than a 44-year career.

Perhaps the thing Roger enjoys more than land management is sharing his knowledge and passion for the outdoors with landowners and youth.

Roger was recognized as the 2019 Agroforestry Award winner for the variety of forestry practices he implemented on his 300-acre farm in Lyon County and his involvement in conservation and land management.

At Right: Roger Wells has implemented innovative solutions in his professional consultation and personal land management.



Riparian Forest Buffers

1,005 linear feet,
of tree buffers
along the bank of
Allen Creek

Windbreaks

14.3 acres of
windbreaks and
Timberstand
Improvement
projects to reduce
soil erosion

Tree & Shrub Establishment

1.0 acre of
direct-seeded
tree and shrub
establishment

The Miller brothers assist with a no-till, wildlife planting on their family farm in Osage County. No-till planting is being explored as a time and cost-effective planting method.



Reducing Sediment

When water runs off, and streams and rivers flood, trees and shrubs cause the water to slow down, reducing its erosive force and causing sediment to drop out of the water. In 2019, foresters planned 128.77 acres, or approximately 10.5 miles, of riparian forest buffers to reduce sedimentation of Kansas waterways.

Record rains in 2019 led to flooding in many Kansas watersheds throughout the spring and summer.

Sediment from fields and streambanks is slowly filling these reservoirs and displacing the water at low pool levels. While this has little impact on their flood pool capacity, there are several reservoirs where the secondary benefits of recreation and water supply we've come to rely on are greatly diminished.

Streambank stabilization and revegetation is a key component in the state's strategy to reduce the rate of sedimentation in these reservoirs and planting perennial native vegetation next to streams is an outstanding conservation practice for improving water quality.

No-till planting of bareroot seedlings and direct seeding are two planting techniques KFS Watershed Foresters have implemented to improve the success rates and lower the costs of riparian buffer and other plantings.

While flooding prevented or delayed the planting of many riparian forest buffers in 2019, KFS foresters wrote plans for 128.77 acres of riparian forest buffer. Previously established forest buffers continue to demonstrate their importance for slowing floodwaters, stabilizing streambanks, and prolonging the usefulness of our multi-purpose reservoirs.

The bulk of our involvement in streambank and buffer work is through two inter-agency partnership agreements: the Regional

Conservation Partnership Program and the Kansas Interagency Streambank Protection Team.

We are grateful for these opportunities to collaborate with the USDA-Natural Resource Conservation Service, the Kansas Department of Health and Environment, the Kansas Department of Agriculture and the Kansas Water Office on these important issues.

Look for the **Direct Seeding a Streamside Forest Buffer** video on the Kansas Forest Service YouTube channel to learn more!



Reimagining Windbreaks

Kansas landowners are rethinking the form and function of their windbreaks with the planning assistance of the Kansas Forest Service, wildlife biologists and cost-share programs.

It's been said that the climatic conditions of western Kansas have once again trended toward those of the Dust Bowl. Thanks to the implementation of more sustainable agricultural practices including the installation of windbreaks and shelterbelts, rotational grazing patterns and minimum-till farming, the horrendous erosion and dusty conditions of the hot, dry, windy climate in western Kansas have been mitigated.

With the help of the Soil Conservation Service, known today as the Natural Resource Conservation Service, many producers in northwest Kansas established their own farmstead shelterbelts.

As years go by, there is a progression

of decline in the windbreaks due to age, drought and storm damage. In these cases, windbreak renovation is needed to further extend the life and effectiveness of the windbreak.

In many renovation projects, a remnant of trees from the existing windbreak is left in place until the new planting becomes established. When the newly planted trees become large enough, the old remnant trees are removed.

Soil and energy conservation aren't the only goals for Kansas farmers, ranchers and landowners when planting shelterbelts and shrub rows.

