



Association of American
State Geologists



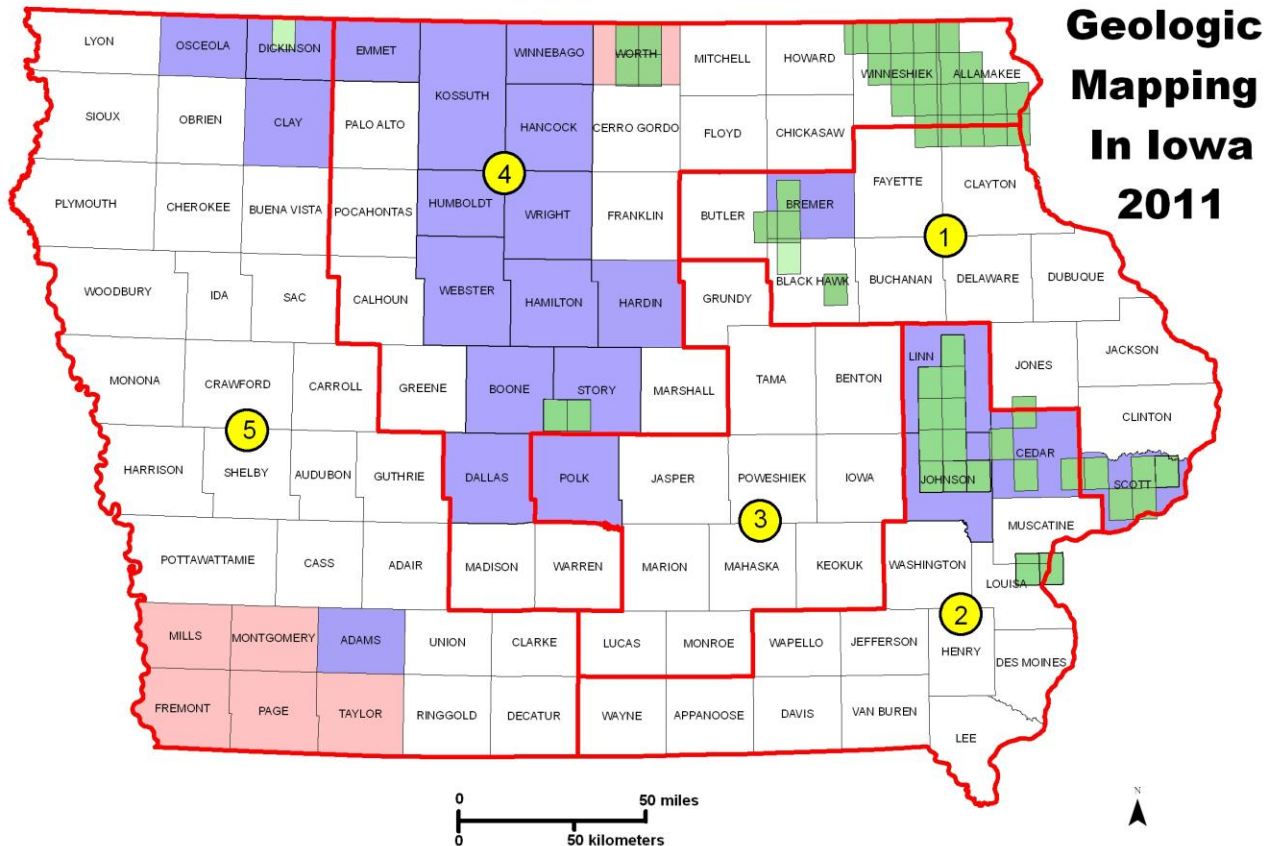
United States
Geological Survey



Iowa Geological and Water Survey

National Cooperative Geologic Mapping Program

STATEMAP Component: States compete for federal matching funds for geologic mapping



Geologic Mapping In Iowa 2011

STATEMAP Funding (FY1993 through FY2011)

- 5 Congressional District Numbers
- Congressional District Boundaries
- Completed 1:24,000 scale geologic maps
- In-progress 1:24,000 scale geologic maps
- Completed 1:100,000 scale geologic maps
- In progress 1:100,000 scale geologic maps
- Completed statewide regional bedrock geologic maps

Contact Information

Iowa Geological and Water Survey (319-335-1575)
State Geologist: Robert Libra
STATEMAP Coordinator: Deborah Quade
<http://www.igsb.uiowa.edu>

