Mapping Our Future: Expanding GIS and Remote Sensing (GIS/RS) Knowledge in Iowa

A strong geospatial foundation is a necessity to lay the framework for higher-level geospatial and remote sensing education. During grant year (GY) 2020, IowaView’s HIA focused on understanding the current conditions of GIS/RS education in K-12 Iowa classrooms with the use of a survey. From those results, it was concluded that there is an information gap about GIS and how it can be used in the classroom. Those previous year results informed IowaView’s GY 2021 activities and project staff focused on finding opportunities to promote GIS/RS knowledge through outreach. IowaView staff coordinated in-person teacher professional development events and developed educational resources and activities.

During GY21, we were able to begin transitioning back to in-person activities while also participating in various online activities. Below are some highlights from GY21:

• Provide GIS/RS Learning Opportunities for K-12 Teachers
  April 2022: IowaView staff co-presented with a consortium member to provide a 45-min workshop about using GIS in the classroom at the statewide Iowa Technology Education Connection Conference held in Des Moines, Iowa. AmericaView resources were shared throughout the presentation and 7 attendees were given AmericaView posters, books, and USGS trading cards.
  July 2022: IowaView staff and a consortium member hosted a two-day geospatial technology workshop at William Penn University in Oskaloosa, Iowa to provide three K-12 teachers a more in-depth opportunity to explore using GIS and Story Maps in the classroom and gain continuing education credits.

• GIS Day 2021
  IowaView staff hosted a GIS Day open house in the atrium of ISU’s College of Design. There were over 50 participants. This was an opportunity for students to learn more about the academic opportunities available for learning GIS including an undergraduate minor and graduate certificate in GIS. It was also a time to distribute AV posters and educational materials.

• IowaView Website
  IowaView had an active website presence (40 posts during GY21) with regularly updated content as well as Landsat 50th promotional information. This included producing Landsat IowaShots images and time-lapse videos; 11 were released during GY21. During this reporting period, 4,632 users visited the site with 7,669 pageviews.
- During GY21, IowaView staff analyzed the results from the GY20 K-12 GIS education survey to better understand the current use of GIS in K-12 classrooms as well as understanding barriers to using GIS. This information is beneficial to IowaView, the Iowa Geographic Information Council, the State of Iowa, and other entities to help understand current conditions and better target educational resources. The results were shared to GIS/RS audiences at two conferences in March and June 2022. A StoryMap summarizing the major findings of the study is available: https://arcg.is/0HTPOS

- IowaView staff were asked by teachers at the July 2021 GIS workshop to create a list of Iowa data resources for teachers and students to use when creating StoryMaps. The resulting StoryMap, published in July 2022, includes data and imagery sources, lessons plans and other resources: https://arcg.is/1e9WWT

- Some metrics from the GY21 reporting year:
  - 35 college students and 15 faculty/staff interactions during GIS Day 2021
  - 120 K-12 teachers received emails regarding Iowa GIS resources and training notifications
  - 10 K-12 teachers received training during spring and summer in-person events
  - 40 GIS community members attended presentations about K-12 GIS use in Iowa
  - 15 youth attended 4-H Youth GIS Workshop
  - 3 student groups participated in the Iowa Map Contest

**Benefits to Iowa**

**IowaView Consortium Membership**

The mission of the IowaView consortium is to increase the knowledge and use of remote sensing and other geospatial technologies for the benefit of the citizens of Iowa, through education, research and service. IowaView supports the collection and management of publicly accessible remote sensing data archives (ortho.gis.iastate.edu) which includes current and historic imagery, LiDAR elevation and other datasets useful for research and education. Collaborators come from several departments at ISU as well as from public agencies and organizations.

**Contact Information**

IowaView Principal Investigator:
Robin McNeely, GIS Facility Manager
Iowa State University
515-294-2087
mobes@iastate.edu

https://www.iowaview.org
State Coordinator: Amy Logan
amylegan@iastate.edu