



# OKLAHOMAVIEW 2022 - 2023

**AmericaView**<sup>SM</sup>  
Empowering Earth Observation Education  
[americaview.org](http://americaview.org)

## OKLAHOMAVIEW 2022 - 2023 ACTIVITIES

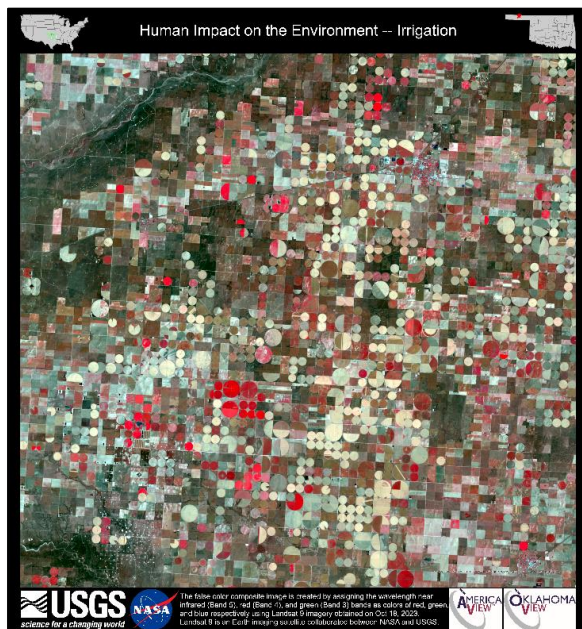
The proposed HIA for GY22 was to show the impacts of climate and human activities on agriculture and natural resources in Oklahoma including red cedar encroachment, wildfire, tornado, intensive logging, large-scale irrigation, and oil and gas operations, with remote sensing.

Six representative phenomenon were chosen to develop aesthetically beautiful posters with satellite remote sensing images, high spatial resolution imagery from small Unmanned Aerial Systems (sUAS), and ground photography.

Different band combinations have been evaluated to highlight these unique phenomenon in Oklahoma. Then color composite images were used to make high quality posters to show Oklahoma as Art. Drone and ground photos were included to spark the viewers' interest in earth observation by connecting the familiar scenery with the satellite image that depicts the landscape from space.

This HIA developed materials that can be used by educational and training organizations to promote remote sensing.

Location/phenomenon	Description
Eastern red cedar encroachment	Eastern red cedar encroachment into grasslands is a major issue in Oklahoma, which can cause changes in biodiversity and wildlife habitat
Intensive logging	Large scale logging activities in Southeastern Oklahoma
Irrigated winter wheat and cotton	Large size irrigated agriculture fields
Oil and gas fields	Massive oil and gas fields
Starbuck fire	Wildfire started in the Oklahoma panhandle and burned 246,570 ha in Oklahoma and Kansas
Newcastle-South Oklahoma City-Moore Tornado	One of the deadliest Tornadoes in Oklahoma



False color composite image (band 5, 4, 3) from Landsat 8 showing the irrigation fields in Oklahoma



Skylene Elementary School Outdoor Day: (a) introducing satellites, (b) flying a kite with a camera, (c) students flying their own kites, and (d) thank you notes.

OklahomaView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G18AP00077.

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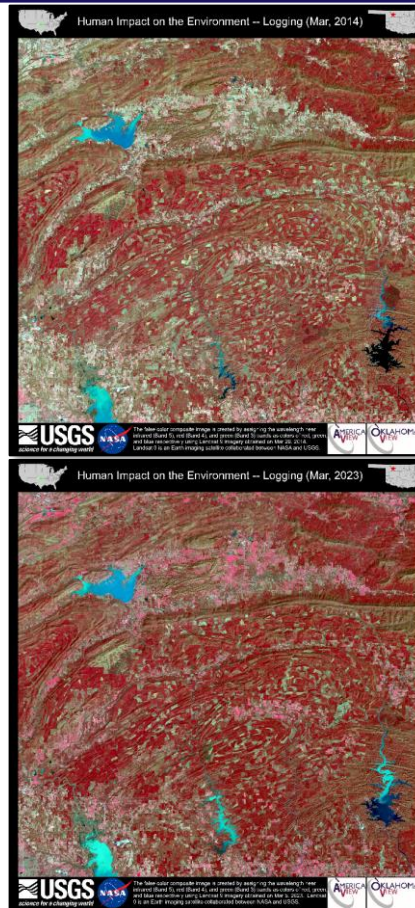
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## BENEFITS TO OKLAHOMA

- One undergraduate student and one graduate student learned how to plan field trip and fly sUAS under various conditions.
- Posters were made for the six representative phenomenon to show how Landsat can be used to study the impacts of climate and human activities on agriculture and natural resources in Oklahoma.
- Field surveys were conducted to collect images and videos using sUAS and ground photography.
- Outreach events like the Skyline Elementary School Outdoor Day and GIS Day at the Capitol helped state agencies and local communities to understand the potential of remote sensing.



GIS Day at the Capitol



False color composite image (band 5, 4, 3) from Landsat 8 showing intensive logging activity in Southeastern Oklahoma in 2014

False color composite image (band 5, 4, 3) from Landsat 8 showing intensive logging activity in Southeastern Oklahoma in 2023

## OKLAHOMAVIEW CONSORTIUM MEMBERSHIP



Science Serving Agriculture



Federal consortium members identified above do not receive funding from AmericaView.

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