U.S.G.S. National Cooperative Geologic Mapping Program
Program Coordinator: Peter T. Lyttle (703-648-6943)
Associate Program Coordinators:
Douglas A. Howard (703-648-6978)
Linda J. Jacobsen (703-648-4335)
<http://ncgmp.usgs.gov>

SUMMARY OF STATEMAP GEOLOGIC MAPPING PROGRAM IN IOWA

Federal Fiscal Year	Geologic Mapping Project Title and Scale	State Dollars	Federal Dollars	Total Project Dollars
93	Surficial Geologic Maps of Letts and Blanchard 1:24,000 Quadrangles	\$9,000	\$9,000	\$18,000
94	Surficial Geologic Maps of Cedar Rapids North and Marion 1:24,000 Quadrangles and Bedrock Geologic Map of Linn County 1:100,000	\$40,000	\$39,095	\$79,095
95	Surficial Geologic Maps of Cedar Rapids South and Central City 1:24,000	\$30,090	\$30,000	\$60,090
96	Surficial Geologic Maps of Bertram 1:24,000 Quadrangle and Linn County 1:100,000; Digital Compilation Bedrock Geologic Map of Northwestern Iowa, 1:250,000	\$68,179	\$68,179	\$136,358
97	Digital Compilation Bedrock Geologic Map Northeastern Iowa, 1:250,000	\$52,800	\$52,800	\$105,600
98	Surficial Geologic Maps of Des Moines Lobe of Iowa: Kossuth, Winnebago, Hancock and Wright Counties 1:100,000	\$79,618	\$79,618	\$159,236
99	Surficial Geologic Map of Des Moines Lobe of Iowa: Hamilton and Webster Counties 1:100,000	\$60,720	\$60,720	\$121,440
00	Surficial Geologic Maps of Des Moines Lobe of Iowa: Boone and Story Counties 1:100,000. Surficial Geologic Maps of Huxley and Slater 1:24,000 Quadrangles. Digital Compilation Bedrock Geologic Map of North-Central Iowa, 1:250,000	\$96,121	\$96,120	\$192,241
01	Surficial Geologic Map of Des Moines Lobe of Iowa: Dallas and Humboldt Counties 1:100,000. Surficial Geologic Maps of Ely and Swisher 1:24,000 Quadrangles: Johnson County Developing Area Project. Digital Compilation Bedrock Geologic Map of South-Central Iowa, 1:250,000	\$163,750	\$163,750	\$327,500
02	Surficial Geologic Map of Des Moines Lobe of Iowa: Polk County 1:100,000. Surficial Geologic Maps of Tiffin and Iowa City West 1:24,000 Quadrangles: Johnson County Developing Area Project. Digital Compilation Bedrock Geologic Maps of Southwest and East-Central Iowa, 1:250,000.	\$188,090	\$188,090	\$376,180
03	Dickinson and Emmet Counties, 1:100,000. Iowa City East 1:24,000; Geologic Map of Johnson County, 1:100,000. Digital Compilation Bedrock Geologic Map of Southeast Iowa, 1:250,000. McCausland 1:24,000	\$192,829	\$192,829	\$385,658
04	Clay and Osceola Counties, 1:100,000. Surficial Geologic Maps of Dixon and Eldridge 1:24,000 Quadrangles in Scott County. Decorah 1:24,000	\$142,491	\$142,491	\$284,982
05	Surficial Geologic Map of Des Moines Lobe of Iowa: Hardin County; 1:100,000. Impaired Watersheds in Northeast Iowa: Surficial Geologic Maps of Bluffton and Freeport 1:24,000 Quadrangles; Bedrock Geologic Map of the Yellow River Watershed; 1:100,000 scale. Cooperative Mapping with NRCS: Surficial Geologic Maps of the Rochester and Bennett 1:24,000 Quadrangles.	\$187,167	\$187,167	\$374,334
06	Impaired Watersheds in Northeast Iowa: Surficial Geologic Maps of Burr Oak and Highlandville 1:24,000 Quadrangles. Cooperative Mapping with NRCS: Surficial Geologic Maps of the Cedar Bluff, Stanwood and Bremer 1:24,000 Quadrangles.	\$118,310	\$118,310	\$236,620
07	Impaired Watersheds in Northeast Iowa: Surficial and Bedrock Geologic Maps of Cresco NE, Dorchester and Ridgeway Quadrangles. Cooperative Mapping with NRCS in Cedar County Final Phase: Surficial and Bedrock Mapping 1:100,000 maps.	\$170,293	\$170,293	\$340,586
08	Developing Areas Mapping: Surficial and Bedrock Geologic Mapping of the Davenport West and Davenport East Quadrangles. Cooperative Mapping with NRCS in Bremer County Surficial and Bedrock Geologic Mapping of the Shell Rock Quadrangles and Bedrock Mapping of the Waverly Quadrangle. Digital Compilation Mapping of the Quaternary Geology of Iowa: Loess Thickness Map of Western Iowa (1:250,000)	\$196,292	\$196,292	\$392,584
09	Cooperative Mapping with NRCS in Bremer County Final Phase: Surficial and Bedrock Geologic Mapping of Bremer County 1:100,000 scale. Cooperative Mapping with NRCS in Worth County Surficial and Bedrock Geologic Mapping of the Fertile SE Quadrangles and Manly Quadrangles 1:24,000 scale.	\$169,108	\$169,108	\$338,216
10	Cooperative Mapping with NRCS Fertile NE and Northwood Quadrangles, 1:24,000. Final Phase: Surficial and Bedrock Geologic Mapping of Scott County, 1:100,000 scale. Surficial and Bedrock Mapping of the Gilbertville Quadrangle 1:24,000 scale. Quaternary Geology of Adams County, 1:100,000 scale.	\$196,232	\$196,232	\$392,464
11	Cooperative Mapping with NRCS, Final Phase: Surficial and Bedrock Geologic Mapping of Worth County, 1:100,000 scale. Surficial and Bedrock Mapping of the Cedar Falls Quadrangle 1:24,000 scale. Quaternary Geology of Montgomery County, 1:100,000 scale.	\$158,997	\$158,997	\$317,994
	TOTALS	\$2,320,087	\$2,319,091	\$4,442,946

