

Stories from the Survey

Kansas Geological Survey Staff Newsletter: June 2026



This Month at the KGS

Welcome to the June 2026 KGS Staff Newsletter! This month was a whirlwind: the Geohydrology and Geohealth division kicked off June by hosting a five-state symposium focused on water quality and rural health outcomes. Then, the annual Kansas Field Conference brought together state legislators and agency heads to discuss community engagement and economic strategies around Scott City. KGS scientists are busy as field season is underway and AEM surveys collect data in GMD 3. Our newsletter features these and other June highlights.

2026 Kansas Field Conference Highlights



By Blair Schneider

The 31st Kansas Field Conference was a success! This year had a total of 51 attendees, including 15 state legislators, representatives from Senator Marshall and Senator Moran's office, and 15 state agency partners. The themes for this year's tour centered on conservation strategies and community engagement. These themes were prominently featured at all 10 stops, as well as on the bus talks

held on the second day of the trip. I would like to give a huge shout out to all of the folks in the outreach team who help to make this trip possible - this includes writing field conference guide stops, editing, printing and compiling the guidebooks, making nametags, etc. This year featured an extra special addition with a [new storymap version](#) of the guidebook,

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Upcoming Events

July 21

GSAC in
Hutchinson

Aug. 3-5

Kansas Live Well

Aug. 15

Rocks & Rockets
in Colby

Aug. 24

First Day of KU
Fall Semester

Oct. 11-14

GSA in Denver



compiled by Emily Bunse and Kristen Jordan-Koenig. I also want to recognize Sam Zipper, Hanna Szydlowski, Laikyn Coursen, Nikki Potter, Scott Ishman, Hannah Horinek, Jon Smith, Brownie Wilson, Ian Gambill, and Jay Kalbas who all helped during the trip as well. This trip is a real highlight for me each year and I'm grateful to have such wonderful support from a fantastic team!

Central Plains Drinking Water Quality and Rural Health Symposium

Clean water is fundamental to health, yet many rural communities face unique challenges in maintaining and accessing safe water. Multi-state collaboration is important to build networks, identify gaps in state strategies, and collaborate on critical water issues in the Midwest.

Researchers, health professionals, rural health advocates, policymakers, and community leaders from Kansas, Nebraska, Iowa, Missouri, and Oklahoma met June 2 at the KU Conference Center in Lawrence to help address these issues. At the KGS-organized symposium, they explored the critical intersection between water quality and rural health and advanced potential solutions to rural water challenges.



Above: Jesse Belle of Nebraska presents the keynote address.

Left: Erin Seybold and Sunday Siomades participate in the community engagement breakout group.



Thank you to all at the KGS who participated in this event, especially Scott Ishman for directing the symposium's vision and Hanna Szydlowski and Hannah Horinek for helping with coordination.

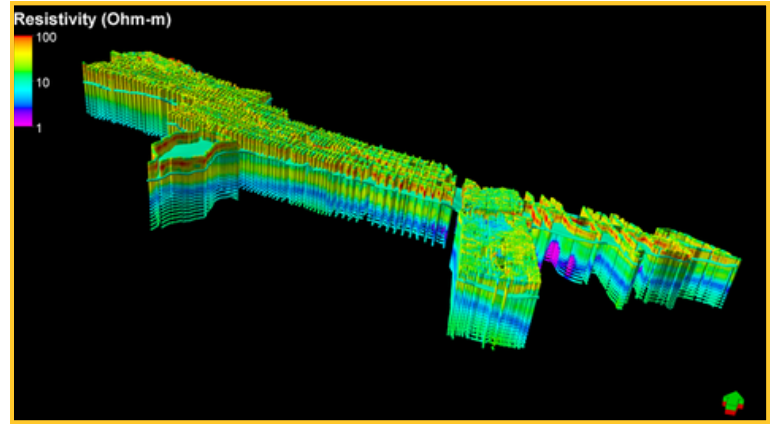
For more information about the event and to access the state vignette presentations, see the event webpage [HERE](#).

KGS Oversees Last of AEM Survey Flights

The 2026 field season marks the third and final airborne electromagnetic (AEM) surveying campaign undertaken by KGS and its partners. In 2024, survey flights covered approximately 2,500 miles across Northwest Kansas (GMD 4); in 2025, flights extended over 2,900 miles in Western Kansas (GMD 1).