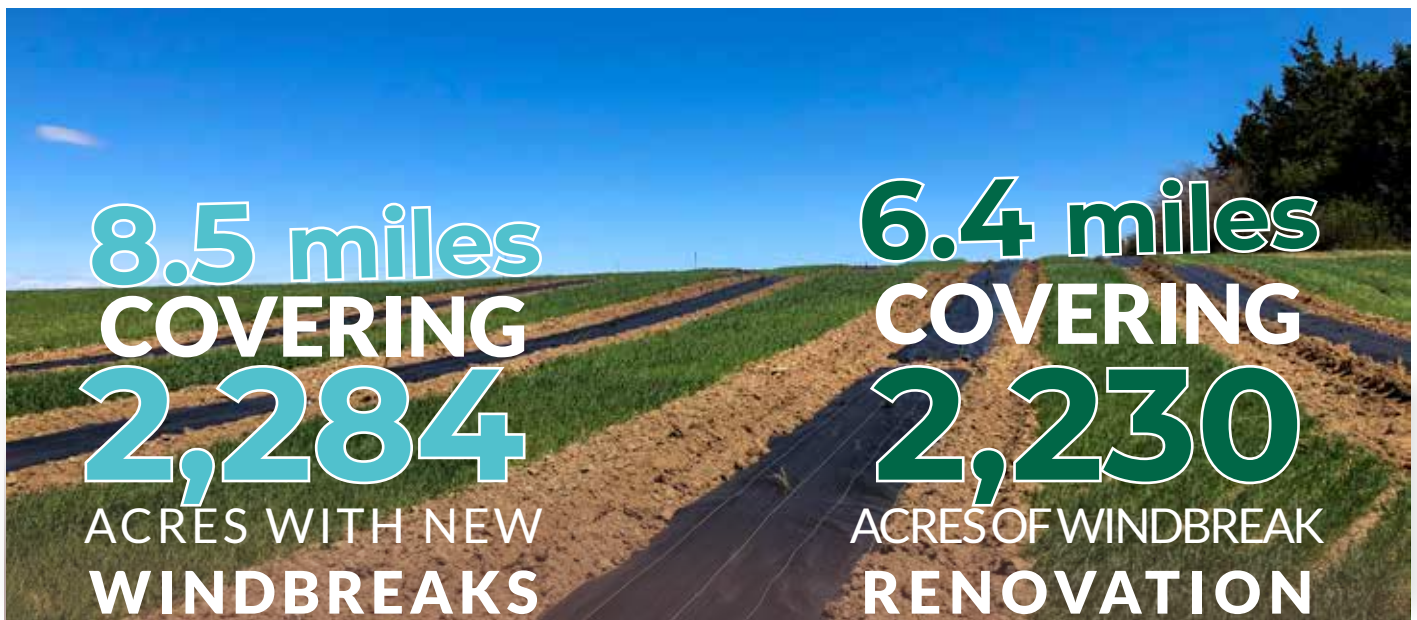
Recent declines in wildlife numbers, particularly upland game birds, have prompted many producers to explore conservation plantings

for wildlife protection, forage and nesting.

The Kansas Forest Service partners with District Biologists from the Kansas Department of Wildlife, Parks, and Tourism to design customized plans for conserving the producers' species of interest.

Foresters assisted Kansas landowners with the planning of 2,824 acres of new windbreaks and renovated 2,230 in 2019.

Windbreak establishment and renovation consultations are offered in every county within this district. To learn more about cost-share programs and plan design, contact the district forester or local NRCS office.



Hazardous Fuels Mitigation Project

The Annual Wildland Fire Mitigation Project serves Kansans by reducing fuel loads in areas that pose a potential wildfire risk and provides training opportunities for staff, students and partners in a controlled environment.



At left: The Kansas Forest Service Incident Management Team gathered on the first day of the Mitigation Project.

The Kansas Forest Service Incident Management Team led efforts to reduce the risk of wildland fire on the Quivira Scout Ranch at the 15th Annual Hazardous Fuels Mitigation Project in March of 2019.

Located about 12 miles north of Sedan, Kansas, Quivira Scout Ranch experienced a wildfire in 2016 that damaged approximately 1,700 acres and another smaller fire in 2018 that burned 800 acres. The risk of wildfire entering the property prompted QSR

to seek out assistance to protect the property for its intended use.

During the mitigation project, firefighters thinned woodlands, built fire breaks, removed snags, conducted prescribed burning and more to meet the conservation and fire-adapted landscape goals of QSR.

