

# The Coastal Plainer

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Http://www.mo15.nrcs.usda.gov/

## Message from the MO–Leader’s Desk

By Charles Love, MO–15 Team Leader

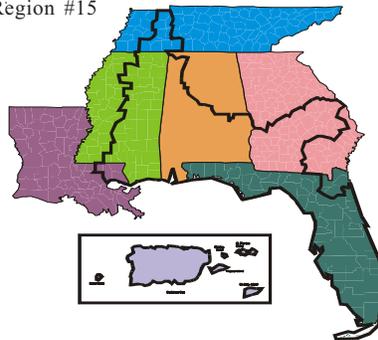
Hello fellow soil scientists and cooperators.

Recently I attended the Southern Region Cooperative Soil Survey Conference at Oklahoma City, Oklahoma. A lot of good information was provided at this conference.

Mike Golden, director of the Soil Survey Division, gave us an overview of the National Soil Survey Program. He pointed out that Chief Knight has approved and signed the National Soil Survey Program Restructuring Plan. Mike refers to our restructuring efforts as the “New Soil Survey Program.” Nationally, this restructuring will result in the establishment of about 143 MLRA Soil Survey Offices (MLRA–SSOs) by 2009. These offices will conduct soil survey activities throughout large geographic work areas. These offices will have soil scientists at various skill levels and a variety of support team members, including GIS specialists.

Our first task under the plan is to complete the initial soil survey across the country by 2009. Nationally, about 61

MLRA Soil Survey Region #15



million acres in 17 states are left to be mapped. In MO–15, about 3.3 million acres are left. We are planning to deploy our soil scientists to complete this workload by 2009.

Dr. Larry West, University of Georgia, and Dennis Lytle, NRCS national MLRA coordinator, co-chaired an ad hoc committee on MLRA Soil Surveys. The committee was given the charge of identifying methods to strengthen and improve the roles and decision making opportunities for cooperators within the new soil survey structure. The consensus of the committee members was that it is very important to keep the National Cooperative Soil Survey Partnership involved in all planning processes for deploying the MLRA–SSO concept. In other words, our

partners in the NCSS need to be at the table to help develop long-range work plans, identify data gaps, and develop plans for research and lab analysis of key soils to strengthen our interpretations.

Nationally, we have the challenge of using new technologies to keep more than 3,000 soil surveys accurate, current, and seamless. The technology committee provided demonstrations of new technologies currently used by soil scientists in Oklahoma and Texas. Presentations showed tablet PCs, high-end computers, LIDAR, and spatial data engineering for updating

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and maintaining soil surveys. When these robust technologies become available at each MLRA Soil Survey Office, they will help us to examine soils across large geographic areas and to maintain consistency across soil survey areas. The message of the session with the technology committee was that we must move forward in implementing new technologies to complete the initial national soil survey and to support the update and maintenance efforts. I am encouraged that we are on the right track for using technologies to meet our “new soil survey program” goals.

The proceedings from this year’s conference will be provided in the very near future. ■

*Charles*

## Alabama Hosts Dune Restoration Workshop and Demonstration

By Julie A. Best, Public Affairs Specialist, Auburn, AL

Last year’s record number of storms eroded miles of beach along the Alabama coastline. To aid in educating individuals about dune restoration, the USDA–Natural Resources Conservation Service, in conjunction with the Baldwin County Soil and Water Conservation District and the Bureau of Land Management, hosted the Alabama Coastal Dunes Restoration Field Day and Demonstration. Approximately 50 volunteers attended the workshop and planting demonstration.

The Plant Materials Center at Brooksville, Florida, provided technical expertise along with

plants for the demonstration. According to Mimi Williams, plant materials specialist, “The meeting was designed to give people the information needed so that they will know what type of plants are suited for planting on their dunes or coastal properties, where they can find these plants, and then show them actually how to plant them.”

Technical presentations came from a variety of perspectives. Dr. Deborah Miller, associate professor of wildlife ecology and conservation, University of Florida, said, “The University of Florida has worked quite a while on dune restoration and we have been working on areas that are very similar to what we have in Alabama and Florida. It is important that people understand that plants are key for dune restoration. Piling up sand isn’t the only thing that we need to do. We also need to revegetate that sand for the dune to stay in place.”