November 2011

STATEMAP PROGRAM IN IOWA

The STATEMAP component of the National Cooperative Geologic Mapping Program (USGS) has enhanced the Iowa Geological Survey's (IGS) ability to produce geologic maps. Iowa's mapping program addresses priority state-wide issues with longer term goals in mind.

The Iowa STATEMAP program focus is on four key areas:

- 1) ***Developing Areas Mapping*** (urban areas and developing areas).
- 2) ***Cooperative Mapping with Natural Resources Conservation Service (NRCS) and the Iowa Cooperative Soil Survey*** Mapping (county scale) and Major Landform Resource Areas (MLRAs), regional scale mapping.
- 3) ***Impaired Watershed Mapping*** (mapping in vulnerable watersheds, karst, shallow bedrock and flood prone areas).
- 4) ***Digital Compilation Mapping***-(regional and state-wide scale bedrock and surficial geologic mapping projects).

The STATEMAP advisory panel, consisting of geologic map users provides recommendations on areas with environmental concerns related to groundwater quality and land-use planning issues. IGS and the advisory panel recognize the need for maps of varying scales to address the complex environmental issues facing urban and rural Iowans. Issues in developing urban areas focus on residential and commercial development along major transportation corridors, rapid subdivision expansion on the fringes of urban areas and related problems of siting septic systems, aggregate potential (identification and protection of resources), sensitive natural areas identification and water quality and quantity issues. In rural areas, issues are focused on the proper siting of animal confinement facilities, water quality, watershed management, nutrient management, wetland delineation and protection and aggregate potential mapping. Since 1993, the volume of statewide mapping projects completed by IGS has grown immensely from mapping two quadrangles with a federal contribution of \$9,000; to multi-year projects producing quadrangle-scale (1:24,000), county-scale (1:100,000) and regional-scale compilation mapping with a contribution of \$196,292 in federal dollars for 2008.

The Iowa Geological and Water Survey (IGWS) has recently embarked on a ten-year project to characterize and develop predictive models of the state's major aquifers. In the first phases, bedrock and surficial geologic map information has been invaluable in defining and modeling the Lower Dakota Aquifer in Northwest Iowa and the Cambrian-Ordovician Aquifer (Jordan Aquifer) in Central and Eastern Iowa. Such models and information are essential for addressing concerns with water conservation, well interference, water-supply and well head protection issues. It is anticipated that as this project progresses, other major aquifers across the state will be mapped utilizing geologic information collected and entered into databases as part of the STATEMAP program.