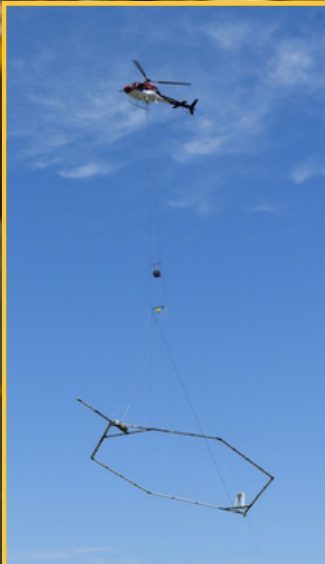
This year, the program turned to Southwest Kansas Groundwater Management District 3 (GMD 3) — the largest and most geologically complex of the three districts surveyed to date. Owing to GMD 3's greater geographic extent, survey flights covered 8,887 line kilometers as of June 25, 2026.

The KGS contracted with Aqua Geo Frameworks to conduct the AEM surveys, in collaboration with SkyTEM Surveys and Livewire Aviation. KGS staff on the project include Scott Ishman, Jim Butler, Geoff Boehling, Gaisheng Liu, and Mark Billinger.



Above: When the survey is completed, a preliminary 3D model, such as this one of GMD-1 produced in 2025, will be made available.

Below: Scientist Jim Butler gives an informational presentation on AEM to attendees at the Kansas Field Conference at the Kearny County Airport. A live demonstration soon followed to show how the helicopter surveys with the hexagonal frame.



More from This Month

GeoHydro Intern Kayak Trip

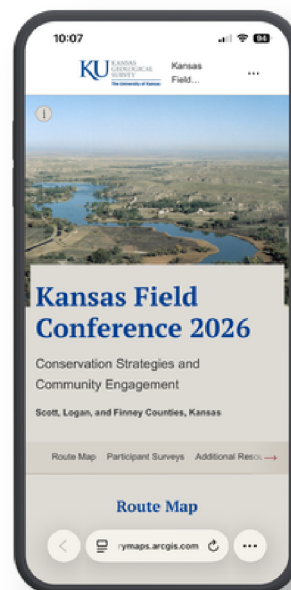
The geohydrology summer interns braved the rain on their annual kayak trip with Friends of the Kaw. Despite the light showers, spirits were high and all enjoyed paddling the calm Wakarusa River. This trip served as a bonding experience for interns and supervisors, and as a chance to get out and experience Kansas waters. Thank you to Friends of the Kaw for hosting!



Field Conference Story Map

An [ArcGIS story map](#) accompanied this year's field conference, serving as a guide for each stop. The story map includes a brief summary of the information in the physical field guide book. This feature allows people who didn't attend the conference to access the same information and visit the same sites. It also includes additional resources on sites. Thank you to Emily Bunse, Susie Fagan, Rhonda Houser, and Kristen Jordan for creating this resource.

Access the story map here! The map works on both mobile and desktop devices.



New on Socials

Be sure to follow KGS on social media!



@KansasGeologicalSurvey
@ksgeology

Intern Spotlights

This summer the KGS has a variety of interns joining us to help with projects. KGS social media is highlighting each intern, their summer goals, and their career ambitions. Check out one of our spotlights from this month featuring Laikyn Coursen, a geohydrology intern helping with the KGS Solar Recharge Project. Click [here](#) to read the full post on Instagram.

From the Field: Alan Peterson

The *From the Field* series features researchers and one of their projects. This month, Assistant Researcher Senior Alan Peterson shares about his experiences researching the Mima mounds across Kansas.

