



NebraskaView

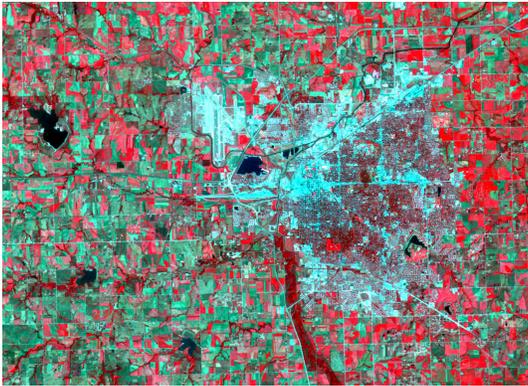
Center for Advanced Land Management Information Technologies (CALMIT)
School of Natural Resources
University of Nebraska-Lincoln



Geospatial Information for Nebraska

Promoting the Benefits of Geospatial Data and Applications

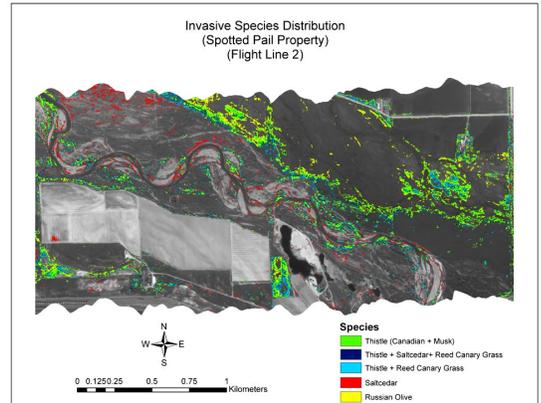
Since the early 1970's, billions of dollars have been spent by the federal government and private sector on satellite-based earth observing systems. Hundreds of geospatial datasets portraying elevation, land use, water, soils and other resources have been developed. The mission of **NebraskaView** is to ensure that Nebraskans make full use of satellite imagery, geospatial data and technologies such as geographic information systems (GIS) for mapping, monitoring and managing our cities and rural lands and protecting our natural resources. Working in collaboration with the national AmericaView consortium and our state partners, we archive and distribute geospatial data, conduct applied research and training, offer assistance in applications development and foster technology transfer.



Landsat satellite image of Lincoln, NE

Bridging the Gap between Research and Application

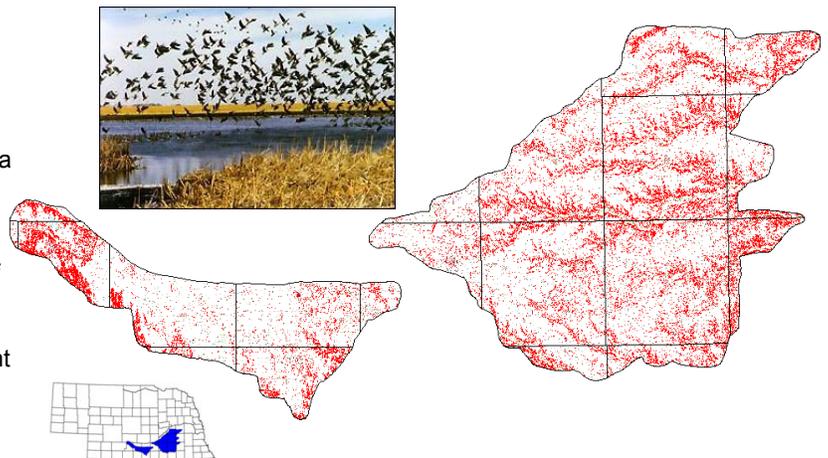
CALMIT research showed that airborne hyperspectral imagery (right) can be used to map invasive plants along the North Platte River, important information for Nebraska agencies working to mitigate impacts of invasives on wildlife and water resources.



