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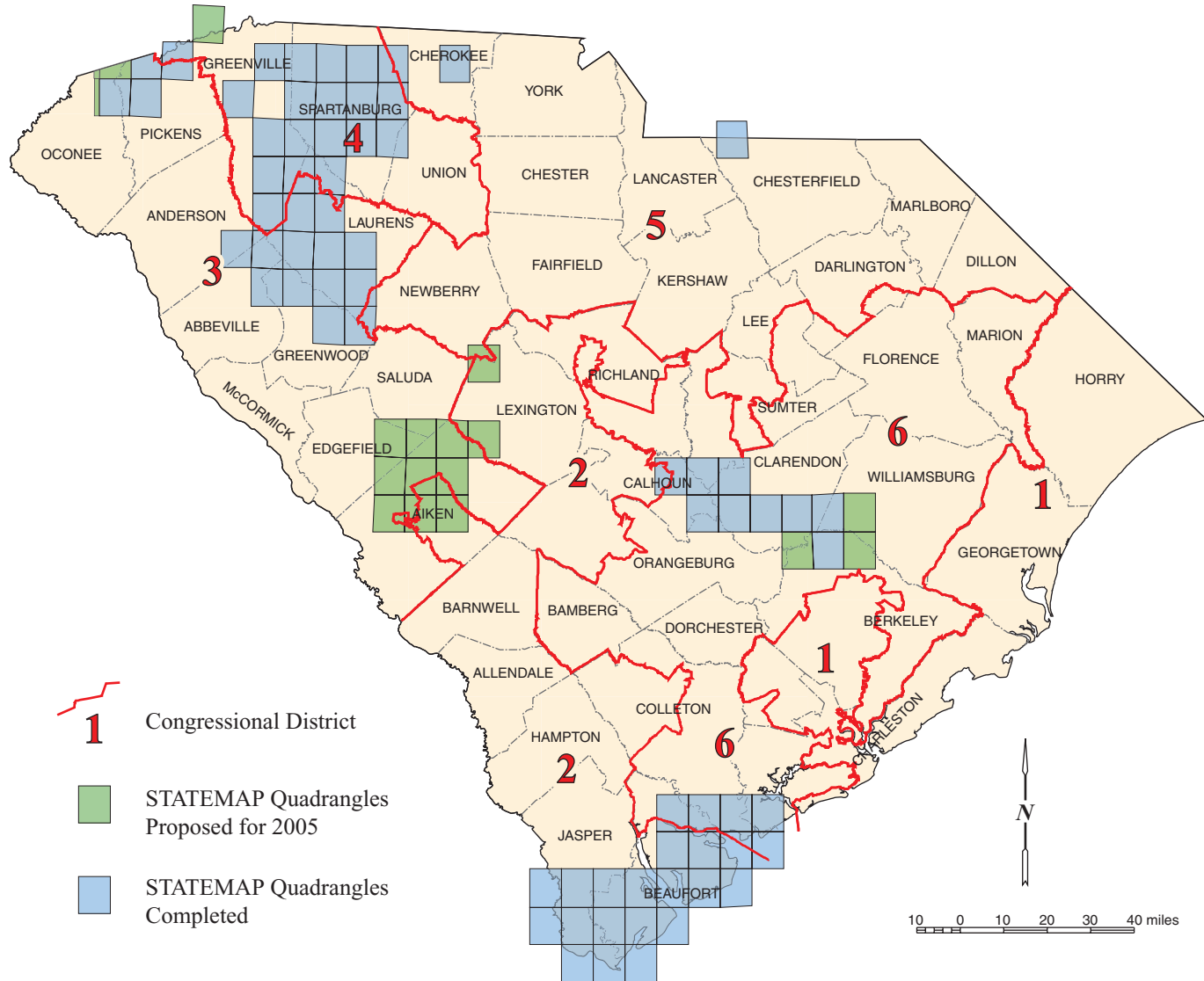


S. C. Department of Natural Resources

National Cooperative Geologic Mapping Program

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

South Carolina



Contact Information

South Carolina Geological Survey
 State Geologist and Chief:
 C. W. Clendenin, Jr. (803/896-7708)
 STATEMAP Contact:
 C. W. Clendenin, Jr. (803/896-7708)
<http://water.dnr.state.sc.us/geology/geohome.htm>