Dr. John Hovanesian, president of CNPS Inc., a private firm that works in the area of dune restoration, said, “I would like for everyone to realize how important and fragile the coastline is. It belongs to everybody in America. We have to take whatever steps we are able to do, whether it is large or small, to preserve the coastline.”



Staff from the Plant Materials Center at Brooksville, Florida, demonstrate how to plant dune-restoration vegetation.

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Environmental issues impact dune restoration. Rob Tawes, U.S. Fish and Wildlife Service, explained the permitting process related to dune restoration. In the Gulf Shores area of Alabama, sea turtle nesting is a big issue, along with habitat for beach mice. Tawes said, "When restoring the dunes, people should realize that they are not just stabilizing the area; they are improving the environment so that the animals that live in the area have a better habitat and a better chance of survival."

Several school-age youth, as well as teachers, participated in the planting demonstration, which took place on a beach site property owned by the Bureau of Land Management. Sarah King, a student from Chi Alpha Academy, said, "I'm learning that by planting vegetation such as sea oats, the roots will help keep the beach from eroding." Dawn Hopper, teacher at Central Baldwin Middle School, said, "Hopefully, these students are learning to conserve, to take care of our natural resources, and to look at Baldwin County as their home. If we want the beaches of Baldwin County to be the natural setting that draws a lot of people to this area, then we have to take care of our shoreline. Volunteer work, such as this, improves citizenship and helps develop leadership skills."



*Children, as well as adults, can make a difference in conserving our natural resources.*

Alabama State Conservationist Gary Kobylski said, "With all of the hurricanes that we have had, not only in Alabama, but also in Mississippi, Louisiana, and Florida, we see a great need to work with homeowners as well as city and county officials to help them restore what has been destroyed. The dunes are our first line of defense when a hurricane hits. Our Plant Materials Centers have a lot to offer in helping landowners and city officials understand the various types of vegetation that are available for dune restoration."

Special thanks go to the Baldwin County Soil and Water Conservation District. It was a hot day on the beach, and the District provided cool beverages and lunch for

volunteers. The District, along with NRCS employees, also worked hard to prepare the beach site prior to the event. They installed sand fencing so the planting scheme could be carried out.

The day was filled with valuable information, including an explanation of the latest planting method using hydrated polymer gels and slow release fertilizer and a description of planting schemes. The staff from the Plant Materials Center emphasized that dune restoration does not need to be left to professionals. Individual homeowners, residence associations, and local schoolchildren can all contribute to the restoration of a functioning dune environment for both humans and wildlife. ■

## Mapping Subaqueous Soils in Florida

By L. Rex Ellis, Assistant Research Scientist, University of Florida; Mary Collins, Professor, UF; Thomas Saunders, Graduate Student, UF; and Kelly Fischler, Graduate Student, UF.

Florida has a tremendous amount of shallow aquatic habitats. Given that soil scientists have recently begun to consider such areas as subaqueous soils instead of as sediments, soil mapping will likely occur in these subaqueous areas. To provide a foundation for these future efforts, pedologists at the University of Florida (UF) have undertaken several pilot mapping projects. In addition to

mapping, these projects focus on interactions between submerged aquatic vegetation, water quality, and subaqueous soil.

The first study took place at Cedar Key, Florida. The main objective was to apply the pedological paradigm to a vegetated, subtropical subaqueous area. The general conclusion was that soil properties in the upper portion (0-30 cm) of the soil were related mainly to vegetative cover, but pedon properties (0-200 cm) were predictable only when all soil forming factors were considered. Geographic position relative to barrier islands was proposed as a soil forming factor to discern between many pedons. A subaqueous soil survey at a

scale of 1:12,000 was created and should soon be available on the UF pedology Website (<http://pedology.ifas.ufl.edu>).

The second study is focused on subaqueous soils in and around a seagrass mitigation site in the Indian River Lagoon, Florida. Initial results confirm geographic position as an important factor in determining pedon properties. Also, when comparing soils between the east and west coasts of Florida, it is evident that parent material greatly affects the amount of fine (silt + clay) particles in subaqueous soils. The culmination of this study will be a fine scale (1:1,000) survey of the soils in the mitigation site once they have reached an initial equilibrium with the surrounding area. This study is

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*An upland-to-subaqueous landscape illustrating the continuity of soil. The photograph was taken at low tide. The soil scientist in the picture is standing in subaqueous soils supporting the seagrass *Halodule wrightii*.*

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an ongoing part of a larger study to investigate subaqueous soil in the Indian River Lagoon.