The Hazardous Fuels Mitigation Project exemplifies the overall goals of the wildland fire program for the Kansas Forest Service: collaborating

with agencies throughout Kansas and the region; providing training for future and current firefighters; conducting on-the-ground fuels reduction through physical removal; and the use of prescribed fire to conserve and promote the native ecosystems of Kansas.

What originally started as training for Hutchinson Community College Fire Science Program students has evolved into a Type 3 managed incident. Planning for the week-long project and the activities through

7,909
hours of training were
delivered to
1,162



students in 2019 including fire department personnel, federal and state agency personnel, National Guard, students, landowners, and community managers.

the project week were all managed by KFS staff members and partners who are nationally-certified wildland firefighters and incident managers using the National Incident Management System.

The annual project also offers Hutchinson Community College students in the Fire Science Program a hands-on training opportunity and an introduction to wildland firefighting and NIMS.

Kansas firefighters from the Marion

County and Johnson County Wildland Fire Task Forces integrated into the mitigation project as a test of the state-wide Wildland Fire Task Force response. As part of the operational plan, the task forces received training in wildland firefighting tactics including mop-up procedures to secure the prescribed burns conducted earlier in the exercise.

The counties represent two highly trained groups of firefighters in the state with two different staffing structures. The Marion County

Wildland Task Force is entirely manned by volunteers, while the Johnson County Wildland Task Force is fully staffed by career firefighters.

KFS is tasked with training, equipping and providing financial assistance for local fire departments on wildland fire. KFS also supports programs in fuel mitigation and public education. The annual mitigation project and integration of the task force activation is one of the ways KFS meets those objectives.

Protecting Kansas F

The health of Kansas trees, forests and woodlands are constantly threatened by invasive species. Kansas Forest Service and state-wide partners are taking action to increase the odds of survival under the threat of invasive pests.

While there are a large number of invasive threats to Kansas trees, woodlands and forests, three of the major pests being targeted by Kansas Forest Service and partners include: emerald ash borer, Asian bush honeysuckle and callery pear.

Emerald Ash Borer

Emerald ash borer was detected in Kansas in 2012 and has since spread to 10 counties in the northeast including Doniphan,

Atchison, Leavenworth, Wyandotte, Jackson, Johnson, Miami, Jefferson, Douglas and Shawnee Counties.

Emerald ash borer is a beetle from eastern Russia and northeastern Asia that likely was brought to the U.S. in infested packing material. This beetle threatens our urban, rural and riparian forests by killing North American ash species (*Fraxinus* sp.) and their cultivars.

The Kansas Forest Service has committed to several strategies to mitigate the impact of this destructive pest, including survey and detection, planning with communities, utilization of impacted trees, promoting alternatives to ash when replanting and making the best available science for treatment options available to the public.

One aspect that has been very successful is the collaboration between the Kansas Department of Agriculture and the Kansas Forest Service to place insect monitoring traps throughout the uninfected portion of the state and to conduct “trap tree peels” of ash trees to detect EAB as early as possible. Early detection of EAB maximizes the window of opportunity for communities to implement management strategies for how their community responds to infestation, making response more efficient and effective.

The detection and monitoring is supported by a \$25,000 grant from the Kansas Forest Service and the USDA Forest Service.



At left: Volunteers organized by the Heartland Tree Alliance, plant trees in Piper, Kansas, a community affected by emerald ash borer.

Forests

Combating Canopy Loss



Trees in communities across Kansas are threatened by the emerald ash borer, weather extremes, climatic events and mortality due to age. Kansas Forest Service partnered with Heartland Tree Alliance to administer grant funds from the U.S. Forest Service to combat canopy loss.

The project supports ongoing efforts in the Kansas City metropolitan area to empower local stewardship and boost ecosystem restoration and resilience. The partnership will conserve, protect and enhance the KC metro canopy by training local citizens, creating arboretums, planting along street and riparian corridors and collecting geodata.

Heartland Tree Alliance coordinated 444 volunteers in Lenexa, Westwood, Overland Park, Wyandotte County and Kansas City, Kansas, to plant a diversity of trees in 2019. A total of 3,160 trees will be planted by the end of the project.