U.S.G.S. Geologic Mapping Program Office
 Program Coordinator:
 Peter T. Lyttle (703/648-6909)
 Associate Program Coordinators:
 Randall C. Orndorff (703/648-4316)
 Laurel M. Bybell (703/648-5281)
<http://ncgmp.usgs.gov/>

SUMMARY OF THE STATEMAP GEOLOGIC MAPPING COMPONENT IN SOUTH CAROLINA

Funds Matched by SCGS since 1993	\$1,407,823.00
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By placing emphasis on the socioeconomic needs for new geologic information, the STATEMAP component of the National Cooperative Mapping Program complements the legislatively mandated duties of the South Carolina Department of Natural Resources, Geological Survey (SCGS). Those duties include geologic reconnaissance, mapping, and gathering of surface and subsurface data. The information gathered by primary duties is used in other legislatively defined duties involving advice and assistance to other State and local government agencies engaged in environmental protection, regional planning, effective land use, and economic development.

The SCGS has participated in STATEMAP since 1993. Funding from STATEMAP awards allows Federal dollars to be used by the SCGS to address socioeconomic needs for geologic information on the county and local level. Original STATEMAP projects addressed identification and economic development of mineral resources in the Piedmont. In 1995 the priorities of the SCGS were changed; and more emphasis was placed on geologic information addressing effective land-use planning, environmental protection, and geohazards. Expansion of STATEMAP mapping into the Coastal Plain also was part of that change in emphasis. Subsequent STATEMAP-funded mapping in 1996 and 1997 in the Coastal Plain produced the first 1:24,000-scale maps of the area around the Pinewood toxic-waste dump on the north shore of Lake Marion. At this same time, mapping in the Piedmont was redirected to address the needs of land-use planning adjacent to the I-85 growth corridor in Greenville and Spartanburg. In 2002, structural information generated by part of that mapping was applied to understanding the controls of uranium-contaminated ground water in the Simpsonville-Fountain Inn area. This information assisted the South Carolina Department of Health and Environmental Control in more detailed studies of water quality. At the 1997 STATEMAP Advisory Committee meeting, a committee member recommended a shift in SCGS mapping priorities to the south coast to address the impact of rapid growth on the sensitive marsh ecosystem. In 1998, STATEMAP priorities were modified to accommodate that recommendation, and a 5-year plan to map the south coast from Edisto Island to the Savannah River was developed. New 1:24,000-scale maps in an electronic format now are available for the south coast.

Prior to 2002, land-use planning and environmental protection were given priority in STATEMAP projects. Earthquake awareness and the impact that such a catastrophe would have on critical infrastructure were basically left to the South Carolina Emergency Preparedness Division. After splay faults related to the Eastern Piedmont fault system were recognized underlying the high-risk, earthen Lake Murray dam and FERC demanded a \$250-million-plus retrofitting project, priorities began to be reevaluated. At the 2003 STATEMAP Advisory Committee meeting, priorities were changed to emphasize the protection of infrastructure. New mapping will focus on known fault zones in the Piedmont and Coastal Plain that could affect the Greenville, Columbia, or Charleston metropolitan areas. The geology of the Savannah River Site also will be digitized as part of this new priority. New detailed digital maps of site geology are considered a subject of homeland security.

The benefits of STATEMAP to South Carolina exist on several levels. The primary benefit is the development of new detailed geologic maps. The new map information can be used by many diverse interests or for specific purposes without significantly diminishing the value received by all. It should be understood that there is a defined need for a government-based mapping program as it affects the quality of life of individual citizens, as well as the State's economic growth, emergency response, natural-resource management, and environmental monitoring. What organization, other than a government agency, could collect, analyze, update, revise, and maintain the information necessary to produce the maps, while not trying to develop a profit? Secondly, STATEMAP has enabled the SCGS to develop a competent GIS product refinement program. This program is now producing and distributing a new generation of high-quality digital maps with detailed explanations and cross sections. It is in the best interest of South Carolina to be involved in STATEMAP because it makes geologic map information widely available at low cost and because such information maximizes the benefits and opportunities for all citizens and businesses.