



# GeoSpatial Advisor

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## Calendar of events: May 2005

May 2-4: AWRA 1<sup>st</sup> Annual Int'l Conference on Restoring the Everglades, Palm Beach Gardens, FL

May 8: Mother's Day

May 11: Mid-Atlantic Chapter of URISA Spring Meeting: Moving to Higher Ground-FEMA's GIS-based Program to Update Flood Hazard Maps, Bordentown, NJ

May 11-13, 2005: Solving Water Pollution Problems in the Wakulla Springshed of North Florida, Hydrogeology Consortium meeting, Tallahassee, FL

May 13-14: AWRA Florida Section Meeting, Lakeland, FL

May 24-27: Florida Joint GIS & Mapping Conference, Sarasota, FL

## Florida Geological Survey Posts FAVA Project Results Online

Last month, the Florida Geological Survey (FGS) completed and delivered the Florida Aquifer Vulnerability Assessment (FAVA) report to the Florida Department of Environmental Protection (FDEP) available [online at FDEP's website](#). If you visit the site, don't forget to download the three plates which summarize the project results and present the final vulnerability maps in a large map format. FGS is currently making final formatting adjustments in preparation to publish this document in paper format as an FGS Bulletin due out this summer. The results of this project are intended to replace the DRASTIC model which has been used in the past to implement ground-water protection by FDEP. The FAVA results are superior to the DRASTIC method as they are entirely GIS based, allow for easy incorporation of new data as it becomes available, and take into consideration Florida's karst features – which not only shape the topography but are a dominant hydrogeologic feature affecting Florida's ground-water system. FAVA maps are displayed in classes of relative vulnerability (one area more vulnerable than another). The final output consists of GIS grid-based probability maps that can be used by environmental, regulatory and planning professionals to facilitate the protection of ground-water resources.

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## Benefits of Local-Scale Aquifer Vulnerability Assessment

The FDEP's FAVA project output maps on a statewide scale provide an excellent means by which to implement protection of Florida's unique hydrogeologic system, however, the use of FAVA statewide results on a local scale can be somewhat limited. The application of the FAVA methodology on a local scale greatly increases this tool's utility in protecting ground-water resources and identifying areas more suited for particular types of growth and development. Though similar input data coverages are used in both the FAVA project and in local scale analyses, the respective results clearly confirm that local scale assessments produce more detailed and useful maps when compared to the statewide results.

Advanced GeoSpatial Inc. (AGI) specializes in innovative application of spatial analysis through GIS to develop solutions to a variety of water-resource, infrastructure, and hydrogeologic applications. Aquifer vulnerability assessment is one of our primary services and provides a

## Category of Links

*In case you haven't tried the beta Google maps site, check it out here:*

<http://maps.google.com/>

*Visit the Seven Hills Regional Users Group of GIS based in Tallahassee, FL*

<http://www.shrug-gis.info/>

*Florida Geographic Data Library*

<http://www.fgdl.org/>

## Contact Us

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practical and useful approach to ground-water protection. Our professionals are particularly qualified to complete local vulnerability assessments as a result of our experience in the design of the FDEP's Florida Aquifer Vulnerability Assessment.

Aquifers are without a doubt the most important source of drinking water in the state of Florida. All aquifers are vulnerable to contamination to some degree and different areas require different levels of protection. Some factors affecting aquifer vulnerability include soil (permeability or drainage), aquifer confinement (overburden or Intermediate Aquifer System thickness), presence of karst features (sinkholes or depressions), aquifer water levels, and geology.

AGI implements "weights of evidence" to complete aquifer vulnerability assessments. This method is superior to others because it is data-driven, not expert-driven, which reduces inherent bias associated with expert opinion. Weights of evidence, when applied to aquifer vulnerability, relies on the combination of two input categories: data about the natural hydrogeologic system, and points of known occurrence, like water quality data from wells. More information describing the weights of evidence methodology as applied to aquifer vulnerability is [available here](#).

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## Tips and Tricks

Digital Orthographic Quarter Quadrangle's for the State of Florida from 2004 are now available at [www.labins.org](http://www.labins.org). Orthophotos are very useful for enhancing site maps, modeling results, and making excellent base maps onto which other map or data layers may be overlain. Orthophotos are superior to aerial photography because traditionally, aerial photographs have image displacements which are the result of camera angle and local topographic features. Aerial photos do not contain uniform scales and it's



not possible to use them as a map since distances are meaningless on an aerial photo. On the other hand, DOQQs are aerial photographs which have been corrected by removing the effects of camera angle and topographic changes through a rectification process. The resulting DOQQ is now usable as a stand-alone map or in many GIS applications. Other data layers such as parcel data, flood zone information, aquifer extents, roadways, and a variety of other coverages can be added to

produce highly usable and information-rich maps.

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## New Office Location

Though all our contact information remains the same, AGI has relocated to a new office space within the same building. American Classifieds recently purchased the building on Monticello Drive and is in the process of remodeling the building. As part of the remodeling, a new, separate office space was constructed for AGI. If you visit, we now have our own separate entrance located in the back of the building facing the parking lot. Pull around and stop in anytime.