

# NATURE

**KANSAS**

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The Kansas River flows 173 miles and provides drinking water for 800,000 people. © Lisa Grossman

## Restoring Flow to the Kansas River

Kaw joins Sustainable Rivers Program 70 years after management plan written

The Kansas River, known locally as the Kaw River, provides. We drink its water, harness its power, dredge its sands, float its currents and harvest its water for our fields. But for decades, we've also controlled its flow.

After the devastating Great Flood of 1951, the Kansas River was transformed with a network of levees, dams and reservoirs to prevent future natural disasters. The management plan written at that time focused only on the human needs for the river and not the health of the river itself. The plan has also never been updated.

Now, almost 70 years later, the way reservoirs are managed and water is released from dams along the Kansas River is being revisited. The Kansas River was added to the Sustainable Rivers Program, a nationwide partnership

between The Nature Conservancy and the U.S. Army Corps of Engineers that finds sustainable ways to modernize water infrastructure.

“We first had to determine how species in the Kansas River rely on the natural flows of the river, and then how those flows have been disrupted by dams,” says Heidi Mehl, director of water and agriculture programs for The Nature Conservancy. “We reviewed all of the scientific literature from before the dams were built to understand how conditions in the river would vary. We could then show how the river would have flowed after a wet year or a drought, when it would be dry and how these changing conditions affected the health of the river ecosystem.”

That variability is a key to restoring more natural flows to the Kansas River,

and it impacts every aspect of river health from fish and insect life cycles to sedimentation and water quality. The project team—which includes representatives from state and federal agencies, along with other non-profit organizations—reviewed what changes to dam and reservoir operations could be made while still meeting all the demands of the communities that rely on the river. The team's formal recommendations to establish “environmental flows” must now go through many layers of review. Some of the recommendations are simple: a mid-summer pulse of water to help specific fish species. Others are more complicated and will take the cooperation of a diverse group of stakeholders to implement. For more information, visit [nature.org/streamsinkansas](http://nature.org/streamsinkansas).



Shelly Wiggam photographing a bumble bee fall feeding roost © Bob Hamilton/TNC; Queen bumble bee with radio transmitter © Shelly Wiggam

# The Birds and the Bees, and the Bats and the Ants

## A Q&A About Pollinators with Shelly Wiggam

*Shelly Wiggam is the manager of TNC's Conservation Stewardship Initiative. Her PhD research investigated how both insect pollinators and plants respond to different rangeland and grazing management practices in Kansas.*

**What is a pollinator, and why are they important?** Pollinators are animals that help plants create seeds and the fruit that helps disperse and protect the seeds. Pollinators can be invertebrate animals—like butterflies, bees, beetles, wasps, flies and ants—or they can be vertebrate animals—such as birds, bats, squirrels and mice. Any critter that visits the reproductive parts of a plant and helps to transfer pollen to flowers of the same species is considered a pollinator. All land-based ecosystems with plants—from prairies to forests and tundra to desert—rely on pollinators.

**How many different pollinators are there in Kansas?** I wish we knew! Unfortunately, insect research has been exceptionally limited in the Great Plains—so much that Kansas and Oklahoma were once thought of as a “native bee desert.” We now know that this area has a very high level of bee diversity. Using museum specimens and current research, we estimate more than 500 different native bee species in Kansas. And that’s just the bees! Insects are the most abundant animals in Kansas, and they are typically found flying from late-February through mid-November every year.

**What is The Nature Conservancy doing to protect pollinators?** In Kansas, The Nature Conservancy works to conserve and restore native plant habitat for pollinators. We make sure that all of TNC’s nature preserves maintain the diverse plant communities that pollinators need to survive and reproduce on the prairie. We also work with ranchers who manage grasslands for livestock production by helping them implement ecosystem-based grazing and rangeland management practices. That keeps the prairie functioning the way it evolved to work, which is good for everyone.

## NATURE KANSAS

### Smoky Valley Ranch LIVE!

Each spring, male lesser prairie-chicken (*Tympanuchus pallidicinctus*) face off at sunrise, competing to be selected to mate with awaiting females. The battles are more dance-off than fistfight, and the opportunity to witness it is increasingly rare. Now you can watch these threatened birds dance, spar, bellow and woo through an animal camera livestreaming from The Nature Conservancy’s Smoky Valley Ranch.

#### What to Expect

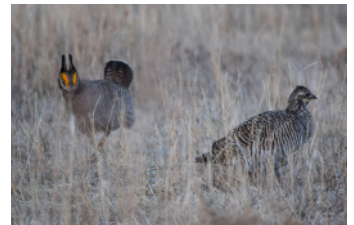
The elaborate mating ritual takes place in areas of open, short grass known as “leks” or “booming grounds.” During booming, the male chickens raise their pinnae feathers and inflate their air sacs on their throats. They then crouch down and pop their tail feathers all at once—boom! Then they start stamping and rotating in a half-circle, first one way and then the other, and make runs at one another. All in hopes that the winner is chosen to mate with one of the females waiting and watching.

#### When to Tune In

From mid-March to early May, male lesser prairie-chickens will be active on the leks for a few hours, beginning shortly before sunrise. Many times, they will return to the leks at sundown. The best times to tune in for the action are around sunrise and sunset.

#### Where to Watch

Visit [nature.org/smokyvalleyranchlive](http://nature.org/smokyvalleyranchlive)



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