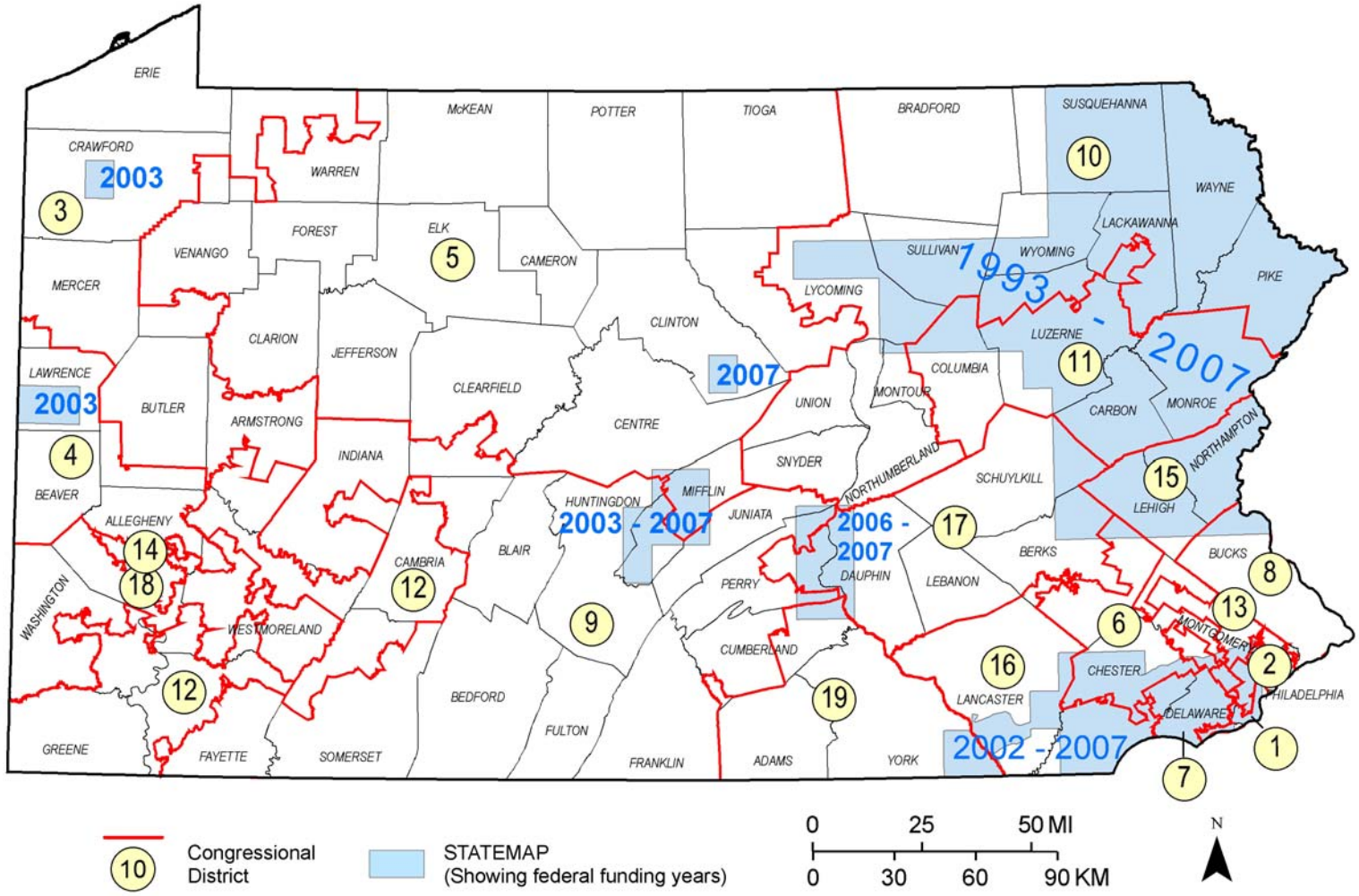
Association of American State Geologists

United States Geological Survey

National Cooperative Geologic Mapping Program

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



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SUMMARY OF STATEMAP
GEOLOGIC MAPPING PROGRAM IN PENNSYLVANIA

Federal Fiscal Year	Project Title	State Dollars	Federal Dollars	Total Project Dollars
93	Surficial Geology of the Allentown 30 × 60 quadrangle	$40,182	$40,000	$80,182
94	Surficial Geology of the Allentown 30 × 60 quadrangle	$48,556	$40,000	$88,556
95	Surficial Geology of the Allentown 30 × 60 quadrangle	$56,974	$34,423	$91,397
96	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$80,581	$75,489	$156,070
97	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$132,616	$132,616	$265,232
98	Bedrock and Surficial Geology of the Scranton 30 × 60 quadrangle	$127,728	$122,458	$250,186
99	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$77,094	$75,000	$152,094
00	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$108,644	$108,415	$217,059
01	Bedrock and Surficial Geology of the Honesdale 30 × 60 quadrangle	$131,717	$131,444	$263,161
02	Bedrock Geology of Selected Quadrangles of Southeastern Pa.	$41,199	$40,339	$81,538
03	Surficial Geology of Eastern Pennsylvania; Bedrock Geology of the Ridge and Valley Province; Bedrock Geology of the Piedmont Province.	$115,605	$109,251	$224,856
04		$151,048	$108,928	$259,976
05		$89,546	$60,333	$149,879
06		$165,496	$84,325	$249,821
07		$164,232	$143,173	$306,405
	TOTALS	$1,531,218	$1,306,194	$2,837,412

The Pennsylvania Geological Survey is pursuing NCGMP mapping projects in several regions of the state where population pressure is increasing and up-to-date or adequate geologic maps are lacking. The maps provide detailed basic information that is critical for local engineering studies, groundwater resource investigations, geologic hazard assessments, and effective land-use planning.

In northeastern Pennsylvania, unconsolidated glacial deposits deeply buried large areas of the layered sandstone bedrock. Through NCGMP, nearly 41 quadrangle reconnaissance maps (scale 1:24,000) of the surficial geology have been produced. An additional 55 quadrangle maps are being digitized from paper copies for a total of 96 quadrangle maps. Each map is accompanied by depth-to-bedrock data that are particularly useful in resource assessments and engineering studies. Four quadrangles from western Pennsylvania were also included for surficial mapping of glacial deposits.

In central Pennsylvania, completed and proposed bedrock mapping of seven quadrangles in the Ridge and Valley physiographic province has revealed additional structural and stratigraphic complexities in these rocks. Recently, exposure of acid rock has caused major problems for road construction projects in the central region of the state. Detailed geologic mapping is crucial for both prevention and mitigation of acid drainage. In a related project, mapping of parts of 7 quadrangles is ongoing to provide base data for a new balanced cross section through central Pennsylvania.

In southeastern Pennsylvania, another area of the state where geologic maps are inadequate and population pressure is high, bedrock mapping is completed or proposed for 30 quadrangles in the geologically complex sedimentary, metamorphic, and igneous terranes of the Piedmont province. NCGMP mapping is providing basic data for use in groundwater investigations, engineering studies, geologic hazard assessments, and land-use planning, as well as contributing to significant advances in our understanding of the geologic and tectonic history of the region.

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