

Delineation of 2001 Land Use Patterns for The Cooperative Hydrology Study in The Central Platte River Basin

Project Description

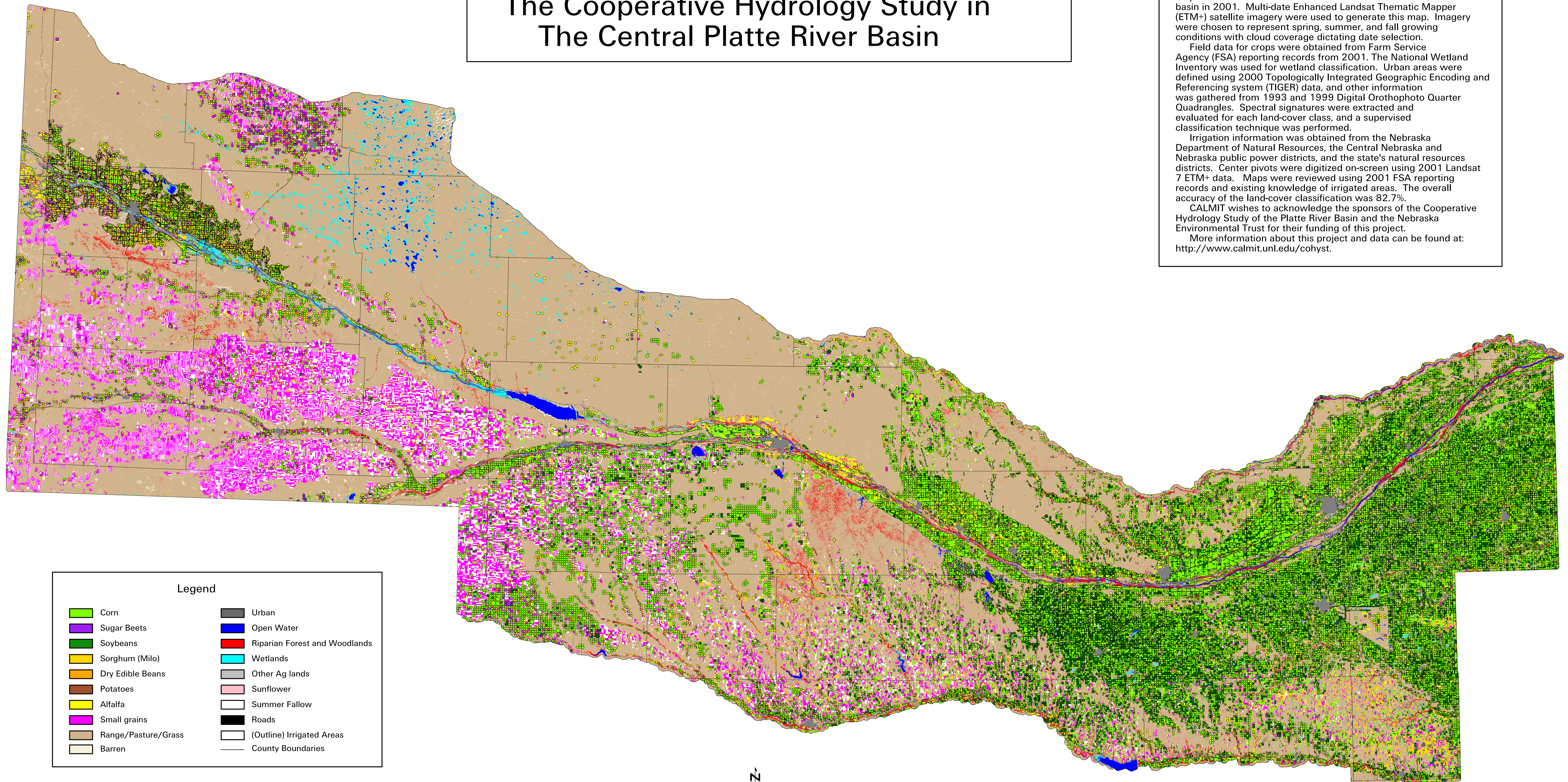
This project involved integrating remote sensing, spatial, and field data analysis to provide an accurate map of crops and other land-cover in the central Platte River basin in 2001. Multi-date Enhanced Landsat Thematic Mapper (ETM+) satellite imagery were used to generate this map. Imagery were chosen to represent spring, summer, and fall growing conditions with cloud coverage dictating date selection.

Field data for crops were obtained from Farm Service Agency (FSA) reporting records from 2001. The National Wetland Inventory was used for wetland classification. Urban areas were defined using 2000 Topologically Integrated Geographic Encoding and Referencing system (TIGER) data, and other information was gathered from 1993 and 1999 Digital Orthophoto Quarter Quadrangles. Spectral signatures were extracted and evaluated for each land-cover class, and a supervised classification technique was performed.

Irrigation information was obtained from the Nebraska Department of Natural Resources, the Central Nebraska and Nebraska public power districts, and the state's natural resources districts. Center pivots were digitized on-screen using 2001 Landsat 7 ETM+ data. Maps were reviewed using 2001 FSA reporting records and existing knowledge of irrigated areas. The overall accuracy of the land-cover classification was 82.7%.

