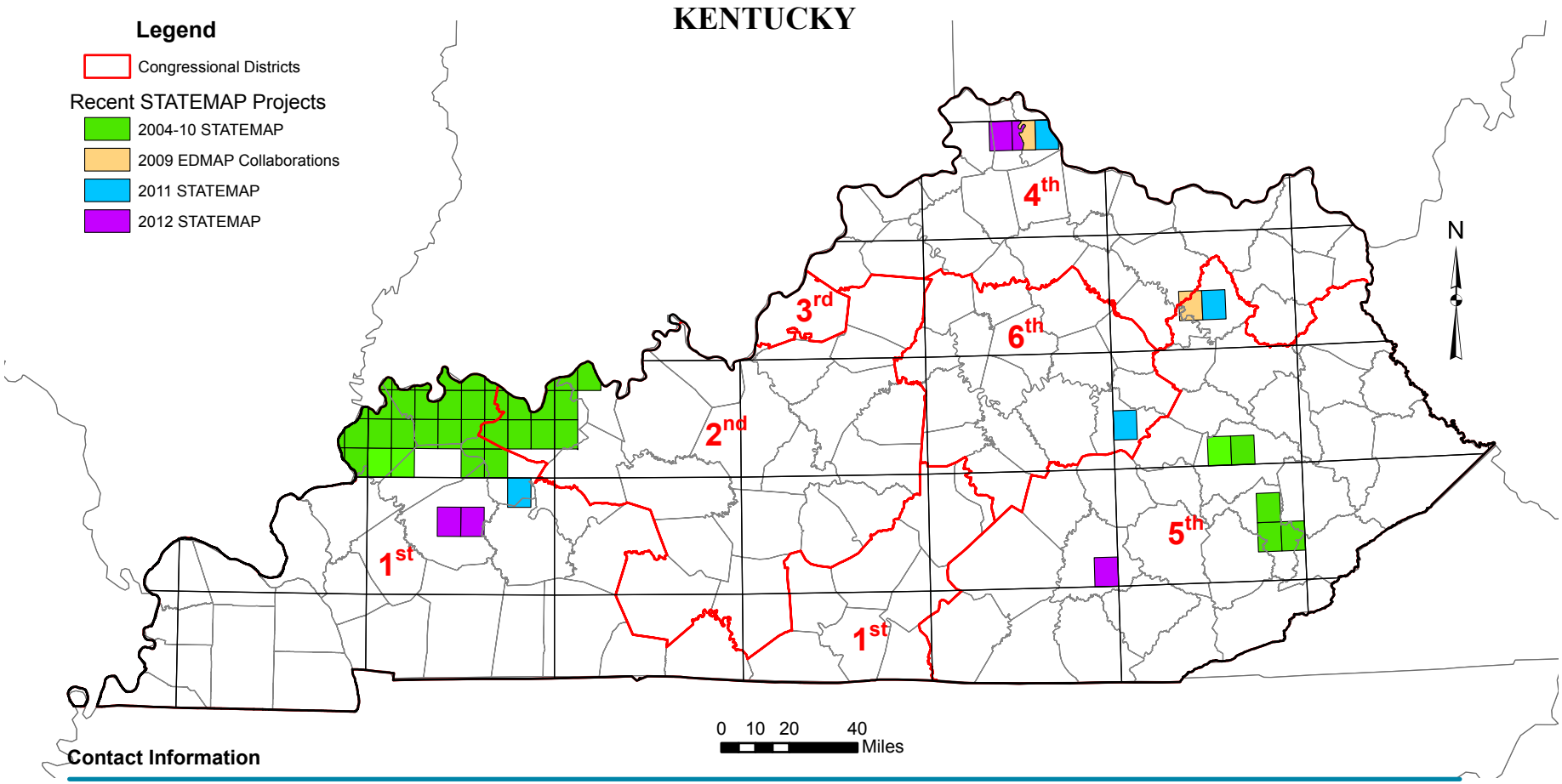
National Cooperative Geologic Mapping Program

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



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Year	Project	Quadrangles Mapped	State Dollars	Federal Dollars	Total
	USGS-KGS Cooperative Geologic Mapping				
1960-1978	USGS-KGS Kentucky Areal Geologic Mapping Program	707 total (mapped and published)	$10,025,800[1]	$10,901,700[1]	$20,927,500[1]
	STATEMAP Projects				
1996-2006	Digital Geologic Mapping Program	707 total (digitized and compiled)	$1,827,837	$1,826,354	$3,654,191
2004-11	New Surficial Geologic Mapping[2]	45	$1,830,343	$1,100,288[2]	$2,930,631[2]
2011-12	New Surficial Geologic Mapping (active)	4.5 (in progress)	$216,399	$216,363	$432,761

[1] in 1978 dollars, not adjusted for inflation
[2] represents share of STATEMAP funding not dedicated to Digital Geologic Mapping Program

USGS-KGS Cooperative Geologic Mapping (1960-78)
Kentucky has strong legacy of geologic mapping. During 1960 to 1978, the joint USGS-KGS Areal Geologic Mapping Program produced complete geologic mapping coverage of Kentucky at a scale of 1:24,000 (1 inch on the map corresponds to 2,000 feet on the ground). A total of 707 geologic quadrangles were mapped and published by this program, making Kentucky the first state of its size to be completely mapped at this scale. The results of this detailed mapping, most but not all of which focused on bedrock geology, produced tremendous advances in the knowledge of Kentucky stratigraphy, paleontology, energy resources, and economic geology.

STATEMAP Projects (1996-present)
Digital Geologic Mapping Program
With the support of the STATEMAP component of the USGS National Cooperative Geologic Mapping Program, Kentucky accomplished another major milestone in geologic mapping between 1996 and 2004 by converting all 707 geologic quadrangles into digital format. These digital data are being compiled into 1:100,000 published geologic quadrangles and are available in GIS-compatible formats for individual end-users. The KGS has also developed an extensive online digital Geoportal, as well as an integrated Geologic Map Information Service, which provide 24/7 Internet access to KGS geologic data, including digital geologic maps, coal, water, oil and gas, land-use, and hazards information. Visit http://kgsweb.uky.edu/main.asp to explore these online data resources. The availability of digital geologic maps in Kentucky will be of great benefit for years to come for economic development and exploration of natural resources, environmental and groundwater protection and hazards mitigation.

New Surficial Geologic Mapping
In 2004, recognizing a need for better delineation of unconsolidated geologic materials and sedimentary deposits in the Commonwealth, KGS began a new field-based Quaternary and surficial geologic mapping program following the recommendations of the Kentucky State Mapping Advisory Committee. The results of these new Quaternary geologic maps are being applied to seismic hazard analyses, landslide studies, engineering geology, aquifer delineation, and investigations of landscape evolution. As of June 2011, thirty-six 7.5-minute quadrangles have been mapped in the Ohio River Valley near Owensboro and Henderson, and five quadrangles have been mapped in eastern Kentucky. In 2008, KGS began collaborative projects with Northern Kentucky University and Morehead State University which each received EDMAP grants to pursue related Quaternary geologic mapping. In 2009, the USGS published a surficial geologic map of the Evansville-Henderson area along the Ohio River, which resulted from collaborative STATEMAP and FEDMAP efforts.

Kentucky Geological Survey, June 2011