

# **2017 Oklahoma Natural Resources Conference**



**Hosted by the Oklahoma Chapters of The Wildlife Society, American Fisheries Society, Society for Range Management, Invasive Plant Council, Prescribed Fire Council, Soil and Water Conservation Society, Ornithological Society, Game Warden Association, and Society of American Foresters**

**February 22-24, 2017  
Tulsa, OK  
Hyatt Regency Hotel**

## MEETING SCHEDULE

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### Wednesday, February 22 (Hyatt Regency Hotel)

OKNRC Registration (Second Floor Foyer).....	9:00 am to 10:00 am
OKNRC Registration (Second Floor Foyer).....	4:00 pm to 6:30 pm
Cross Timbers Symposium A/V setup (Room D) .....	9:00 pm to 10:00 am
Cross Timbers Symposium (Room D).....	10:00 am to 5:00 pm
A/V Set-up for presenters (Second Floor Foyer).....	4:00 pm to 6:00 pm
Student/Professional Mixer (Second Floor Foyer) .....	6:30 pm to 9:00 pm

### Thursday, February 23

Registration (Second Floor Foyer) .....	7:30 am to 11:40 am
Registration (Second Floor Foyer) .....	1:00 am to 5:00 pm
Meeting welcome (Room D) .....	8:00 am to 8:05 am
J. D. Strong (Room D) .....	8:05 am to 8:35 am
Trey Lam (Room D) .....	8:30 am to 9:05 am
*Break .....	9:05 am to 9:20 am*
Fire Ecology (Room D) .....	9:20 am to 10:20 am
Research and Management: A collaborative effort (Room A) .....	9:20 am to 10:20 am
Species of Concern (Room B) .....	9:20 am to 10:20 am
*Break .....	10:20 am to 10:40 am*
Fire Ecology (Room D) .....	10:40 am to 11:20 am
Research and Management: A collaborative effort (Room A) .....	10:40 am to 11:40 am
Species of Concern (Room B) .....	10:40 am to 11:40 am
* Student/Professional Luncheon (ticket required) .....	11:40 am to 1:00 pm*
Landscape Ecology (Room A) .....	1:00 pm to 3:00 pm
Landscape Design (Room D) .....	1:00 pm to 3:00 pm
Species of Concern/Thermal Ecology (Room B) .....	1:00 pm to 3:00 pm
Game Warden Workshop: Jeff Brown, Operation Russian Snag (Paddlefish Enforcement) (Room C) .....	1:00 pm to 3:00 pm
*Break .....	3:00 pm to 3:20 pm*
Landscape Design (Room D) .....	3:20 pm to 5:00 pm
Population Status (Room A) .....	3:20 pm to 4:20 pm
Sampling Techniques (Room B) .....	3:20 pm to 4:20 pm
Game Warden Workshop: Marni Loftis, Tick-borne Diseases (Room C)	3:20 pm to 4:20 pm
Business Meetings .....	4:20 pm to 5:30 pm
TWS – Room A                      OKIPC – Room B                      SRM – Room D	
Poster Session (Second Floor Foyer) .....	8:00 am to 5:00 pm
Mixer (Tulsa Ballroom) .....	6:00 pm

Banquet and Awards Presentations (Tulsa Ballroom) ..... 6:30 pm to 9:00 pm

**Friday, February 24**

Registration (Second Floor Foyer)..... 7:30 am to 9:00 am  
Invasive Species (Room D) ..... 8:00 am to 10:00 am  
Water Issues (Room C) ..... 8:00 am to 9:40 am  
Conservation Planning and Restoration/Human Dimensions (Room B) .. 8:00 am to 10:00 am  
Student Award Presentations (Room D) .....10:20 am  
Adjourn .....10:30 am

**2017 OKNRC Planning Committee:**

Steven Smith – PFC	Priscilla Crawford – IPC	Will Moseley – TWS
Kristen Gillman – TWS	Craig Davis – TWS	Mark Howery – OS
Kurt Kuklinski – AFS	Bill Diffin – OS	Ken Cunningham – AFS
Josh Richardson – TWS	Blayr Gourley – SRM	Colin Walden – SRM
Brandon Reavis – SRM	Joshua Ketch – SWCS	Jeff Brown – GWA
Alex Schwartz – SAF	Jacob Dyer – SAF	Rod Will – SAF
P. J. Martin – SRM	Tim O’Connell – OS	

Steve Hallgren – Cross Timbers Symposium

**Plenary Speakers**

**J. D. Strong – Director of Oklahoma Department of Wildlife**

J.D. Strong was selected in September 2016 by the eight-member Oklahoma Wildlife Conservation Commission to serve as the Director of the Oklahoma Department of Wildlife Conservation.