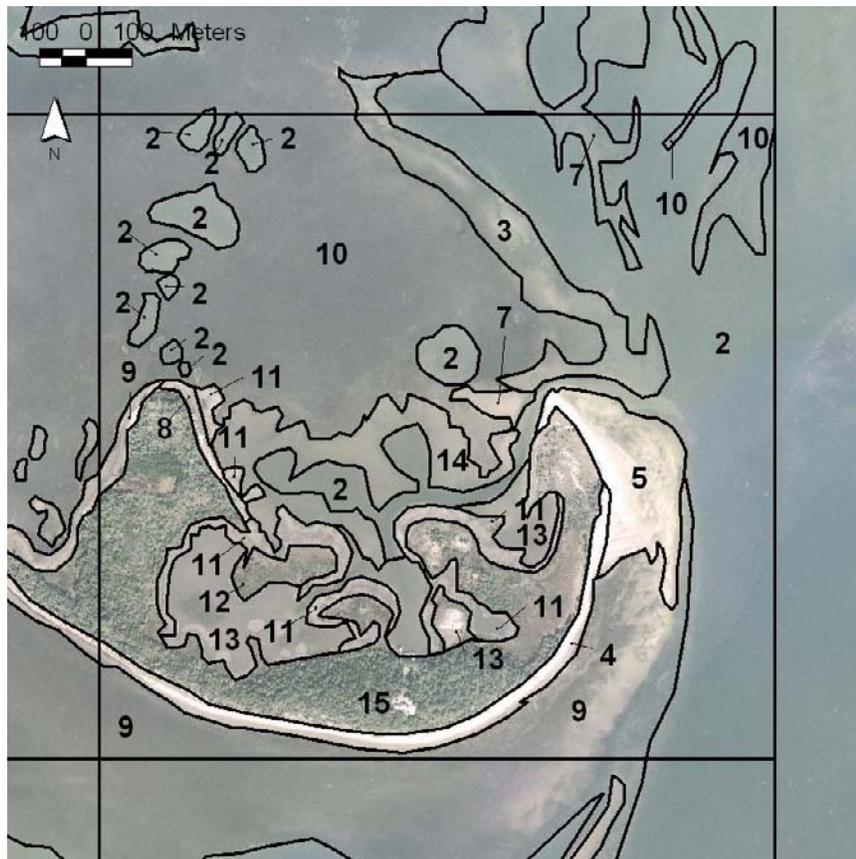
The third study is an investigation of subaqueous soils and their interaction with water quality in the Chassahowitzka spring-fed river and estuarine system along the Gulf Coast of Florida. Soil will be mapped at a fine scale, and nutrient flux rates across the soil/water interface will be measured in each soil and extrapolated to its mapped extent. Extrapolated flux

measurements will be used to quantify the biogeochemical significance of various soils in the nutrient cycling of the spring and estuary system. This work is in collaboration with ongoing research and water-quality monitoring by the University of Florida Department of Fisheries and Aquatic Sciences. Initial results indicate that subaqueous soils are an active site of biogeochemical change within the Chassahowitzka river system and act as a nitrate sink.

Together, these studies represent the pilot effort by UF pedologists to investigate and



*Core of a subtropical subaqueous soil supporting the seagrass Thalassia testudinum. Note the darker colors in the upper portion of the soil. Many vegetated subaqueous soils appear to have an A horizon.*



*Tile of a subaqueous soil survey conducted near Cedar Key, Florida.*

map subtropical subaqueous soils. It appears that the pedological paradigm is a suitable approach for these areas but needs refinement as we continue to learn more about the factors affecting formation of subtropical subaqueous soils. Future county-scale mapping of subaqueous soils will benefit from the concepts and methods derived from these research projects. ■

## Current NASIS Efforts in Alabama

By Scott Anderson, Soil Data Quality Specialist, MO-15

National Bulletin 430-5-7 was issued August 25, 2005. The purpose of the bulletin was to identify priority data elements in NASIS and to establish target dates for populating those elements. The data is needed for implementation of the Farm Bill to determine eligibility and ranking, conduct planning and application, assess compliance, and measure performance. The data will also be used for Homeland Security purposes.