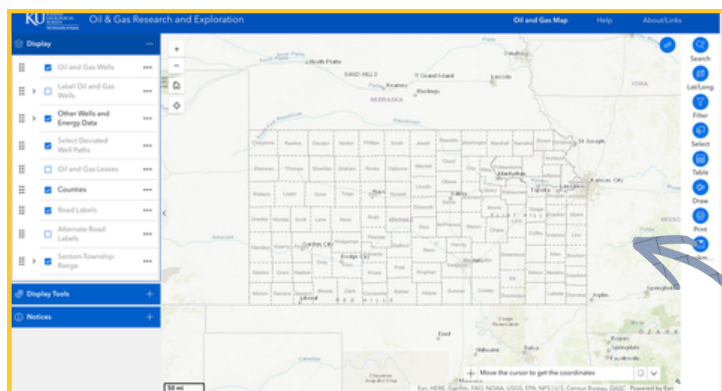
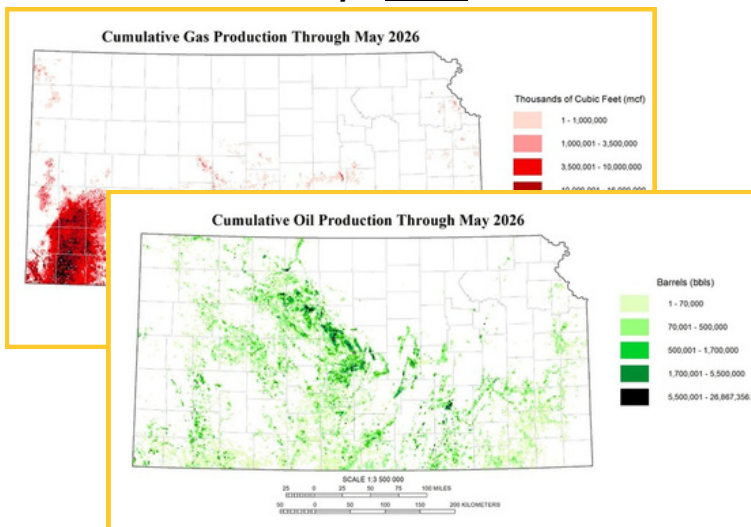


Oil and Gas Cumulative Data Maps

A new KGS online mapping feature provides a look at cumulative oil and gas production in Kansas. Developed in a collaborative effort led by the KGS Cartographic Services with GIS/IT and Energy specialists, the cumulative maps are available through two online resources.

Cumulative production maps now can be viewed as a layer on the KGS Oil and Gas Interactive Mapper or downloaded from the KGS GIS Hub. These resources are visited daily by hundreds of industry, research, and public users. Production data will be updated quarterly on the new maps, which add coalbed methane (CBM) production to the cumulative gas totals. The cumulative maps are updates of the inset maps in map M-121 (revised), "Oil and Gas Fields of Kansas."

See the cumulative maps [HERE](#)



Above: Preview of the interactive map tool.

Petrographic Thin Section Imager

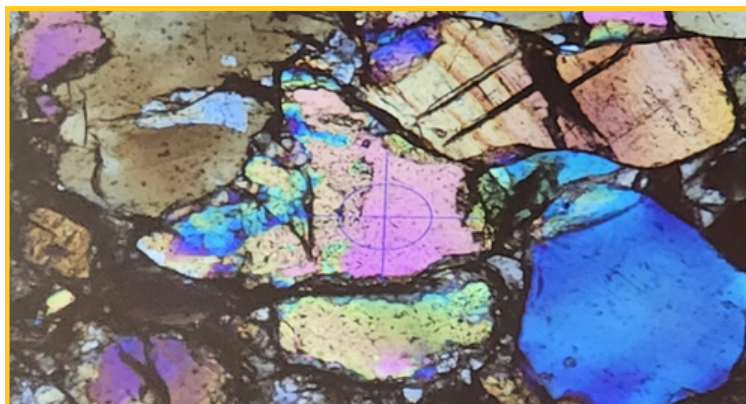
The Watney CORELAB just installed a new Zeiss Axioscan 7 for Geology, which takes high-resolution thin section petrographic images.

This new automated scanner offers customized settings to do plane-polarized and cross-polarized light. Slides can be viewed, shared, and analyzed remotely.

Eventually, all of the KGS thin section collection will be digitized. This will allow the KGS to preserve physical specimens for future generations.



Above: The new Zeiss Axioscan 7. Below: A sample scan.





Above, from left: Hanna Szydlowski (KGS), Hannah Parker (K-State), Micah Cameron-Harp (K-State), Laikyn Coursen (KGS), and Sam Zipper (KGS).