J.D. Strong came on board as Director of the Oklahoma Department of Wildlife Conservation in October 2016 after 23 years of experience working in the environmental arena. He had been Executive Director of the Oklahoma Water Resources Board since 2010. Though he originally started his career doing water and biological research for the OWRB, his time there was split while he served as former Gov. Brad Henry’s Secretary of the Environment from 2008-10 and before that as Director of Environmental Affairs then Chief of Staff in the state Office of the Secretary of Environment. He brings to the Department his rich experience working with legislators, sister agencies, partner organizations and key stakeholders on a number of complex environmental issues, such as the historic water settlement with the Chickasaw and Choctaw nations.

An active sportsman, Strong is a fifth-generation Oklahoman from Weatherford. He earned a degree in wildlife ecology from Oklahoma State University in 1993.

## **Trey Lam – Director of Oklahoma Conservation Commission**

Trey Lam entered service as executive director on November 17, 2014. Lam is a lifelong conservationist who has served on the Garvin Conservation District board and as President of the Oklahoma Association of Conservation Districts.

"Mr. Lam's extensive professional and personal experience in conservation along with 30 years' experience in operating his own farm make him the clear choice for this position," said Karl Jett, Commission Chairman.

Following in the footsteps of his father, who also served on the Garvin District board, Lam has taken his knowledge of Oklahoma's land and agriculture to the national stage as Oklahoma's representative on the National Association of Conservation Districts' board.

"Trey Lam is an outstanding choice to lead the Oklahoma Conservation Commission," said Jim Reese, Oklahoma Secretary of Agriculture. "His leadership in conservation, the conservation districts and conservation programs will be a great asset for the Commission."

Lam uses the Conservation practices no-till and cover crops to make the most of his land at Lam Farms, where the family raises alfalfa, corn, soybeans, wheat, and cattle. He also works closely with USDA Natural Resources Conservation Service and OSU to develop farm plans for crop rotation and equipment usage.

Lam's previous leadership positions include Oklahoma Soybean Association President, Oklahoma Soybean Checkoff board member, Oklahoma Crop Improvement Association President, Oklahoma Alfalfa Hay and Seed Association Vice President, and OSU Dean of Agriculture Advisory Council member. He is a Yale University graduate.

2017 OKNRC Oral Presentations  
 Cross Timbers Ecosystem Symposium  
 Wednesday, February 22, 2017

Session	Cross Timbers Natural History and Management Opportunities Symposium
Room	D
10:00	The Ancient Cross Timbers Consortium; <i>D. Stahle</i>
10:30	Buried soils and their contents: Clues to Cross Timbers dynamics; <i>D. Wyckoff</i>
11:00	Current status of the Cross Timbers in a suburban landscape of central Oklahoma; <i>C. King, J. Cheek, K. LaMere</i>
11:20	Tree community change in Oklahoma Cross Timbers: Is there evidence for mesophication; <i>H. Adams, S. Hallgren, R. DeSantis</i>
11:40	Understanding drought sensitivity within the Cross Timbers: Climate-growth responses of two co-dominant oak species; <i>A. Freeman, R. DeSantis, M. Stover, S. Hallgren, H. Adams</i>
12:00	Lunch
1:20	Learning from the recent past: Modelling present suitability of Cross Timbers; <i>W. Hammond, A. Freeman, M. Papes, S. Hallgren, H. Adams</i>
1:40	Effect of eastern redcedar ( <i>Juniperus virginiana</i> L.) encroachment into the Cross Timbers forest of central Oklahoma on wildfire fuels; <i>D. Hoff, R. Will, M. Gregory, C. Zou, G. Serrau, C. Mendonca, N. Lillie</i>
2:00	An evaluation of historical fire occurrence, drought and the El Niño Southern Oscillation in the Cross Timbers Region of the United States; <i>M. Rooney</i>
2:20	Tree-ring analysis of the relationship between cool and warm season moisture over the central United States, 1685-2015; <i>M. Torbenson</i>
2:40	Annual rings of perennial forbs and mature oaks show similar effects of climate but inconsistent responses to fire in the North American prairie – forest ecotone; <i>J. Dee, M. Palmer</i>
3:00	Management of Cross Timbers for Wildlife; <i>D. Elmore</i>
3:20	Break
3:40	Cross Timbers conservation within a fire-grazing managed landscape at the Tallgrass Prairie Preserve, Osage County, OK; <i>R. Hamilton</i>
4:00	Native grass establishment through seed addition in a southeast Kansas oak savanna restoration; <i>F. Russell</i>
4:20	Cross Timbers Symposium synthesis and closing remarks; <i>S. Hallgren</i>
4:40	Adjourn