The bulletin is also directly related to proposed changes in General Manual Title 450. GM 450 is being updated to reflect changes in responsibilities, organization, content, and procedures related to eFOTG. GM 450 will include a description of the minimum content required for Section II (soils section) of the eFOTG. Completion of the data population required by National Bulletin 430 will satisfy the requirements proposed as changes to GM 450. The long-term goal is to have a fully populated NASIS database.

Work began on the Alabama datasets in September 2005.

The work was divided into three phases: state-wide global edits, county-wide global edits, and global edits by soil series. The state-wide edits include changing or populating *Aspect*, *Albedo*, and *Surface Horizon Structure* and populating null values with "0" as needed. Edits by soil series include changing or populating *Parent Material* and *CEC*. County-wide edits are everything else. Many queries, reports, validations, and calculations have been developed to assist with this data population.

"Keep in mind that your data will be available world-wide..."

The Alabama database has about 4,450 detailed map units and about 428 soil

series. Each of these units and series will need to be selected and edited in NASIS. Many of the data elements that need to be populated are new to Alabama. Examples include *Component Surface Morphometry data*, *Albedo Dry data*, *Horizon Structure data*, *CEC* (low & high), and *Sum of Bases*.

You can view a copy of National Bulletin 430 by going to the NRCS Electronic Directives System Website (<http://policy.nrcs.usda.gov/>). Select "National Bulletins." Scroll down to 430-5-7. The attachment is a listing of all the NASIS data elements that must be populated and made

available to the eFOTG through the Soil Data Mart.

It is important that all soil survey project leaders and resource soil scientists become familiar with this national bulletin and the new requirements for populating NASIS. Keep in mind that your data will be available world-wide through the Soil Data Mart and the Web Soil Survey. Think about the quality of the data. Project leaders need to make sure that appropriate data is collected in the field to ensure the database and resulting interpretation ratings are a true reflection of the soils and landforms mapped. ■

## Washington County Soil Survey Lends Assistance

By Joey Koptis, Soil Scientist, Washington County, Alabama

John Clement, an employee of the Alabama Department of Public Health (ADPH), recently completed the fieldwork requirements to take the soil classifiers examination as set forth by the Alabama Board of Registrars for Professional Soil Classifiers.

About a year ago, John was hired as an environmentalist by the ADPH with the understanding that he was on probationary status until he

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obtained his professional soil classifiers license. John was allowed to travel on per diem and the state paid his salary while he was obtaining the required documentation and completing the necessary soil mapping.

Because one of the requirements to take the examination is to map 5,000 acres under the supervision of a registered soil classifier, John turned to a current NRCS soil survey project for help. John contacted me and Sandy Page, the soil survey project leader in Washington County. We gladly accepted the task of helping John. We knew that in turn he would help us gather documentation for our survey. Charles Love, State Soil Scientist, agreed that this would be an "outstanding way of sharing knowledge and gaining experience" for John.

John signed up as an Earth Team volunteer right away and started his travels down to Washington County back in November 2005. John was able to work an average of 3 to 3.5 days per week, except for a couple of weeks when he was called to fill in for one of the other senior environmentalists employed by the state. One of the factors that complicated John's efforts was that the ADPH was gearing up to adopt a whole set of new onsite sewage rules that had been in the making for several years. These rules took effect on March 19, 2006. The adoption of

the new rules required the senior environmentalist to conduct numerous training courses throughout the state. The courses were designed to prepare the local Health Department Environmentalist for the changes. John assisted with the soils training in these courses.

While in Washington County, John assisted with activities related to map unit documentation, including digging and describing soil pits for a field assist, running several transects on map units, and compiling maps. John also used GPS to determine locations in the field and downloaded the locations into ArcGIS for integration into the current Soil Survey GIS applications.

John will be able to use the principles and knowledge that

he gained about map units and their association with landscapes throughout Alabama as he goes forth on his career with the ADPH. Upon completion of his duties, John had mapped just over 5,000 acres and performed roughly 100 soil pedon descriptions in Washington County. Near the end of his time with the Earth Team, while he was working in the field on different landowner's properties, John assisted in EWP program activities by documenting the location of timber downed by hurricane Katrina.

