Greenwood County Wins 2021 J. Mitchell Graham Memorial Award

For Developing and Implementing a Soil Class Application

By W. Stuart Morgan III

Greenwood County won SCAC's prestigious 2021 J. Mitchell Graham Memorial Award for developing and implementing a Soil Class Application for the Greenwood County Assessor's Office.
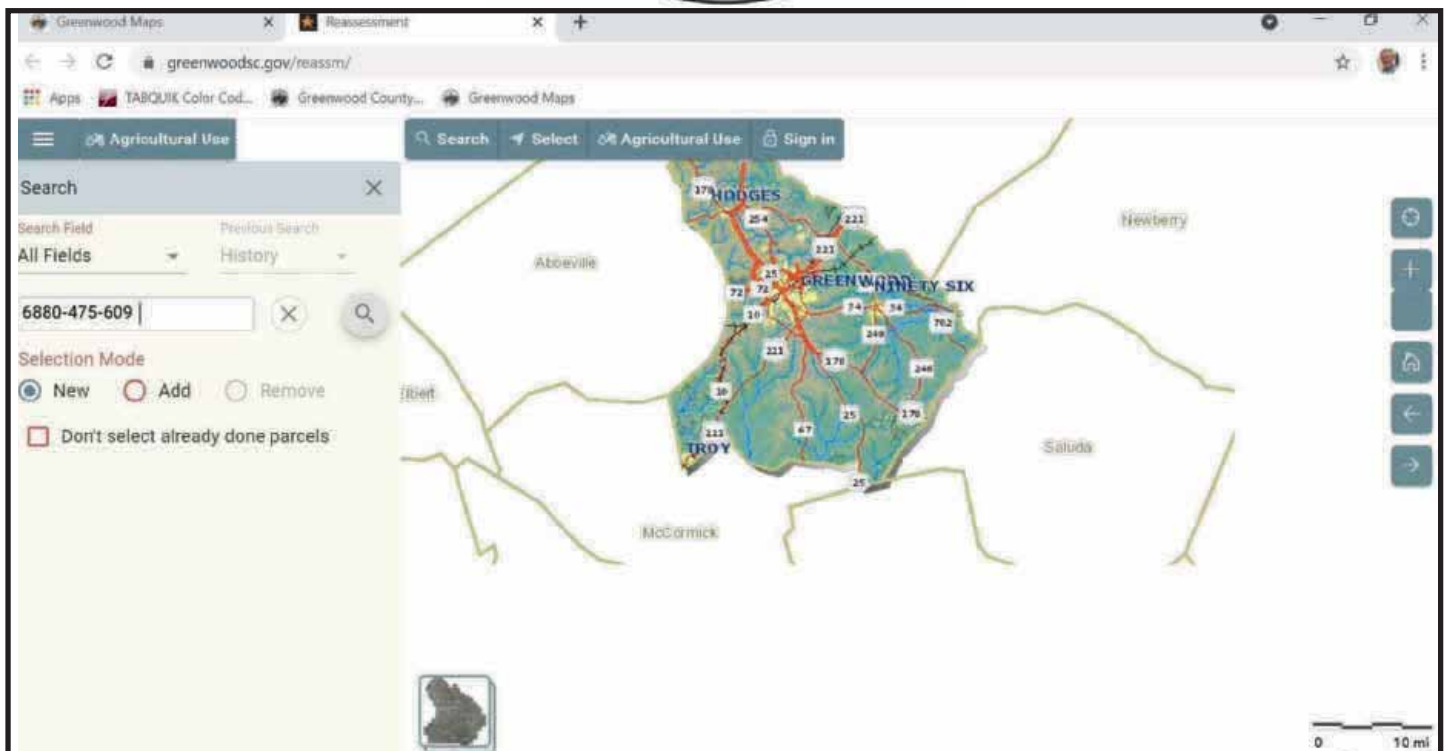
The new application addresses previous issues that the Assessor's Office faced when trying to accurately identify soil classifications on property designated for agricultural use. The application has already proven to be particularly helpful in Greenwood County where most of the acreage is agricultural, and much of it is designated for agricultural use.

"Each acre or portion of an acre has a value per acre that must be calculated, based on values established by the state legislature, and the values change depending on soil class and type," explained William E. Tomes, Joseph P. Riley Jr. Center for Livable Communities, College of Charleston, who headed the three-judge panel evaluating SCAC's 2021 J. Mitchell Graham Memorial Award Competition. "The prior method of determining soil class had multiple steps involving both appraisers and administrative assistants, using a combination of automated and manual processes. Through a collaborative effort of the county's GIS and Assessor's departments, a component of an in-house computer assisted mass appraisal software application was developed to quickly and accurately compute soil classification data of agricultural properties using GIS layers."

Many other counties contract with software vendors to use third-party Computer Assisted Mass Appraisal (CAMA) Software that might include similar soil classification applications as components.

Screenshots (above and on the next page) show GIS layers of soil classification data provided by Greenwood County's Soil Class Application.