Three unique programs were developed to address the specific community-based challenges in the priority landscape including neighborhood mitigation and restoration, arboretum inspiration and riparian corridor mitigation and restoration.

43
**NEW SPECIES
PLANTED**
**TO BOLSTER
FOREST RESILIENCY**

NEIGHBORHOOD MITIGATION AND RESTORATION

A diversity of tree species have been planted in communities where canopy has been lost to EAB, age-related decline, drought or where the canopy is in poor condition. HTA coordinated with city staff to involve community members in the planting process, including a two-year pledge to care for trees planted in the right of way.

**250 TREES
PLANTED**

ARBORETUM INSPIRATION

Three arboretums were created or enhanced in Fairway, Roeland Park and Westwood. In Fairway, aging, high-risk trees removed at the Shawnee Indian Mission National Landmark and will be replaced with desirable and historically-appropriate native trees. In Roeland Park, a high-use park previously loaded with ash will be revitalized with diverse species. An existing arboretum will be enhanced around Westwood City Hall, a high-use, high-profile location.

**60 TREES
PLANTED**

RIPARIAN CORRIDOR MITIGATION AND RESTORATION

In the city of Overland Park, erodible and high-impact creeks in the Blue River Watershed will be improved and mitigated for loss from EAB, climatic damage and storms. A conservation and educational collaboration between HTA and Boy Scouts of America-Heart of America Council will provide training and hands-on learning opportunities for 400 Boy Scouts.

**2,850 TREES
PLANTED**



Asian Bush Honeysuckle

Another invasive pest that has long plagued Kansas landscapes is Asian bush

honeysuckle. This plant species, formerly promoted for its perceived benefits, has now been properly recognized as a major threat to forest regeneration and native wildlife.

Asian bush honeysuckle shades out native species, including desirable tree seedlings, and creates a dense monoculture in forests, landscape edges and open fields. Since 2012, the Kansas Forest Service has provided a variety of grant funds to local land managers to combat this invasive scourge.

In 2019, the Kansas Forest Service provided funding to the City of Manhattan (\$10,000), the KDWPT Mined Land Wildlife Area (\$10,000), and the Dillon Nature Center (\$5,000) outside of Hutchinson for treatment of invasive plants. This funding was matched on a local level and resulted in acres of forestland across Kansas being restored from degraded, invaded status to a higher-quality landscape.

In addition, thanks to funding from the USDA Forest Service (\$5,000) and the National Wild Turkey Federation (\$2,200), multiple backpack mist blowers and one large mist blower are now available to landowners and resource managers. Backpack mist blowers increase the efficiency of bush honeysuckle treatment by making the best available technology and techniques accessible to anyone with the time and training to use them, regardless of financial resources.

Callery Pear

Callery pear is an emerging pest that is spreading rapidly across

Kansas. In response to the new threat, Kansas Forest Service secured \$34,000 from the U.S. Forest Service to identify infestations in Kansas. Identifying infestations is key to early intervention through treatment to curb the spread.

Callery pear has thick, waxy leaves that are resistant to herbicide exposure, the ability to re-sprout rapidly from the roots after fire and a tendency to bear fruit at a young age. The combination of characteristics present multiple challenges to controlling the tree. Working in coordination with the Kansas Department of Agriculture and K-State Research and Extension, the geographical extent of this pest is already coming into clear focus.

Effective treatments are being developed in conjunction with a private landowner and a forestry contractor, with \$2,200 in grant funding resulting not only in advanced infestation of 40 acres of Flint Hills landscape receiving treatment and monitoring, but better information about effective herbicide methods being gained by on-the-ground case studies.

While there are more than these three pests of concern impacting our forest resources, they represent one aspect of the effort that the Kansas Forest Service's Forest Health Program is implementing to identify, manage and reduce threats to forest and ecosystem health across Kansas.

Protecting Kansas Forests

25th Annual Fall Forestry Field Day

The annual Fall Forestry Field Day highlighted working forestry management. Interactive sessions focused on holistic management of woodlands based on Kansas-specific concerns and objectives. Participants heard about management options for invasive plants and pests, saw a portable sawmill demonstration, and learned about the resources available to them through the American Tree Farm System. Experts shared their insight on wildlife management, using prescribed fire as a tool for managing woodlands, working forestry management and landscape scale restorations. Field tours of previously managed plots were a part of these discussions.