Many thanks go out to John from the staff of the Washington County soil survey and from Charles Love, state soil scientist and MO-15 team leader. John and his assistance will be missed in Washington County. ■



*John Clement, an employee of the Alabama Department of Public Health and an Earth Team volunteer, working on map compilation for the Soil Survey of Washington County, Alabama.*

## Tribute to Sebastian Thomas from his Co-Workers

We are all saddened by the death of Sebastian Thomas, Alabama state office purchasing agent and former writer/editor at MO-15. He passed away suddenly on May 25, 2006, of heart failure due to a congenital heart defect. He was 37.

There really aren't adequate words to say how special Sebastian was to our NRCS Family. Don't ever allow yourself to believe that you can't make a difference in the lives of others. That's what Sebastian did. He helped and influenced so many. Sebastian was such a hard worker, and this was recognized daily. He helped so many in our everyday work life.

We were honored to have Sebastian as an employee. He came to us as a very young adult. It was a joy to

see him mature, both professionally and personally. While working full-time, he also completed work to earn a college degree. We were so proud of him and all that he accomplished during his tenure with us.

Sebastian loved life. He was a jovial young man who spread



*Sebastian Thomas—November 14, 1968, to May 25, 2006*

cheer to those around him. He was an avid University of Alabama fan. Working in an environment where most of his co-workers were Auburn University fans, he took a lot of good-natured ribbing. He took that in stride, continued to support his team, but was gracious no matter which team came out on top.

Sebastian's co-workers were asked to share a few words about their association with him. Here are some of those comments. They express the sentiments of all of us.

- Sebastian was a kind, warm-hearted person who always took the time to share a smile or talk with you about how you were doing today. I would look forward to greeting him everyday. If he was having a bad day, you would never have known it because he was always a cheerful guy.
- Sebastian was a friend to all. He had a unique way of not only talking with you but also making sure you felt special. Sebastian always made sure everyone was included whenever a group was present.
- I will remember Sebastian as a young man of excellent character with a soft-spoken manner. He was a genuinely good person to the core. He loved his family and his co-

workers, and his co-workers truly loved him.

- We are all going to miss Sebastian very, very much. He touched our hearts and spirit with small expressions of warmth that made us feel special. He either greeted us with his affectionate smile, waved from a distance to say hello, or just tapped us on the shoulder as he passed by.
- Sebastian brought a bit of the sunshine with him when he came to work and shared it with all of us, making our days a little brighter.
- Sebastian always had a smile, a positive outlook, and was a pleasure to be around.
- The most outstanding trait I will remember about Sebastian is his positive attitude. He always treated people like he was glad to see them and when you left his presence, you felt uplifted.
- He was one of the most polite young men I have ever worked with. He always had a smile on his face and something nice to say to you.
- Sebastian was a kind, loving, and dear friend who will be missed. His smile, personality, and kind words will forever remain in my heart. He was a devoted and intelligent individual who worked well with others.
- Sebastian always had a positive attitude and a smile on his face. I consider him more than a co-worker; he was my friend.

We extend to his family and friends our deepest sympathy. Sebastian was family and friend to us here at NRCS and his presence will be greatly missed. He was like a little light beacon in our office. ■

## Web Soil Survey Improvements

Many improvements are currently under consideration or development for the Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/>). Some of the improvements you might see in the next release include:

- The ability to generate a customized soil survey publication for a specified area of interest. The customized publication would include map unit descriptions, user-selected tables, and supporting documentation. The tables and data will be up-to-date and generated from the Soil Data Mart. The format will reflect the structure of the traditional soil survey publication.
- Easier navigation to desired areas of interest. Under investigation is the ability to set as an area of interest PLSS sections and federal areas, such as National Parks. Also under investigation is a search function for place names (for example, Oak Lake or Hoover Dam).
- The ability to define larger (40,000 acre) areas of interest.
- The ability to view and print map unit descriptions from the soil map tab. ■

## Editor's Note

Issues of this newsletter are available on the Internet on the MO-15 homepage (<http://www.mo15.nrcs.usda.gov/>). Click on "News" and then on "The Coastal Plainer." You are invited to submit stories for future issues to Aaron Achen, editor, MO-15.

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