The group of hard-working researchers collects data at the experimental solar site in Finney County.

The solar recharge project crew was out at the experimental solar site in early June for the second quarterly visit of the year. They collected data on shallow soil moisture, took soil samples, and performed site maintenance. They will be back at the site in mid-July to collect deeper soil moisture data. Thank you to our K-State collaborators for assisting with the field work.

Collecting Bathymetry Data on Kansas Rivers

Map denoting the bend in the Kansas River



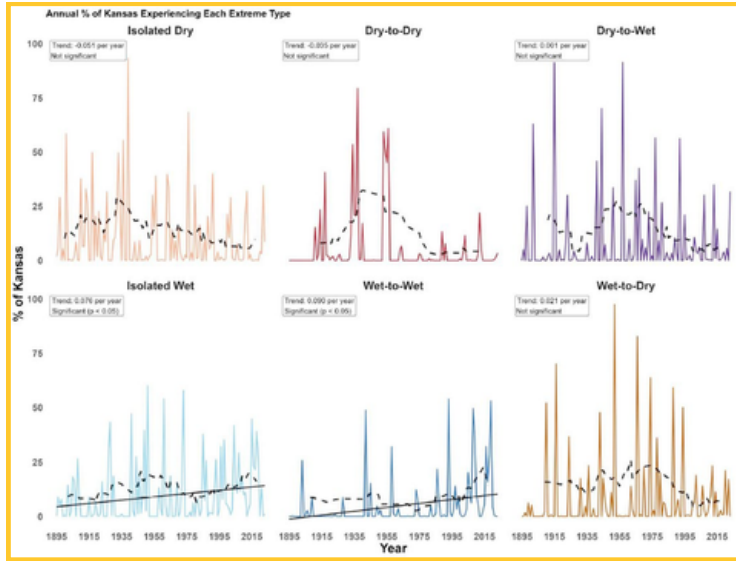
Above, Tony Layzell and a team of researchers and interns pose after surveying a stream site.

In early June, Alan Peterson and Tony Layzell used a remotely operated boat to collect bathymetry data that maps the underground topography of a water body.

The data they collected from Riverfront Park shows waveforms on the sandy bed of the Kansas River. The second image depicts the boat's data-collection path on the Kaw.

This small but mighty boat is able to collect highly accurate information by moving between waypoints in the same way that an aerial drone might complete a survey. In the future, the boat will be used to track bed changes over time on the Neosho River.

New Research Details Changing Trends in Kansas Precipitation



A new KGS open-file report, “Characterizing Spatial and Temporal Changes in Kansas’s Seasonal to Annual Hydroclimatic Extremes,” examines historical shifts in precipitation across Kansas.

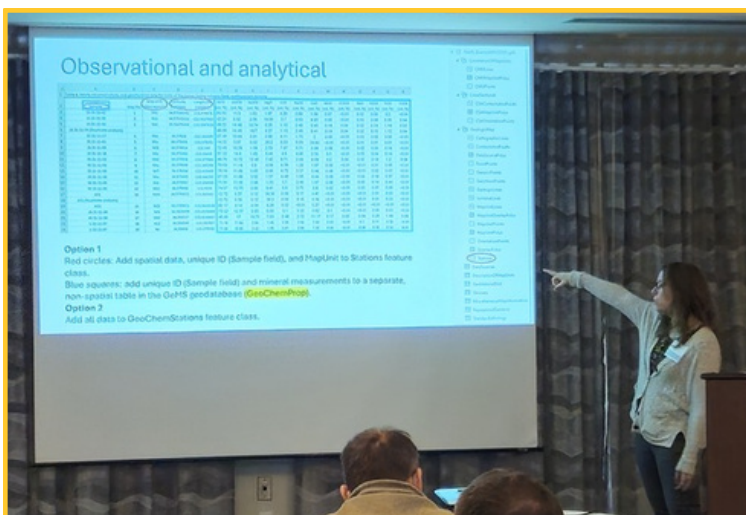
Recent research from Sam Zipper and coauthors Archi Howlader, David Weiss (KBS), Jude Kastens (KBS), and Erin Seybold highlight significant shifts in precipitation patterns across Kansas over the past 130 years, pointing to increasingly wetter conditions statewide.