Panel 1:

Search

Search Results (1 Parcels)

✕ Clear

Property Report Sales History Tax History
Building Permits   Tax Estimator

Parcel ID	6880-475-609
Property Address	Martin Town Rd
Owner Name	
Mail Address	
City State Zip	
Purchase Date	
Deed	
Plat	
FEMA LOMA	No
Total Tax Value	$293,500
Total Cap Value	$337,500
Total Market Value	$293,500

Search Select Agricultural Use Sign in

Panel 2:

Search Results

Agricultural Use

⊞ Timber ⛏ Crop ✕ Clear

Click a parcel on the map to define ag use area

☑ Select entire parcel   Clear All

☐ 6% tax (10 or more owners)

Save

Search Select Agricultural Use Sign in

Panel 3:

Search Results

Agricultural Use

⊞ Timber ⛏ Crop ✕ Clear

Click a parcel on the map to define ag use area

☑ Select entire parcel   Clear All

☐ 6% tax (10 or more owners)

0.86 acres of Ca
111.82 acres of GaC
73.49 acres of GaB
47.45 acres of HrB
29.85 acres of GaB
18.04 acres of GaB
5.04 acres of GaB
3.3 acres of HrC
2.16 acres of EnC
1.49 acres of EnB

0.86 acres of 2 Timber at $192
288.99 acres of 3 Timber at $141
3.65 acres of 4 Timber at $102

293.5 Acres Ag Use: 41,285

294.23 Timber

Search Select Agricultural Use Sign in

But Greenwood County's assessor and IT director partnered over a 10-month period during 2019/2020 to design and create a unique Soil Class Application. The Assessor's Office then began using the application during the spring of 2020 for all agricultural exemption requests. Created entirely in-house without help from outside agencies or organizations, the application allows one person in the Assessor's Office to calculate the value of property per acre, and thus, calculate the agricultural use tax based on soil classifications within one hour instead of up to two days as required when the previous manual process was used.

"This project to create a Soil Class Application came out of a need," said V. Lynn Hammett, assessor/commercial appraiser, Greenwood County Assessor's Office. "Because the previous process was complicated and lengthy, we asked our county's IT Department to simplify the process so we could use technology in a more efficient way. The Soil Class Application is just one component of a larger project to create a computer-aided mass appraisal program that we want to implement for the next reassessment in 2025."

More than 75 percent of the acreage in Greenwood County is agricultural, and more than 4,800 parcels are designated for agricultural use. Multiple soil classes are typical on large tracts that exist in the county, and each soil class has an acreage amount that must be identified. Each soil class must also be classified as "crop" or "timber."

This explains why the county's new Soil Class Application is so significant. The county's GIS Department created the application, which eliminates the multiple steps that appraisers and administrative assistants in the Assessor's Office previously had to take to calculate soil classes. The application allows the county's Assessor's Office to use soils classification polygons, and whenever necessary, manually-drawn polygons, that can be overlaid on layers to identify soil classes and the amount of acreage in each class, and calculate agricultural use tax areas.

Creating the Soil Class Application was a challenge, according to Hammett, because the expertise of the IT Department and Assessor's Office had to be combined to create and design the new application. The IT Department's programmer had to understand the process that staff members of the Assessor's Office were required to follow, and the math they were required to use to calculate soil classes or valuations. Keith Banks, Deputy Assessor, collaborated with the IT Department's programmers on behalf of the Assessor's Office to produce the Soil Class Application.

"We met often, asked questions, defined and updated processes, and conducted tests," Hammett said. "We learned from a good bit of trial and error when 'bugs' and discrepancies were discovered, and then adjusted the Soil Class Application prior to implementing it."

Greenwood County's IT Department and Assessor's Office created the Soil Class Application that the county needed despite the challenge, and won last year's J. Mitchell Graham Memorial Award for the project to create the application.

"Taxpayers benefit from the consistency and fairness of our county's new Soil Class Application's calculations," Hammett said, "because, in a nutshell, using the application reduces inconsistencies due to human error."

Brad Barnell, IT director for Greenwood County GIS, said he

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appreciated the statewide recognition that the county's Soil Class Application project has received, but it was "just icing on the cake" to win SCAC's J. Mitchell Graham Memorial Award last year.

"The previous process of calculating Greenwood County's agricultural use tax was time consuming, but new geographic information technology made it possible for the county's GIS Department to efficiently program the Soil Class Application for the Assessor's Office," he added. "The county's new application benefits county residents because the automated process ensures that agricultural properties are not taxed disproportionately as compared to residential and other classifications of real property. Using software to compute the tax value of property instead of manually calculating the value also greatly reduces the chance for errors and improves the fairness of the tax that's assessed."

Hammett admitted she was unaware of SCAC's J. Mitchell Graham Memorial Award when she was hired as a commercial appraiser for Geenwood County in 2018. However, someone told her about the award at a staff meeting shortly after she was hired.

Hammett then met with Barnell, and they agreed to meet with Toby Chappell, the county manager, to explain how the county's new Soil Class Application worked. Chappell liked the application, and encouraged them to submit the new Soil Class Application project as an entry at SCAC's 2021 Memorial Awards Competition and COVID-19 Response and Resiliency Showcase, held on June 8 at S.C. Educational Television in Columbia.

The rest is history.

Greenwood County won its fourth J. Mitchell Graham Memorial Award in 2021! The county previously won the award 1985, 1991 and 2007.

"Sometimes we don't realize how significant our work is until someone recognizes our achievement," Hammett said. "Our county's IT director, Brad Barnell, and deputy assessor, Keith Banks, and our county's prior assessor, Joseph Richey, who put this project in motion, deserve all the accolades for what they accomplished on behalf of Greenwood County and its taxpayers."