

# SOUTH DAKOTAVIEW 2018 - 2019



South DakotaView:

Building partnerships and capability

within South Dakota to facilitate the

utilitization of remote sensing data and

geospatial technologies for the benefit

of its citizens and the economic

development of the state.

The SDView mission statement superimposed on

remotely sensed imagery of South Dakota

# **SOUTH DAKOAVIEW HISTORY AND SUCCESSES**

South DakotaView (SDView) is a charter member of the AmericaView organization. Since 2002 SDView efforts have focused on remote sensing education and outreach to students, educators, and current workforce personnel across South Dakota. SDView activities during the past few years include:

- South Dakota Statewide Geospatial Conference in Mitchell
  - o July 25-26, 2017
  - 142 attendees
  - o 36 speakers including four keynotes from EROS and Esri
  - Track for educators
- "Storytelling with Maps" workshop in Brookings for K-16 educators
  - o November 18, 2017
  - o 16 K-12 teachers and one university pre-service educator
  - Synergistic event that utilized resources and personnel from five AmericaView states: SD, TX, OH, LA and
- Interactive display at Big Sioux Water Festival in Brookings "South Dakota Lakes: A Look from Above"
  - Annual event in early May on SDSU campus



Keynote speaker session at the July 2017 South Dakota Statewide Geospatial Conference in Mitchell



K-16 educators at the November 2018 "Storytelling with Maps" workshop in Brookings

- Earth Observation Day events (2016-17)
  - Watertown two events for 6<sup>th</sup> graders
  - o Brookings seven events for kindergarten and second graders
  - o Rural Madison one event at Hutterite Colony
- South Dakota Agricultural Heritage Museum display
  - o "Weathering the Storm: Nature's Impact on South Dakota"
  - Featured remotely sensed imagery documenting extreme weather events such as hail, tornadoes, wildfires, blizzards and flooding
  - o On display at the museum March-September 2018
  - Presently traveling to K-12 schools in South Dakota
- Presentations and posters
  - Black Hills Digital Mapping Association, October 5, 2016
    - "Remote Sensing Imagery: Types, Availability, Applications, and Training"
  - Pecora Symposium, November 16, 2017
    - "South Dakota LiDAR Factsheet"
  - Technology and Innovation in Education conference, April 12, 2016
    - "Geospatial Technologies in the Classroom"
  - South Dakota Precision Ag Conference, February 2014
    - "Elevation Data: LiDAR, NED and More"

South DakotaView 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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## **SOUTH DAKOTAVIEW 2018 - 2019 ACTIVITIES**

## **sUAS Curriculum Development and K-12 Outreach**

This SDView High Impact Activity had two components. The first was to revise and develop curriculum for a university undergraduate-level introductory small Unmanned Aircraft Systems (sUAS) one-semester course, and the second was a one-hour K-12 activity. The sUAS course prepares students for the Federal Aviation Administration (FAA) Part 107 remote pilot exam. Other components of this course provide students with hands-on experience with sUAS systems, including: (1) Flight simulations and scenarios; (2) Experiences with on-board sensors; and (3) Processing and analysis of aerial imagery.

The one-hour K-12 activity demonstrates Landsat and other types of remote sensing image capabilities as well as an indoor sUAS flight demonstration. This has been incorporated into SDSU's College of Natural Sciences STEM outreach program.

### **South Dakota Statewide Geospatial Conference**

SDView and its consortium partners hosted a statewide geospatial conference in Mitchell on July 24-25, 2019. The conference was attended by 107 geospatial personnel and ten vendors from across the state and beyond.

In addition to SDView, other AmericaView members played a significant role in the conference. LouisianaView's Earth as Art exhibit was on display throughout the conference. Brent Yantis from LAView made three presentations at the event. Chris McGinty, AmericaView's Executive Director, was a keynote luncheon speaker and also presented a workshop.

SDView consortium members involved in the conference were South Dakota State University, the SD Department of Transportation, City of Sioux Falls, the SD Department of Environment and Natural Resources, ASRC Federal Data Solutions (EROS Contractor), Technology and Innovation in Education, and the SD Bureau of Information and Telecommunications.

For five weeks before the conference, the Earth as Art exhibit was on display at the Brookings City Library. Brent Yantis made a public presentation about the exhibit at the library on June 18<sup>th</sup>.



Earth as Art display at the Brookings Public Library



South Dakota State University students receiving instruction on the operation of small Unmanned Aircraft Systems (sUAS) from SDView Principal Investigator Dr. Bruce Millett

#### Other 2018-2019 Activities:

# Participation in the Big Sioux Water Festival

This annual festival brought more than 1000 4<sup>th</sup> graders and their teachers from eastern South Dakota to the South Dakota State University campus on May 7<sup>th</sup> to learn about various water-related topics. SDView had an interactive ArcGIS Online display in the exhibit hall that looked at water from a remote sensing perspective.

# • Mini-grants for University Students

Two \$1000 mini-grants were competitively awarded to graduate students for projects involving geospatial technologies. Students from all of South Dakota's universities and tribal colleges were eligible to apply. The first project: addressed the issues of sustainable land use, land change, and land management in Burkina Faso by looking at an agricultural practice called Farmer Managed Natural Regeneration (FMNR). The second project used a Sky Quality Meter (SQM), light meter, and GIS to measure light pollution.

## Earth Observation Day Activities

Second graders from Medary Elementary School in Brookings learned about "South Dakota from Space" during an SDView visit on September 17.

#### SDView Website Renovation

The SDView website received a complete renovation and a new website address (https://sdview.org).

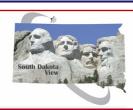
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https://sdview.org