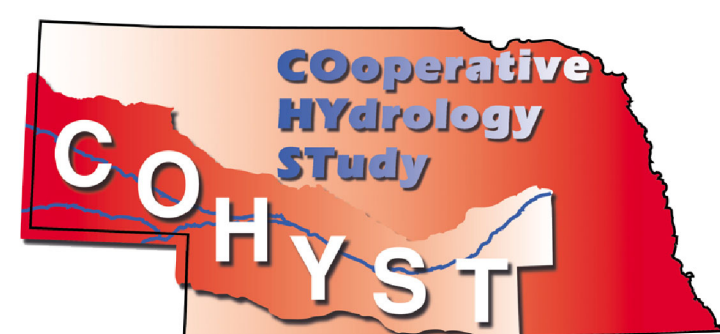
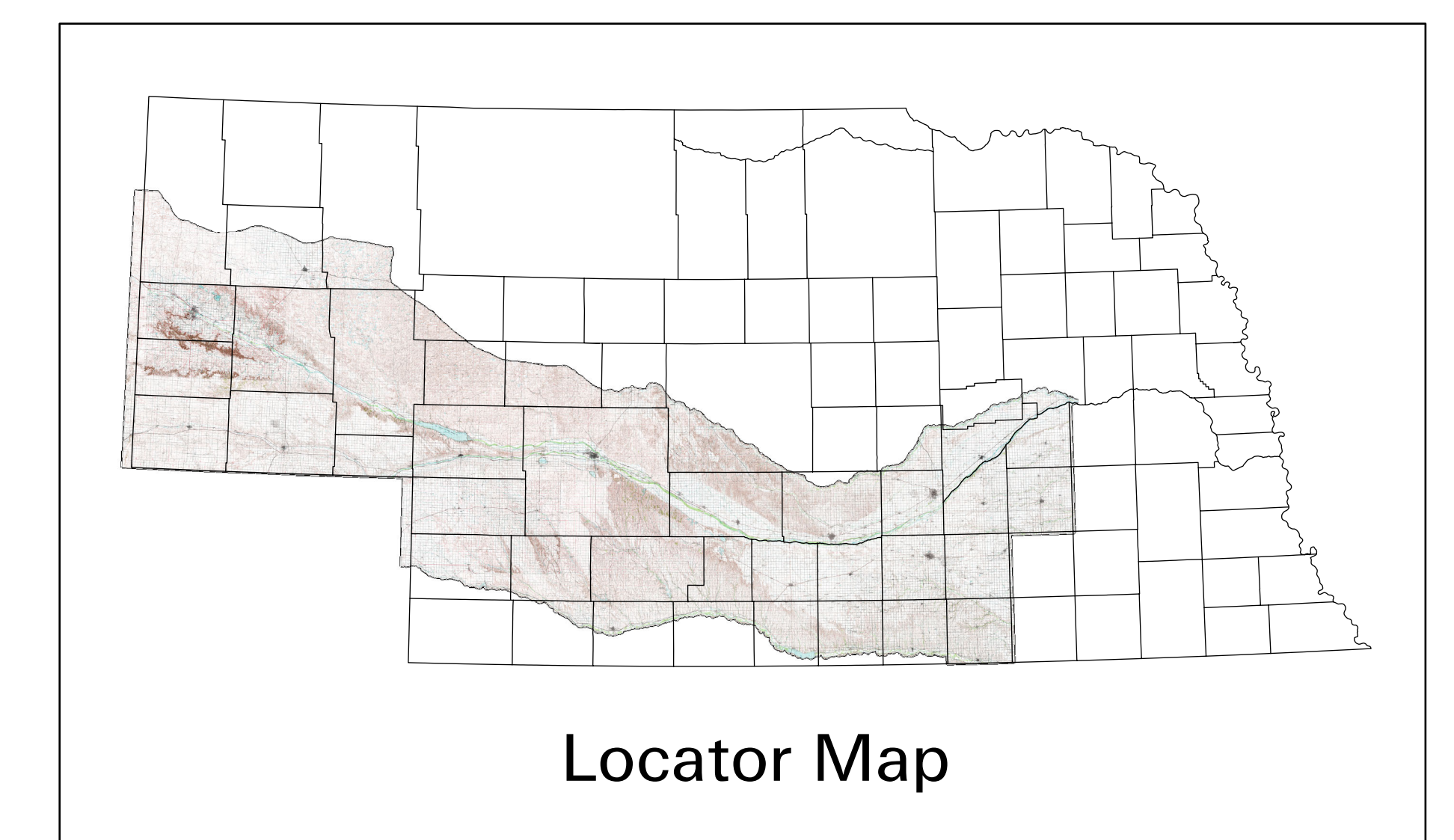
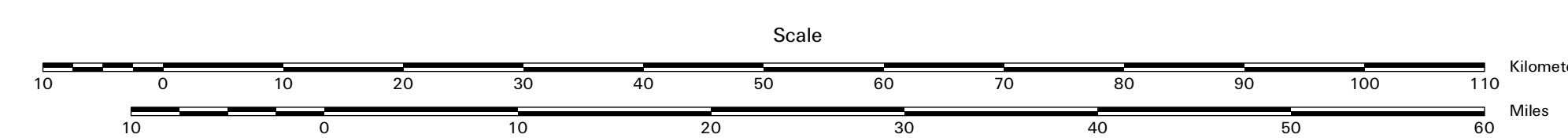
CALMIT wishes to acknowledge the sponsors of the Cooperative Hydrology Study of the Platte River Basin and the Nebraska Environmental Trust for their funding of this project.

More information about this project and data can be found at: <http://www.calmit.unl.edu/cohyst>.



Legend

Corn	Urban
Sugar Beets	Open Water
Soybeans	Riparian Forest and Woodlands
Sorghum (Milo)	Wetlands
Dry Edible Beans	Other Ag lands
Potatoes	Sunflower
Alfalfa	Summer Fallow
Small grains	Roads
Range/Pasture/Grass	(Outline) Irrigated Areas
Barren	County Boundaries



University of Nebraska - Lincoln
Center for Advanced Land Management Information Technologies