Partners

NebraskaView has established a network of partnerships with other Nebraska institutions and agencies including the following:

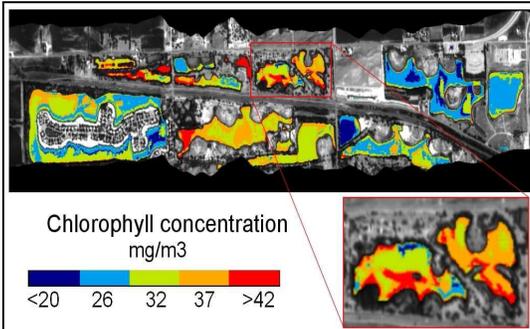
- University of Nebraska-Omaha, Department of Geography and Geology
- University of Nebraska-Omaha, NASA Nebraska Space Grant Consortium
- Nebraska Earth Science Education Network (NESEN)
- University of Nebraska-Kearney, Department of Geography
- Creighton University, Department of Biology
- Chadron State College, Geoscience Department
- Doane College, Department of Natural Science
- Nebraska Wesleyan University, Biology Department
- Nebraska Department of Natural Resources
- Nebraska Emergency Management Agency
- Nebraska GIS Council
- U.S. Geological Survey



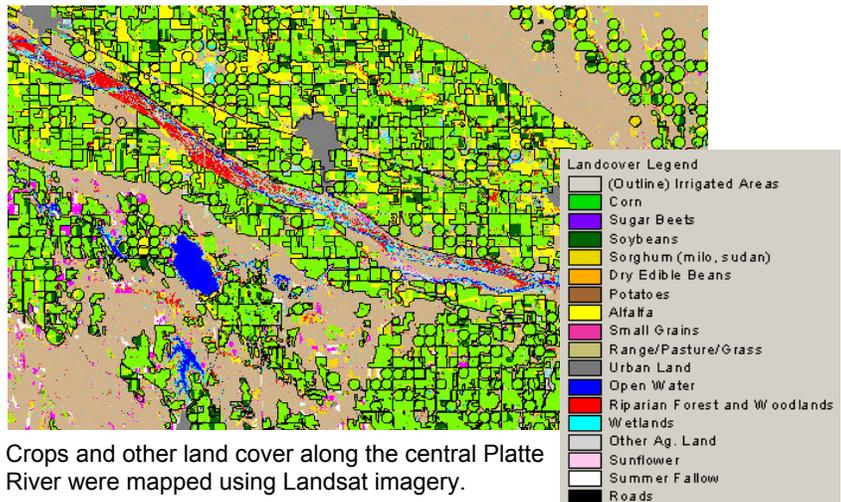
Landsat-derived land cover maps were integrated with other geospatial data to model soil erosion in Nebraska's Rainwater Basin, an important wetlands ecosystem critical to waterfowl (above). Red areas represent predicted soil loss greater than 5 tons/acre/year. Partners included the Nebraska Game & Parks Commission, the Rainwater Basin Joint Venture and the U.S. Fish & Wildlife Service.

Benefits

Water is a critical resource in Nebraska. Landsat imagery has been used to map irrigated and dryland crops statewide so that current and future water demands can be estimated. CALMIT's airborne hyperspectral imaging system provides estimates of chlorophyll concentrations and toxic algae in Nebraska lakes. NebraskaView supports remote sensing research for the well-being of Nebraska and its citizens.



Airborne hyperspectral imagery is used to quickly assess water quality in lakes such as these near Fremont, NE.



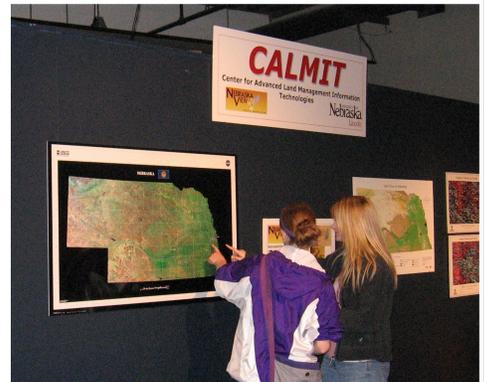
Education



NebraskaView courses utilize state-of-the-art computer facilities for analyzing satellite imagery and other geospatial data.

Education is an important component of NebraskaView. In addition to providing support for classes at the University of Nebraska-Lincoln, we have recently:

- conducted summer short courses for Lincoln Public School science teachers
- mentored visiting professors on sabbatical from Doane College and Nebraska Wesleyan University
- developed an exhibit for the Strategic Air Command Museum, and
- provided internships for undergraduate students in collaboration with the Nebraska NASA Space Grant Consortium.



CALMIT/NebraskaView Exhibit at the Strategic Air & Space Museum in Ashland, NE

NebraskaView Data Archive



NebraskaView provides on-line access to over 500 satellite and aerial images, and other geospatial data for Nebraska through its web site at <http://nebraskaview.unl.edu/>. NebraskaView and its partners are currently working with the Nebraska GIS Council, the Nebraska Office of the Chief Information Officer and the Nebraska Information Technology Council to develop a statewide geospatial data portal (left) expected to become operational in 2010.

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