2017 OKNRC Oral Presentations

Thursday, February 23, 2017

Session	Future of Natural Resources in Oklahoma (Room D)		
8:00	Welcome and Introduction –Brandon Reavis		
8:05	J. D. Strong – Future of Wildlife Management in Oklahoma		
8:35	Trey Lam – Conservation 2017: Voluntary + Incentives + Local = Success Still working after 80 years!		
9:05	Break		
	<b>Fire Ecology</b>	<b>Research and Management: A Collaborative Effort</b>	<b>Species of Concern</b>
Room	D	A	B
9:20	Fire is needed to maintain the genetic integrity of shortleaf pine ( <i>Pinus echinata</i> ) <i>R. Will, J. Stewart, J. Bradley</i>	Wanna Get Buzzed Out on the Range? Pyric Herbivory Increases Pollinator Diversity and Creates Bumble Bee Habitat <i>S. Wiggam</i>	The effects of northern bobwhite ( <i>Colinus virginianus</i> ) management on the ecology of Texas horned lizards ( <i>Phrynosoma cornutum</i> ) <i>M. Thibodeau</i>
9:40	Response of <i>Artemisia filifolia</i> to an early growing-season wildfire <i>A. Tanner*, J. Kachel, S. Fuhlendorf, S. Winter</i>	<i>J. Koger - TBA</i>	Creating community pollinator gardens: Helping the monarch <i>E. Hiatt, A. Randle</i>
10:00	Wildland fire as an ecosystem management tool on Air Force installations <i>M. Morales</i>	Grazing land soil health: A Riesel Case Study <i>J. Goodwin</i>	Regulations to protect endangered species reduce local employment: Evidence from the listing of the lesser prairie chicken <i>M. Melstrom</i>
10:20	Break		
10:40	Insectivorous bird response to fire frequency in the Cross Timbers <i>C. Laughlin*, T. O’Connell, S. Hallgren</i>	Conservation measures within Osage Nation <i>J. Hayman</i>	Evaluating monarch-parasite interactions across an urban landscape <i>K. Deal*, K. Baum</i>
11:00	Oklahoma Forestry Services: Assisting landowners with prescribed fire planning and implementation <i>D. Daily</i>	How research has affected management at the Tallgrass Prairie Preserve <i>R. Hamilton</i>	Oklahoma amphibian infectious disease sampling: Preliminary results and future recommendations <i>J. Watters, C. Siler</i>

