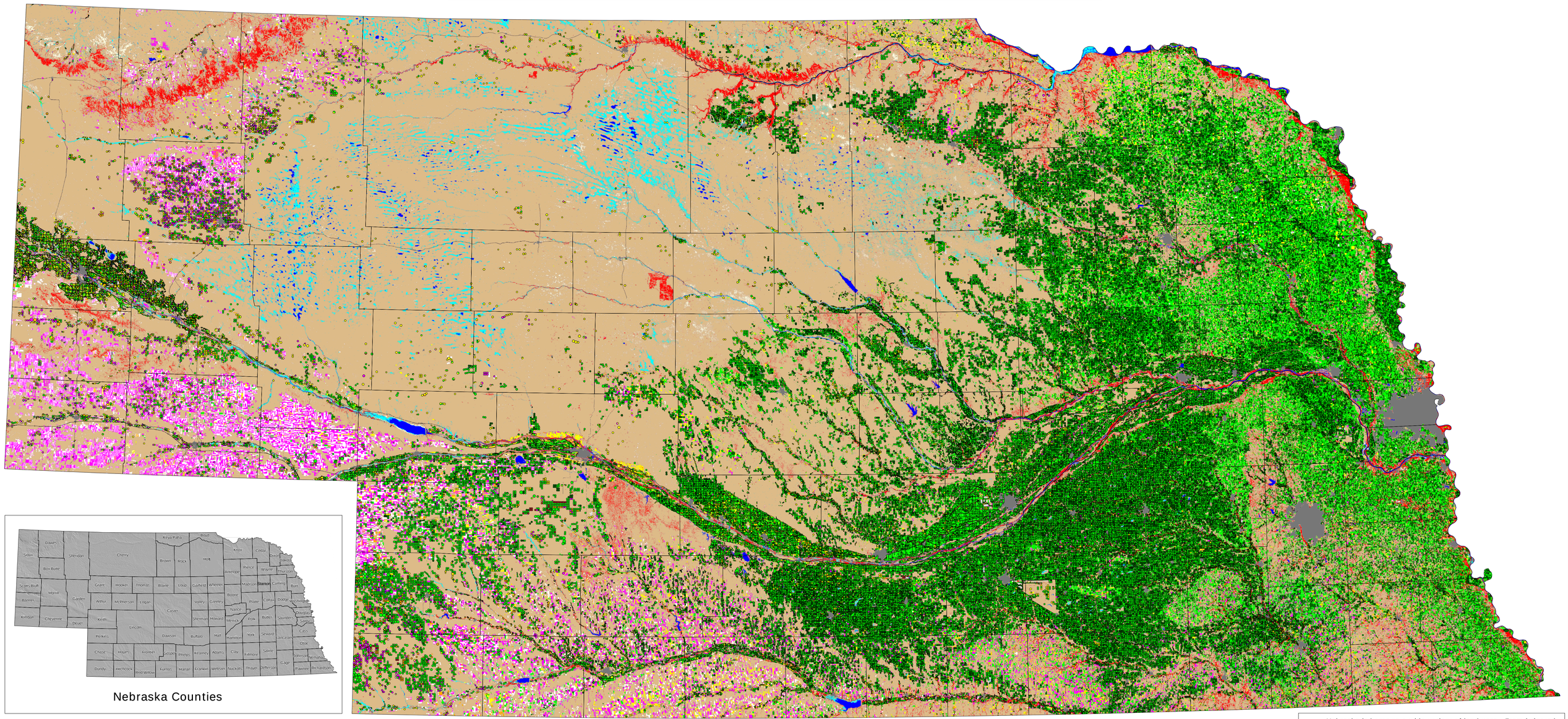
Delineation of 2005 Land Use Patterns for the State of Nebraska Department of Natural Resources

Nebraska Department of Natural Resources

University of Nebraska Lincoln

http://www.calmit.unl.edu/2005landuse/



Nebraska Counties

25 12.5 0 25 50 75 Miles

25 12.5 0 25 50 75 100 Kilometers

1:840,000

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Land Cover Classes

- Corn
- Soybeans
- Sorghum (Milo)
- Dry Edible Beans
- Alfalfa
- Small Grains (Wheat, Oats, Rye, Millet)
- Fallow Fields
- Sunflower
- Sugar Beets
- Potatoes
- Range, Pasture, Grasslands
- Barren Areas
- Open Water
- Emergent Wetlands
- Riparian Forest and Woodlands
- Urban Areas
- Other Agricultural Lands (Farmsteads, Feedlots etc.)
- Roads
- Outline - Irrigated Areas
- County Boundaries

Projection Information:
State Plane Fipszone 2600
Horizontal Datum Name: NAD 83
Ellipsoid Name: GRS 1980
Raster Cell size: 93.48 feet

Nebraska is home to a wide variety of land uses. From irrigated row crops and winter wheat in the western part of the state to dryland corn and soybeans in the east, agricultural practices shape the landscape and influence state and region-wide policies that involve everything from water use to endangered species and environmental concerns. To map statewide land use patterns, Landsat 5 Thematic Mapper (TM) satellite imagery were utilized in conjunction with field data from Nebraska's Natural Resource Districts (NRDs) and 2005 Farm Service Agency (FSA) high resolution ortho-imagery. For most Landsat Path/Row locations within the study area, three dates of imagery (representing spring, summer, and fall growing conditions) were acquired. Multi-date Landsat imagery allow the phenological patterns of different agricultural crops and native plant communities to be discerned and classified. Urban areas and cloud cover were manually masked out of the Landsat imagery before running the classification. A post-classification smoothing filter was applied to lessen the mixing of land use classes. Field data and high resolution imagery were utilized for validation of the final land use classification.

Irrigation data were provided by NRD's and the Nebraska Department of Natural Resources. Center Pivots were on screen digitized using the 2005 Landsat satellite imagery and were validated using the 2005 FSA Ortho-Imagery. The image classification has an overall accuracy of 80.43%. This project was funded by the Nebraska Department of Natural Resources. All of the project datasets are available on line at: http://www.calmit.unl.edu/2005landuse/.