

Missouri Soil Surveys

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Erosion control, identification of prime farmland, energy conservation and urban growth all require detailed knowledge of the location and properties of soils.

Soil resources of all Missouri counties are being classified, mapped and interpreted in response to this need for information on soil characteristics such as texture, slope, drainage, acidity, stoniness and fertility.*

This soil information is published in survey reports which contain detailed maps of the location and extent of all the soils in an area. Each soil identified is described by its physical and chemical properties, classified according to a national system and interpreted for agricultural and urban uses.

How Surveys are Made

Before 1940, many counties in Missouri were provided with soil reconnaissance maps. Although these maps have been helpful for planning purposes, they are general in nature.

Modern soil surveys of today use aerial photographs as base maps. The soil maps are on a scale of 2.6 inches of map per mile of land. Soil scientists examine the soil to a depth of 5-10 feet, and soil descriptions are based on a standard depth of 60 inches. Soil scientists examine nearly every acre in a county identifying each different soil found. Because of this thoroughness, one mapper would need about 10 years to complete a soil map for a county.

Uses of Soil Information

In addition to the soil maps, survey reports contain detailed information about each of the soils found within the counties. Interpretations for use and management of soils for the following purposes also are given:

Agriculture and Forestry. Survey information can help farmers determine which soils are best suited for a particular crop. Interpretations on suitability for irrigation, drainage needs, erosion control practices and other cultural practices also are provided. Several counties have used the soil survey in determining assessment categories under the new agricultural assessment bill.

Residential and Industrial Sites. Home buyers can

evaluate sites for potential problems such as flooding, seepage, foundation cracking, erosion and septic system failure. Builders and developers can plan subdivisions according to soil conditions and patterns of the landscape. The survey can be helpful in locating potential industrial sites. It also can be an aid in planning and estimating design costs.

Waste disposal. Soil information can be used to determine suitable sites for septic systems; some waste handling systems are designed for specific soils. The survey may aid initial evaluation of sites for sewage lagoons and sanitary landfills; but consult geological information before making a final decision.

Highways and Utilities. Soil information is essential in the design and construction of roads, pipelines and other utility lines. Soil surveys can identify soil characteristics such as shrinking or swelling potential, flooding or wetness, slope, erodibility, corrosion potential, depth to bedrock and bearing capacity.

Land Use. Soil surveys can aid local government officials and others in decisions on offering building permits, planning utility extensions, evaluating land and providing for preservation of prime agricultural land.

Recreation. The reports can assist in evaluation of areas for wildlife, parks, camping, golf courses and other activities.

Status of Survey Program

Status of the soil survey in each county is shown in Table 1.

Nearly 1/3 of Missouri already has been mapped. Modern soil survey reports are available for public distribution for 18 counties. An additional 15 counties are completely mapped, and reports are in the process of being published. More than 40 soil scientists now are mapping 21 counties.

Total cost of a completed soil survey averages 75 cents per acre.

The organizations cooperating on the survey have the goal of completing every county by 1988. County soil and water conservation districts may apply for state assistance to accelerate the progress of their soil surveys. Priorities are decided on the basis of local interest, contributions and needs.

How to Obtain Soils Information

Copies of your county's soil survey report may be obtained from your local Soil Conservation Service or University of Missouri Extension Center. Copies for other counties may be obtained from the Extension Publications Office, 211 Whitten Hall, University of Missouri, Columbia, MO 65201.

Reports are free to all Missouri residents. Out-of-state

*Because many different users need soil information, the Missouri soil survey program is a cooperative effort by the following organizations:

Soil Conservation Service, USDA
University of Missouri Agricultural Experiment Station
University of Missouri Extension Service
Missouri Soil and Water Conservation Districts
Missouri Department of Natural Resources
Forest Service, USDA

residents are charged \$3 per copy.

Some of the soil reconnaissance surveys mapped before 1940 are available in limited quantities. Those out of print may be found at public libraries, the agronomy extension office (214 Waters Hall, UMC, Columbia, MO 65201) or the Missouri State Historical Society.

Copies of individual field sheets in counties with mapping in progress may be obtained from the district conservationist at the county Soil Conservation Service office.



Table 1. Status of County Soil Surveys

Key to Codes:

- A-Modern survey available
- B-Modern survey complete with estimated publication date
- C-Extensive mapping done with estimated completion date
- D-Mapping just begun
- E-Old general survey available
- F-No survey available

County	Code	Date	County	Code	Date	County	Code	Date
Adair	F		Grundy	E	1916*	Pemiscot	A	1971
Andrew	E	1925	Harrison	B	6/78	Perry	E	1911
Atchison	E	1912	Henry	A	1976	Pettis	E	1914
Audrain	E	1911	Hickory	F		Phelps	F	
Barry	E	1918	Holt	A	1953	Pike	E	1912
Barton	A	1974	Howard	B	1/78	Platte	D	
Bates	E	1910*	Howell	E	1902*	Polk	E	1926
Benton	F		Iron	F		Pulaski	F	
Bollinger	F		Jackson	C	12/81	Putnam	E	1908*
Boone	A	1962	Jasper	A	1954	Ralls	C	12/80
Buchanan	D		Jefferson	F		Randolph	F	
Butler	C	10/79	Johnson	B	4/80	Ray	C	12/80
Callaway	A	1974	Knox	B	7/78	Reynolds	E	1921
Callway	C	12/79	Laclede	E	1911	Ripley	C	10/79
Camden	F		Lafayette	A	1975	St. Charles	C	4/78
Cape Girardeau	B	3/80	Lawrence	B	7/81	St. Clair	F	
Carroll	E	1912	Lewis	F		St. Francois	C	6/78
Carter	F		Lincoln	E	1917	St. Louis	C	6/78
Cass	D		Linn	E	1945	Ste. Genevieve	D	
Cedar	E	1912	Livingston	A	1956	Saline	E	1904*
Chariton	A	1942*	McDonald	F		Schuyler	F	
Christian	B	12/81	Macon	E	1913*	Scotland	A	1975
Clark	F		Madison	F		Scott	B	3/80
Clay	C	12/80	Maries	F		Shannon	F	
Clinton	D		Marion	C	12/80	Shelby	B	7/78
Cole	E	1924	Mark Twain Natl. Forest	A	1975	Stoddard	D	
Cooper	E	1909	Mercer	F		Stone	F	
Crawford	E	1906	Miller	E	1914	Sullivan	E	1911
Dade	F		Mississippi	B	3/80	Taney	F	
Dallas	F		Moniteau	A	1964	Texas	E	1919
Daviess	A	1964	Monroe	B	7/78	Vernon	A	1977
DeKalb	A	1977	Montgomery	B	2/78	Warren	B	2/78
Dent	A	1971	Morgan	F		Washington	F	
Douglas	F		New Madrid	A	1977	Wayne	F	
Dunklin	B	2/79	Newton	E	1917*	Webster	E	1904*
Franklin	D		Nodaway	D		Worth	A	1968
Gasconade	F		Oregon	F		Wright	B	7/80
Gentry	D		Osage	F				
Greene	C	6/78	Ozark	F				

*Out of print

Issued in furtherance of Cooperative Extension Work Acts of May 8 and June 30, 1914 in cooperation with the United States Department of Agriculture. Carl N. Scheneman, Vice President for Extension, Cooperative Extension Service, University of Missouri and Lincoln University, Columbia, Missouri 65201.

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