11:20	Jenks FERST-Fire Ecology Research Station for Teaching <i>B. Yockers, J. Weir</i>	Effects of energy development and rangeland management on movement and space use of greater prairie-chicken in the Southern Great Plains <i>D. Londe*, S. Fuhlendorf, D. Elmore</i>	Influences of mowing and burning on three milkweed dependent species and their host plant <i>M. Kersten*, K. Baum</i>
11:40	Lunch (on your own but include a student)		
Session	<b>Landscape Design</b>	<b>Landscape Ecology</b>	<b>Species of Concern/Thermal Ecology</b>
Room	D	A	B
1:00	A vision for conservation of the Red River from headwaters to the Gulf: Developing a philosophy and process for landscape conservation design <i>B. Kahler, N. Athearn, T. Jones-Farrand</i>	Northern bobwhite ( <i>Colinus virginianus</i> ) habitat selection in a landscape affected by energy development <i>C. Duquette*, C. Davis, S. Fuhlendorf, D. Elmore</i>	Native bee community responses to invasive species in grasslands <i>K. O'Brien*, K. Baum, R. Bennetts, T. Folts-Zettner</i>
1:20	Emphasis areas: An approach to prioritize resources and conservation actions in Oklahoma. Part 1: The Kiamichi-Little River Priority Area <i>D. Martinez, B. Kahler, P. Schmidt</i>	Landscape complexity creates contrasting pattern of predation risk for northern bobwhite <i>F. Atuo*, T. O'Connell</i>	Thermal impacts on wild turkey movement and space use <i>A. Rakowski*, D. Elmore, C. Davis, S. Fuhlendorf</i>
1:40	Emphasis areas: An approach to prioritize resources and conservation actions in Oklahoma. Part 2: The Ozark Highlands Priority Area <i>R. Stark, D. Unruh, P. Schmidt</i>	Wintering bird response to the presence of artificial surface water <i>E. Tanner, D. Elmore, C. Davis, S. Fuhlendorf</i>	Evidence for avian population responses to temperature extremes <i>N. Jaffe*, T. O'Connell, M. Papes</i>
2:00	Blueprint to action: The Ozark Highlands CCS process as a case study <i>T. Jones-Farrand, M. Howery, T. Bonnot</i>	Resource selection and home range analysis of the American black bear ( <i>Ursus americanus</i> ) in the Ozark Mountains of east-central Oklahoma <i>E. Lustig*, S. Fairbanks, S. Lyda</i>	Behavioral responses of ground-nesting birds to thermal variation during a critical life stage <i>R. Beyke*, C. Davis, S. Fuhlendorf, D. Elmore, S. DuRant</i>
2:20	Ecological systems of Oklahoma and Texas: Current vegetation and future updates <i>D. Diamond, L. Elliott, A. Janus, D. German, A. Treuer-Kuehn, B. Hoagland</i>	Land-use dynamics influence distribution of breeding birds in the Great Plains, USA <i>R. Scholtz, J. Polo, S. Fuhlendorf, G. Duckworth</i>	Consecutive years of agricultural drought drove the large losses of beef cattle production in the U.S. Southern Great Plains

			<i>Y. Zhou, X. Xiao, M. Stanton, R. Doughty, R. Bajgain, J. Basara, J. Steiner</i>
2:40	Data sharing, crowdsourcing and decision tools: Texas Ecological Mapping Systems <i>A. Treuer-Kuehn, D. German</i>	Black bear ( <i>Ursus americanus</i> ) use of prescribed burn units in the Ouachita National Forest in Oklahoma <i>D. Yaklin*, S. Fairbanks</i>	
3:00	Break		
Session	<b>Landscape Design</b>	<b>Population Status</b>	<b>Sampling Techniques</b>
Room	D	A	B
3:20	Application of the Ecological Mapping Systems of Oklahoma for habitat evaluation and rare species mapping <i>B. Hoagland, T. Fagin, D. Hough, J. Messick, D. Hardwick</i>	Oklahoma herd health project – Update <i>E. Bartholomew, E. Clark, J. Shaw</i>	Use of consumer-grade sonar to estimate paddlefish spawning habitat availability <i>J. Schooley, B. Neely, S. O'Donnell</i>
3:40	Determining prairie quality at a landscape scale <i>D. German, A. Treuer-Kuehn</i>	Population status of the American black bear ( <i>Ursus americanus</i> ) in southeast Oklahoma <i>E. Perez*, S. Fairbanks, M. Pfander</i>	Trap success and sample heterogeneity using bucket snares to capture American black bears in southeast Oklahoma <i>M. Pfander*, S. Fairbanks</i>
4:00	Grassland Restoration Incentive Program (GRIP) and the Grassland Management Inventory Tool (G-MIT) for grassland birds, butterflies, and bees <i>J. Giocomo, K. Gee, J. Hayes</i>	Policy options for managing eastern redcedar in Oklahoma <i>R. Ochsner</i>	
4:20	Business Meetings (see page 2 for locations)		
5:30	Business Meetings Adjourn		
6:00	Mixer (Tulsa Ballroom)		
6:30	Banquet and Awards (Tulsa Ballroom)		



