Department of Natural Resources
ILLINOIS STATE GEOLOGICAL SURVEY
William W. Shilts, Chief
615 East Peabody Drive
Champaign, IL 61820-6964

Illinois Map 12
2004

Illinois Land Cover

Donald Luman, Illinois State Geological Survey
Tari Tweddale and Brooke Bahnsen, Illinois Natural History Survey
Patrick Willis, USDA National Agricultural Statistics Service

Land Cover Categories[1]	Acreage[2]	Statewide Percentage[2]
Agricultural Land	**27,519,206**	**76.31**
Corn	11,409,233	31.64
Soybeans	10,504,048	29.13
Winter wheat	363,227	1.01
Other small grains and hay	331,467	0.92
Winter wheat/soybeans, double cropped	613,307	1.70
Other agriculture	134,326	0.37
Rural grassland	4,163,599	11.55
Forested Land	**4,150,179**	**11.51**
Upland	3,455,241	9.58
Partial canopy/ savanna upland	614,919	1.71
Coniferous forest	80,019	0.22
Urban and Built-Up Land	**2,325,924**	**6.45**
High density	615,825	1.71
Low/medium density	1,021,605	2.83
Urban open space	688,494	1.91
Wetland	**1,414,613**	**3.92**
Shallow marsh/wet meadow	92,078	0.26
Deep marsh	41,708	0.12
Seasonally/temporarily flooded	113,873	0.32
Floodplain forest	1,107,038	3.07
Swamp	20,254	0.06
Shallow water	39,662	0.11
Other	**653,215**	**1.81**
Surface water (does not include Lake Michigan)	604,687	1.68
Barren and exposed land	37,530	0.10
Clouds	6,875	0.02
Cloud shadows	4,123	0.01
Statewide totals	**36,063,137**	**100.00**

[1]Interpretation based on imagery acquired in 1999 and 2000.
[2]Area statistics calculated for Illinois only.

Explanation

This *Illinois Land Cover* map was produced in response to the need for current, detailed information about land, the raw material of Illinois. Such information is essential to ensure wise land-use decisions and good land stewardship. The map was produced from the computer-assisted classification and interpretation of Landsat 5 Thematic Mapper and Landsat 7 Enhanced Thematic Mapper satellite imagery. The imagery was acquired during key seasonal periods of 1999 and 2000 (see inset map below). Analysis of this imagery produced twenty-three land cover categories (see table).

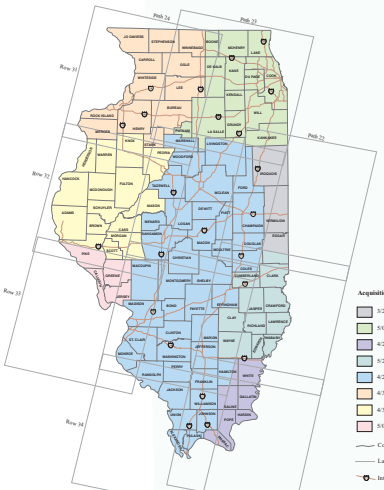
Land cover is the visible evidence of land use (Campbell 1987), that is, the vegetative and non-vegetative features that can be directly observed and interpreted using imagery. Land cover can provide indications of land use, but those principally human activities cannot always be directly observed through imagery alone. For example, "forest" is a specific type of land cover, but imagery cannot always convey the multiple uses of forested land, which may include recreation, wildlife refuge, timber production, or residential development.

Slightly more than three-fourths (76.3 percent, or 43,000 square miles) of Illinois' nearly 56,350 square miles is devoted to agriculture, involving roughly 76,000 farms (Illinois Agricultural Statistics Service 2003). Illinois ranks second in the nation in the production of corn and soybeans, which are grown on 60.8 percent of the total surface area of the state. Forested lands, concentrated mostly in areas of steeply sloping topography, occupy 11.5 percent (nearly 6,480 square miles) of Illinois' surface area. These sloping lands are portrayed dramatically on the companion *Illinois Surface Topography* map (Luman et al. 2003). Urban and built-up lands make up 6.5 percent of the state's surface, or 3,635 square miles. Together agricultural, forested, and urban lands constitute 94.3 percent of the state's entire surface area. Wetlands (3.9 percent) and surface water (1.7 percent) account for the majority of the remaining cover types. Statistical analysis determined the overall accuracy of the twenty-three categories on this *Illinois Land Cover* map to be 83 percent. The definitions of the individual land cover categories and a discussion of the accuracy assessment procedures used are available online at <http://www.agr.state.il.us/gis/state/landcover/>.

This *Illinois Land Cover* map updates and revises the *Land Cover of Illinois* map (Luman et al. 1996) and was generated from the Land Cover of Illinois 1999–2000 database completed in December 2002. A statewide land cover inventory is conducted periodically so that agencies can monitor the extent and condition of Illinois' land resources. For example, from 1982–1997, the amount of Illinois forested land remained fairly constant, but Illinois lost prime farmland at an average estimated annual rate of one township (36 square miles) each year. During the same period, urban land increased at an average annual rate of about 1.5 townships each year (U.S. Department of Agriculture 2000).

The Illinois Land Cover database has been created as part of a cooperative interagency initiative that began in 1999 between the Illinois Department of Natural Resources, the Illinois Department of Agriculture, and the U.S. Department of Agriculture, National Agricultural Statistics Service. The spatial databases, extensive tabular data, and other project information are available online and for free download at <http://www.agr.state.il.us/gis/>.

Landsat 5 and Landsat 7 Satellite Path/Row Scene Index



Acquisition Dates Used for Land Cover Analysis

- 3/25/00, 8/24/00, & 9/17/00
- 5/02/99, 8/30/99, & 10/01/99
- 4/26/00, 8/16/00, & 10/03/00
- 5/25/99, 7/04/99, & 9/06/99
- 4/25/00, 8/31/00, & 10/10/00
- 4/30/99, 8/29/99, & 9/22/99
- 4/30/99, 8/28/00, & 9/29/99
- 5/02/00, 9/07/00, & 10/10/00
- County boundary
- Landsat TM path/row boundary
- Interstate highway

Interstate highway
County boundary

SCALE 1:500,000
10 0 10 20 30 MILES
10 0 10 20 30 KILOMETERS

Transverse Mercator Projection
North American Datum 1983

Acknowledgments

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For more information contact:
Illinois State Geological Survey or Illinois Natural History Survey
615 East Peabody Drive 607 East Peabody Drive
Champaign, Illinois 61820-6964 Champaign, Illinois 61820-6964
(217) 333-4747 (217) 244-2426
http://www.isgs.uiuc.edu http://www.inhs.uiuc.edu

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