Findings show annual precipitation has risen across much of central and eastern Kansas, largely driven by wetter spring seasons. These changing precipitation patterns present growing challenges for water management, agriculture, reservoirs, and municipalities across the state.

An **interactive data tool** allows users to explore historical precipitation trends by reservoir catchments, counties, and groundwater management districts, while a **public dataset** is also available for download for further research.

The project was supported through funding from the Kansas Water Office and collaborative research partners across Kansas.

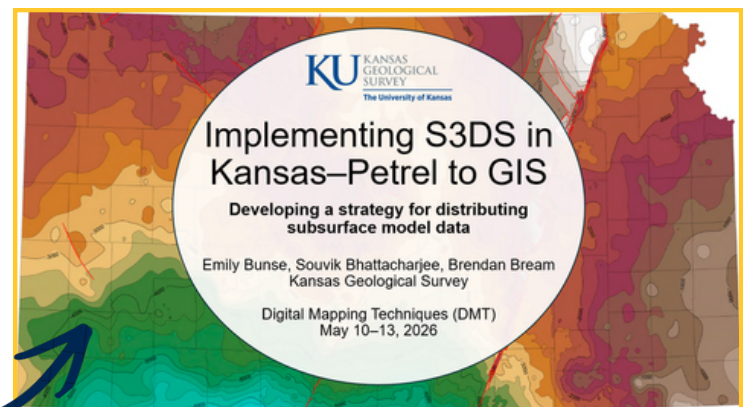
Bunse Presents at Digital Mapping Techniques Workshop



Emily Bunse at the annual Digital Mapping Techniques workshop in Freeport, Maine.

Emily Bunse’s presentation title with coauthors Souvik Bhattacharjee and Brendan Bream.

Emily Bunse gave two presentations in May at the Digital Mapping Techniques workshop. The first highlighted proposed guidelines for expanding the Geologic Mapping Schema (GeMS) to better incorporate derivative geologic datasets. The second presentation showcased subsurface modeling work underway at KGS aimed at improving data accessibility and usability for future researchers and stakeholders.



The Latest on KGS Research



KGS Invited to Two Conferences

KGS researchers represented Kansas science on the global stage at two prestigious geology conferences. Greg Ludvigson was among 90 invited participants at the GSA Penrose Conference 2026, contributing to international efforts shaping the Geologic Time Scale 2030 initiative. Meanwhile, Mark White and Brendan Bream presented at the invitation-only Geologic Hydrogen Gordon Research Conference, where leading researchers explored advancements in geologic hydrogen science. Participation in these events highlights the global

impact and scientific leadership of KGS research advancing earth science discovery and innovation.

SEPM International Sedimentary Geosciences Congress

KGS scientists Kate Andrzejewski and Diana Ortega-Ariza recently attended the 100th Anniversary SEPM International Sedimentary Geosciences Congress in Golden, Colorado. Diana served on the organizing committee for the meeting and attended to support the society.

Kate presented her research on new insights into the hydraulic connectivity of the upper Dakota aquifer system in central Kansas. This talk, titled "Insights into the Cretaceous Dakota Aquifer System of Central Kansas: Applying sequence stratigraphy to unravel hydrogeologic complexities," focused on a new method for interpreting the Cretaceous units of Kansas and hydrologic datasets from the Dakota aquifer system. It included collaborative research from the KGS, KU Geology, and the University of Iowa.



Nelson Gives Keystone Speech

On June 24, KGS Associate Director Ken Nelson spoke to the Keystone Innovation District as part of its Keystone Speaker Series. This weekly gathering helps innovators, entrepreneurs, and professionals learn, grow, and build cross-industry relationships.

His talk, "The Kansas GIS Program: Service and Partnerships to Make Data FAIR," featured strategies for making data accessible in the evolving digital landscape.

We hope you enjoyed this newsletter, newly designed by Ally Prunte and Hannah Horinek and compiled by members of the Outreach division, with special contributions from Emily Bunse, Logan French, Alan Peterson, Hanna Szydlowski, Josh Quick, Nikki Potter, Susie Fagan, Jay Kalbas, Kate Andrzejewski, and others.

*Ally Prunte, Outreach Assistant
Hannah Horinek, Program Coordinator*