Poster Presentations

Second Floor Foyer – Thursday, February 23, 2017

Author(s)	Title
<i>P. Coppick, G. Wilson</i>	<i>Juniperus virginiana</i> encroachment into a tallgrass prairie ecosystem
<i>B. Birchler, J. Vadjunec, T. Fagin</i>	Participatory mapping: Vulnerabilities to hazards and the effects of technology use for creating socio-ecological resilience in America's Southern High Plains
<i>K. Golden, C. Davis, S. Fuhlendorf</i>	Management implications for reducing a dominant native plant species
<i>S. O'Donnell</i>	Reservoir index development and walleye/saugeye stocking criteria investigation
<i>K. Boyer, S. Fairbanks, S. Webb, J. Gaskamp, C. Rohla</i>	Preliminary data on feral hog impacts in pecan operations
<i>S. Robertson, J. Rogers</i>	Tillage and soil moisture effects on winter pasture production and stocker average daily gain
<i>A. Griffin, B. Hoagland, K. Kuklinski</i>	A spatial database for the ecoregional scale analysis of Oklahoma sportfish species
<i>B. Hoagland, T. Fagin, D. Hough</i>	The Oklahoma Biodiversity Information Species: A resource for conservation data
<i>C. Holley, X. Feng, M. Papes, A. Taylor, J. Long</i>	Range-wide ecological niche model for the state-endangered longnose darter

2016 OKNRC Oral Presentations

Friday, February 24, 2017

Session	Invasive Species	Water Issues	Conservation Planning and Restoration/Human Dimensions
Room	D	C	B
8:00	Status of aquatic invasive plants in Oklahoma: Year 1 of a 4-yr survey <i>P. Crawford</i>	Analyzing coupled human and natural resource systems: The example of current and future water consumption in Oklahoma City <i>Q. Zhou, M. Ghimire, C. Buerger, T. Boyer, H. McCarthy, P. Kedron, J. Koch</i>	Cucumber Creek Preserve <i>K. Elkin</i>

8:20	Is the giant reed a giant problem? <i>J. Tuck*, L. Castle</i>	Estimating price elasticity of water demand under a two-tiered block rate water pricing <i>M. Ghimire, T. Boyer</i>	Investigation of shinnery oak propagation as a framework for restoration <i>M. Carroll, D. Elmore, S. Fuhlendorf, C. Davis</i>
8:40	Predation of invasive white perch in Sooner Reservoir: A possible biological control <i>N. Copeland, A. Nealis, W. Wentroth</i>	Increasing water yield by changing land cover <i>E. Stebler, R. Will, C. Zou</i>	SECAS: A blueprint for connected conservation in Oklahoma and adjacent states <i>C. Edwards, B. Kahler, T. Jones-Farrand</i>
9:00	Engaging through invasives: Using invasive species as a teaching tool <i>L. Castle</i>	Evaluating the least cost selection of agricultural management practices in the Fort Cobb Watershed <i>S. Rasoulzadeh Gh*, A. Stoecker, D. Storm</i>	Increasing recreation access: The Oklahoma Land Access Program <i>J. Tibbits, C. Jager, K. Joyner</i>
9:20	Eradication and assessment of <i>Bothriochloa bladhii</i> effects on the tallgrass prairie <i>L. Wilson*, G. Wilson, K. Hickman, E. Duell</i>	Assessing floodplain inundation frequency at the landscape scale <i>Y. Allen</i>	Assessing angler use and opinions at a seasonal urban trout fishery in northeast Oklahoma <i>C. Whisenhunt, J. Johnston</i>
9:40	OkIPC: Watch list of Oklahoma invasive plants <i>K. Hickman, P. Crawford</i>	Watershed-based conservation planning for improved flow regimes (Red/Arkansas River systems) <i>N. Athearn, S. Brewer, A. Pease</i>	An evaluation of the Oklahoma Wildlife Expo in regard to participant recruitment and retention <i>C. Jager, C. Clemens</i>
10:00	Invasive earthworms: Spread, impacts, and potential management <i>S. Loss</i>	Engaging stakeholders to inform actionable science in the Red River Basin <i>D. Escher, M. Langston</i>	
10:20	Student Award Presentations (Room C)		
10:30	Adjourn		

\*Students competing for the TWS Student Presentation Award