



KANSASVIEW 2021 - 2022 ACTIVITIES

This year KansasView produced an online interactive educational tool, "Mapping Kansas Ecosystems", to showcase the new Kansas Ecosystems land cover map. This resource was created for public consumptions including K-12 and higher education.

The Mapping Kansas Ecosystems educational tool contains:

- Introductory remote sensing concepts including information on how the Kansas Ecosystems land cover map was made.
- An interactive web mapping application to explore both the land cover map and the 2,600+ field sites visited across Kansas for the mapping project (Fig 1.).
- An overview of historical and current ecosystem influencers including human land use and management, like prescribed burning (Fig 2).
- A series of map tours to introduce grassland, woodland, and wetland ecosystems mapped in Kansas. The tour engages users with creative descriptions of each ecosystem type mapped and a series of associated images. Images for an ecosystem include:
 - A landscape photograph of the ecosystem
 - An aerial/satellite image containing the ecosystem
 - A plant found in the ecosystem
 - An animal found in the ecosystem

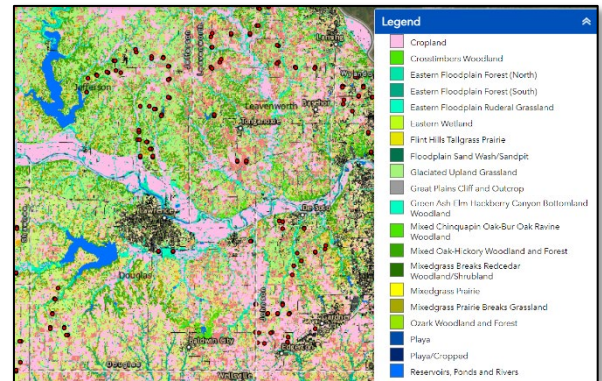


Fig 1. A subset of the web application containing the Kansas Ecosystems land cover map and field sites.



Fig 2. This Landsat image was included to illustrate prescribed burning in the tallgrass prairie ecosystem. Burn scars are shown in black along with white smoke plumes.

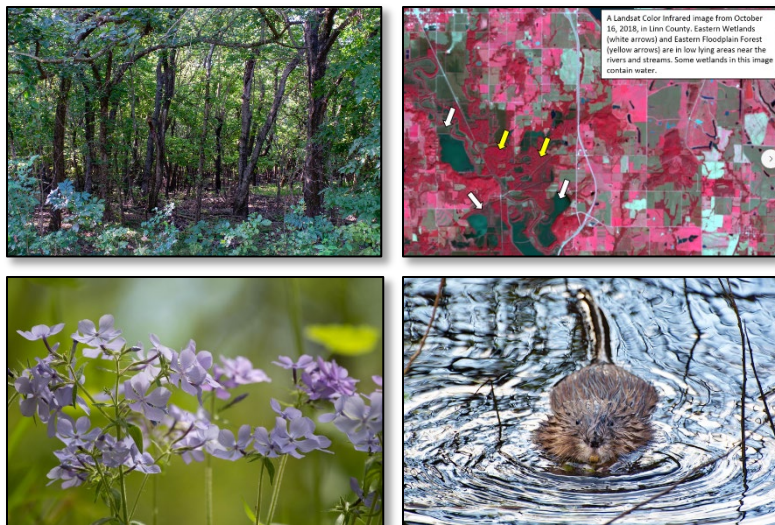


Fig 3. Images used in the map tour for the Eastern Floodplain Forest Ecosystem.

Excerpt for Eastern Floodplain Forest: In the northeastern corner of Kansas, where 600,000 years ago glaciers covered the earth, forests of cottonwood, maple, and sycamore grow along the river's edge, while wildflowers such as sweet **William's phlox** blanket the understory. The Eastern Floodplain Forest, found near the water's edge provides home for animals such as the **muskrat**. Experience the Eastern Floodplain Forest at the Kansas Perry Wildlife Area.

<http://bit.ly/3WjXpBC>



BENEFITS TO KANSASVIEW

We selected images to integrate how Kansas ecosystems appear *on the ground* and *from above* (Earth observations). A variety of aerial and Landsat and Sentinel satellite imagery were selected from different seasons and using different band combinations (e.g., true color, near-infrared color composite) (Fig 4).

Another goal was to make a self-contained, easily accessible educational tool. KansasView used ESRI StoryMaps, a platform that supports mixed media content and customization. We also created a web application using ERSI Web Application Builder. Once the content is shared with the public, users only need internet access and a web browser.

KansasView participates in the Kansas Ecosystems Summer Institute at the University of Kansas to provide remote sensing and geographic information systems educational resources to middle and high school science teachers (Fig 5). The creation of the Mapping Kansas Ecosystems stemmed directly from interactions with Kansas science teachers. Our hope is that teachers can easily integrate this tool into classroom curriculum. We also plan to share this tool with state agencies and other entities who use land cover data and want to learn more about the new Kansas Ecosystems land cover map.

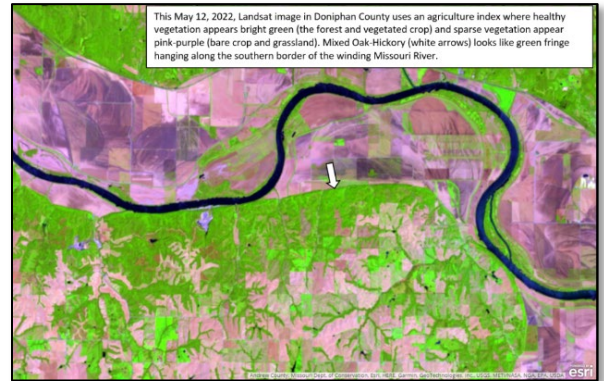


Fig 4. This Landsat image was used to highlight the Mixed Oak-Hickory Ecosystem (shown in green) south of the Missouri river in northeast Kansas.



Fig 5. Kansas science teachers at the Kansas Ecosystems Summer Institute.

KANSASVIEW CONSORTIUM MEMBERSHIP



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