Planting for Pollinators

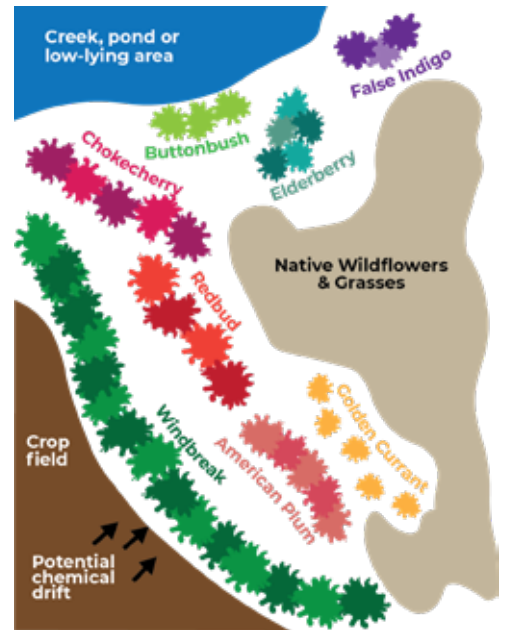
Pollinators play an essential role in the maintenance of ecosystems and in general, the enhancement of agricultural productivity. It is estimated that one of every three mouthfuls of food is supplied by crops requiring animal pollination.

To support pollinators across Kansas, two pollinator bundles were developed by the KFS Conservation Tree and Shrub staff, along with partners at Kansas Department of Wildlife, Parks and Tourism, Xerces Society and K-State Research and Extension, for the spring 2020 conservation and tree sales.

Of all pollinating animals, insects are by far the most important, particularly bees. Other insects that provide pollination services include butterflies, moths, wasps, beetles and flies.

The two bundles, each designed specifically for the conditions of eastern and western Kansas, feature several species of flowering, woody shrubs and trees. Species selection was based on several criteria including ability of a species to produce nectar and pollen for adult insects; leaf tissue for immature butterfly and moth larvae to consume for growth and development; nesting materials for cavity nesting bees; and shelter for adult butterflies and moths.

One of the goals in developing pollinator habitat is to make floral resources available to pollinators throughout the foraging season. With more nectar and pollen available during the year, an increase in the abundance and diversity of pollinators will likely be seen. In addition to flowering shrubs and trees, many herbaceous native plants make excellent compliments to the pollinator bundle and help fill the floral 'gaps' that might occur between blooms. Such plants could include milkweeds (*Asclepias* spp.), blazing stars (*Liatis* spp.), coneflowers (*Echinacea* spp.), prairie clovers (*Dalea* spp.), or sage (*Salvia* spp.).



One possible planting design for the eastern pollinator bundle. This design would be more appropriate for a farmstead setting where pesticide drift is a concern.

POLLINATOR BUNDLE SPECIES



Redbud



American Plum



Fragrant Sumac



Chokecherry



False Indigo



Golden Currant



Elderberry



Buttonbush

Conservation Tree Planting Program Report

Conifers

76,750



Seeds

414,896



Deciduous

71,600



Shrubs

67,550



Fiscal year 2019 marked the conclusion of the 63rd season of conservation tree and shrub seedlings and seed sales. A total of 2,089 orders resulted in approximately 237,620 seedlings and 414,896 seeds sold.

New to the Conservation Tree Planting Program this year were the direct seeding projects coordinated by the KFS Watershed Foresters. The CTPP provided expertise and labor to collect or purchase, process, stratify and evaluate seed quality and viability for these projects. These projects required larger volumes of seed than the CTPP had offered in previous years, in addition to a wider variety of species.

It is estimated that 404,196 seeds were distributed through these projects alone. Though bareroot and containerized plant sales continue to remain the backbone of the CTPP, direct seeding efforts represent a novel way for the CTPP to diversify its services and products while remaining true to its mission to support conservation tree and shrub plantings throughout the state.

Seedlings in Wildlife Bundles

16,800



641,816

Seedlings and Seeds Distributed
Through Conservation Tree
Planting Program



Though EAB has required the proactive removal of trees across campus, many trees will continue contributing to the beauty of campus.

