

**STATUS OF STATEMAP GEOLOGIC MAPPING IN FLORIDA**

| <b>Fed. FY</b> | <b>Project Title and Scale</b>  | <b>Federal Dollars</b> | <b>State Dollars</b> | <b>Total Dollars</b> |
|----------------|---|------------------------|----------------------|----------------------|
| 1994           | Geologic map of the eastern portion of the USGS 1:100,000 scale Homestead quadrangle  | \$30,000               | \$30,000             | \$60,000             |
| 1995           | Geologic map of the western portion of the USGS 1:100,000 scale Homestead quadrangle  | \$30,000               | \$30,000             | \$60,000             |
| 1996           | Geologic map of the western portion of the USGS 1:100,000 scale Sarasota quadrangle   | \$70,000               | \$70,000             | \$140,000            |
| 1997           | Geologic map of the eastern portion of the USGS 1:100,000 scale Sarasota quadrangle and the western portion of the 1:100,000 scale Arcadia quadrangle | \$95,547               | \$95,547             | \$191,094            |
| 1998           | Geologic map of the eastern portion of the USGS 1:100,000 scale Arcadia quadrangle  | \$104,414              | \$104,414            | \$208,828            |
| 1999           | Geologic map of the northern portion of the USGS 1:100,000 scale Crestview quadrangle   | \$105,000              | \$105,000            | \$210,000            |
| 2000           | Geologic map of the southern portion of the USGS 1:100,000 scale Crestview quadrangle   | \$106,021              | \$106,021            | \$212,042            |
| 2001           | Geologic map of the western portion of the USGS 1:100,000 scale Marianna quadrangle   | \$120,990              | \$120,990            | \$241,980            |
| 2002           | Geologic map of the eastern portion of the USGS 1:100,000 scale Marianna quadrangle   | \$134,606              | \$134,606            | \$269,212            |
| 2003           | Geologic map of the western portion of the USGS 1:100,000 scale Gainesville quadrangle  | \$125,761              | \$125,761            | \$251,522            |
| 2004           | Geologic map of the eastern portion of the USGS 1:100,000 scale Gainesville quadrangle  | \$119,027              | \$119,027            | \$238,054            |
| 2005           | Geologic map of the western portion of the USGS 1:100,000 scale Lake City quadrangle  | \$108,780              | \$108,780            | \$217,560            |
| 2006           | Geologic map of the eastern portion of the USGS 1:100,000 scale Perry quadrangle  | \$110,835              | \$110,835            | \$221,670            |
| 2007           | Geologic map of the western portion of the USGS 30 x 60 minute Perry quadrangle   | \$107,689              | \$107,689            | \$215,378            |
| 2008           | Geologic map of the eastern portion of the USGS 30 x 60 minute Ocala quadrangle   | \$109,044              | \$109,044            | \$218,088            |
| 2009           | Geologic map of the western portion of the USGS 30 x 60 minute Ocala quadrangle   | \$107,826              | \$107,826            | \$215,652            |
|                | <b>TOTALS</b>   | <b>\$1,477,714</b>     | <b>\$1,477,714</b>   | <b>\$2,955,428</b>   |

The Florida Geological Survey (FGS) receives federal funding from the STATEMAP Program, a component of the National Cooperative Geologic Mapping Program, for the purpose of conducting detailed geologic mapping in the state. For the 2009-2010 STATEMAP project, the FGS has been funded to map the western portion of the Ocala 30 x 60 minute quadrangle.

Like much of Florida, the area in and around the Ocala quadrangle is experiencing degradation of groundwater quality as nearby cities go through urban sprawl. As populations of the cities spread out, development pressure in the region to have many of these areas re-zoned from agricultural use to higher-density urban use is increasing. The lack of detailed geologic mapping in the area poses a problem for planning agencies and resource management and protection. In nearby areas, these types of detailed geologic maps have often been used by a variety of agencies and companies to help solve problems in the state.

For example, Advanced Geospatial, Inc. (AGI), a private company working on Floridan Aquifer Vulnerability Assessment (FAVA) models for various state and local government clients, has utilized data from several FGS STATEMAP products in their modeling processes. Data pertaining to control points, new cores drilled for the various projects, and field samples has been made available to the modelers over the last several years' worth of STATEMAP mapping in Florida. AGI personnel have used this data to further refine their models and fill in data gaps in the various study areas.

In another case, the Columbia County Commission recently sought to expand its urban development area into rural areas to accommodate growth in the county. The FGS was asked by the Florida Department of Community Affairs (DCA), the state land planning agency, to provide geologic maps in order to help determine if the areas around the city were environmentally suitable for increased urban development. The Comprehensive Growth Management Plan allows a housing density of one unit per five acres, where the outlying areas utilize on-site septic systems for wastewater treatment. Pressure from development is pushing Columbia County to examine the possibility of expanding its urban development area past its current boundaries.

The primary drinking water aquifer in the region, the Floridan Aquifer System (FAS), is highly vulnerable to infiltration by polluted surface-water runoff in parts of the study area due to the presence of karst (mainly sinkholes) and "swallets" (stream-to-sink features). Mapping under the STATEMAP program will aid in locating and documenting the number and size of such features.

One additional factor in the selection of the Ocala quadrangle for mapping is the need for locating additional mineral resources in order to sustain future growth in the state. Florida is currently utilizing approximately 143 million tons of aggregate material per year, of which 55 million tons come from the "Lake Belt" region in south Florida. In fact, five of the top ten production mines in the country are in this region. A federal lawsuit recently threatened to shut down the "Lake Belt" to mining due to environmental concerns. If this were to occur, the impact on the State's economy would be rapidly felt as aggregate prices soared. Preliminary studies indicate that the proposed study area may have significant reserves of limestone suitable for aggregate material. The detailed geologic mapping resulting from this project, combined with ongoing private efforts, will help delineate these reserves and the potential of this area to become a source for aggregate material for future state needs over the coming decades.