K-State Ash Trees Find New Life

Kansas State University teamed up with the Kansas Forest Service to proactively manage ash trees on campus. Many of the trees being removed because of the emerald ash borer are being milled and will be used in projects across campus.

Select ash trees across the Kansas State University campus are being removed as a proactive measure to minimize the effects of the emerald ash borer; an exotic, invasive insect that is decimating the ash tree population as it moves westward across the country.

“Emerald ash borer is a threat to the area,” said Dave Bruton, Marketing and Utilization Forester. “It is not yet to the Manhattan area, but K-State is being proactive in removing ash trees, so they do not have to remove all the trees at one time.”

The key to an effective EAB plan like K-State’s is proactive management that works in advance of an infestation and therefore, spreads out the economic and environmental impact. In keeping with a K-State EAB Readiness Plan, a majority of the 251 ash trees on campus

will be removed in anticipation of an inevitable infestation in the area.

Trees flagged for removal include those in decline, with poor structure or serious defects or those in poor locations. When all of the identified ash trees around campus are removed, replacement trees will be planted.

“Instead of just chopping them for firewood or taking them to the landfill we decided as a committee to look at ways we could use the trees,” said Ryan Swanson, Associate Vice President of Facilities and University Architect at K-State.

Committee members from the K-State Campus Planning, Facilities Management, Landscape Advisory Committee and the Kansas Forest Service milled the first boards from

the ash trees to be used in design or capital building projects. Ash trees removed around Dole Hall were milled into boards at a milling demonstration sponsored by the Kansas Forest Service and the K-State Division of Facilities.

“Each tree is unique. Just like people, you never see one exactly alike,” said Bruton. “When we mill through these, we are finding unique pieces in here.”

Milled boards from the demonstration will be utilized in campus building and design projects.

Mapping Urban Canopy in ICT

The Kansas Forest Service partnered with the City of Wichita and Plan-It Geo to conduct an urban tree canopy assessment with the support of funds from the U.S. Forest Service.

While many large communities in Kansas employ full-time professional foresters and do not require direct technical support from the state, Kansas Forest Service provides large-scale project support to assist in management decisions of urban tree resources. Through the Landscape Scale Restoration grant program, KFS Community Foresters provide large scale assessment projects in Kansas metro areas and priority landscapes.

In 2019, KFS worked with the City of Wichita and the U.S. Forest Service to fund and complete an urban tree canopy study. The study revealed that 45% of the total 105,211 acres of Wichita were classified as areas where tree plantings are possible. Further, the study revealed that 34% of the possible planting area is currently in vegetation other than trees.

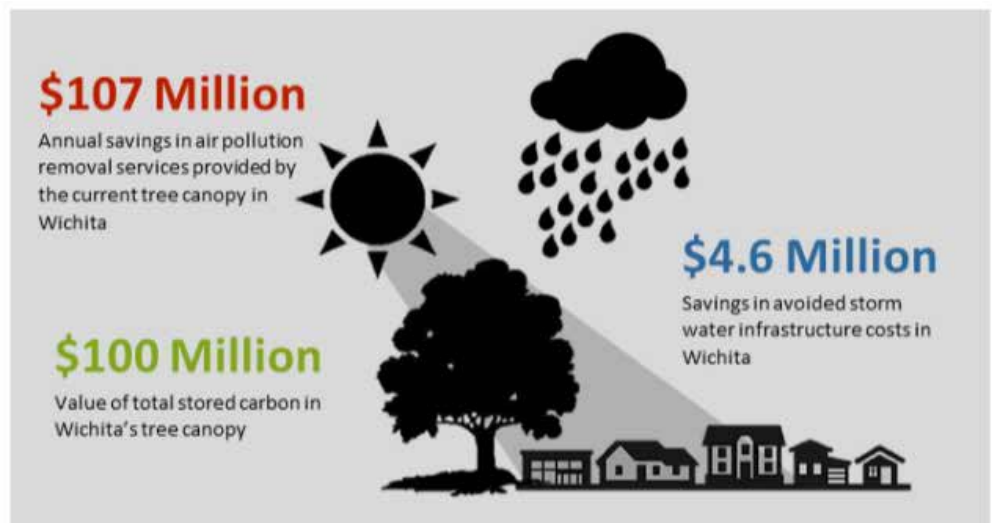
Quantifying the ecosystem benefits of the urban canopy of Wichita was one key aspect of conducting an urban tree canopy study. The study found the urban forest has millions of dollars of savings in avoided

infrastructure costs, pollution reduction and stored carbon. City planners, foresters and community members will use the results of the analysis to develop a continuing strategy to protect and expand Wichita's urban forest.

The study also provides baseline data to assess progress on improving and expanding the urban tree canopy of Wichita.

Other major assessments conducted with the assistance of the Kansas Forest Service include: Assessing Urban Forest Effects and Values of the Greater Kansas City Region and Assessing Urban Forest Effects and Values for Douglas County, Kansas.

These regional assessments were also funded by the U.S. Forest Service grant program.



Quantification of some of the monetary benefits of Wichita's urban forest ecosystem services (based on 23% citywide tree canopy cover). From *An Assessment of Urban Tree Canopy: Wichita, Kansas* - a report prepared by Plan-It Geo, LLC, Arvada, Colorado.

Planting Seeds for



Kansas Forest Service staff gathered for a final group photo with State Forester Larry Biles.

After eleven and a half years of dedicated service, State Forester Larry Biles has announced his plans to retire from the Kansas Forest Service at the end of 2019.

“Larry has been an exceedingly dedicated and impactful public servant,” said Extension Director Gregg Hadley. “His passion for KFS, its staff, protecting the people of Kansas, and enhancing their beloved natural resources will be missed.”

Biles embodied the definition of service during his tenure as State Forester and fostered that sense of service in his staff.

“Larry’s dedication to recognize and appreciate the importance of our administrative staff shows in a professional and friendly atmosphere at KFS, said Aimee Hawkes, Budget and Fiscal Coordinator. “He has gone above and beyond the call of duty to show that an agency not only needs

the Future



“I’m proud of the cadre of KFS employees I leave to a successor State Forester. My staff are extremely creative, talented, dedicated and innovative. In my view, they epitomize the Service sector of K-State’s functional areas.”

- Larry Biles, State Forester

employees front and center, but also behind the scenes to make it function efficiently.”

“I’m proud of the cadre of KFS employees I leave to a successor State Forester,” said Biles. “My staff are extremely creative, talented, dedicated and innovative. In my view, they epitomize the Service sector of K-State’s functional areas.”

Ever focused on serving the people of Kansas, Biles diligently worked traditional and non-traditional ways of raising funds to provide programming and staff to meet the demand for forestry and wildland fire expertise in the state.

Since 2008, Biles grew the agency budget by 44% largely through awards of competitive grants and federal dollars. Also, under his guidance the agency was allotted the first line item in the State budget since 1909 to address the risk of wildfire in the state.

“The \$650,000 budgeted to KFS in

fiscal year 2020 for wildfire protection increases our ability to serve Kansas fire departments and communities,” said State Fire Management Officer Mark Neely. “We will continue to focus our efforts to mitigate the risk of wildfire across Kansas.”

Biles was largely responsible for the largest grant KFS has ever received, the \$13 million Regional Conservation Partnership Program award from USDA NRCS.

“RCPP allowed us to bring on four additional foresters, reducing the size of districts in eastern Kansas to a more manageable size,” explained Bob Atchison, Rural Forestry Program Coordinator. “We were also able to firmly establish a Streamside Forestry Program at KFS because of the program.”

Additionally, as support for the Streamside Forestry Program, Mark Haller, Conservation Trees Program Coordinator, noted that

Biles secured \$90,000 in private funding to refurbish the aging KFS greenhouses.

Beyond increasing the service footprint of KFS through monetary awards, Biles tirelessly worked to raise awareness about forestry in Kansas.

“Larry has devoted a significant amount of his time to hitting the pavement and getting the KFS brand out there,” said Tim McDonnell, Community Forestry Coordinator.

KANSAS



**FOREST
SERVICE**

KANSAS STATE UNIVERSITY