



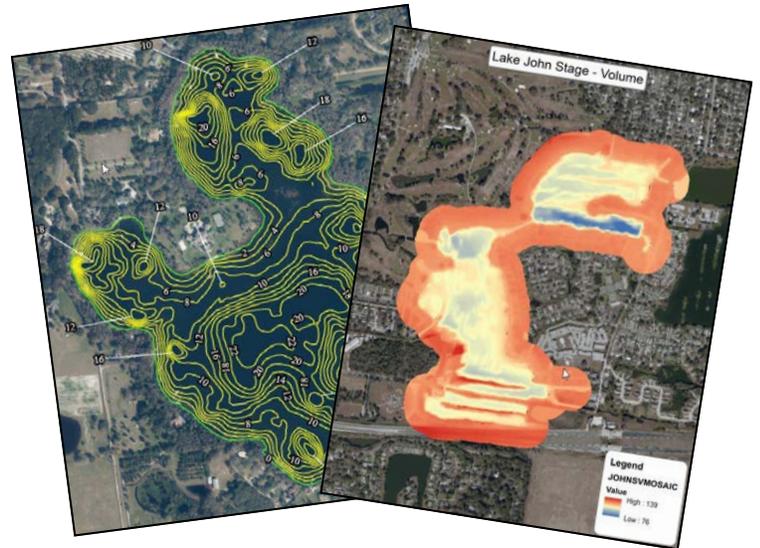
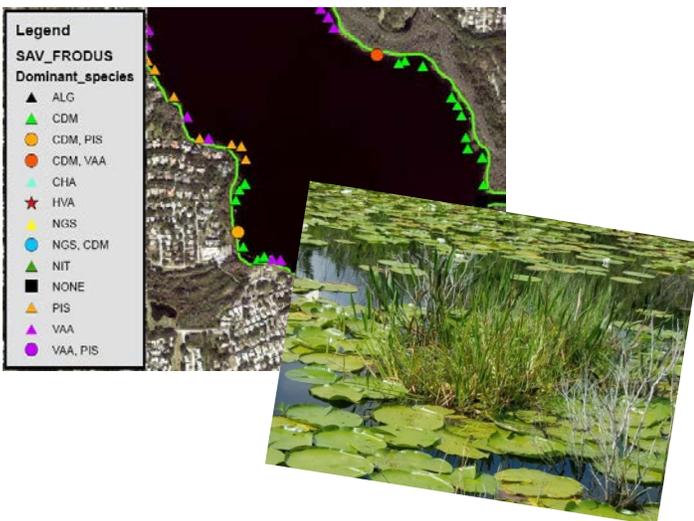
Let USF Assessments Save You Time and Money

Put the expertise of the University of South Florida Water Institute's professional staff and students to work in assessing the natural resources and infrastructure you manage!

- Our field biologists can evaluate and document the morphological and ecological status of aquatic and wetland systems to help you meet regulatory requirements and achieve management goals.
- Our field mapping team can create spatially accurate digital datasets that document the location and attributes of your stormwater and other infrastructure assets.

SAV Community Analysis

Management of submerged aquatic vegetation (SAV) is vital in controlling nutrient levels in aquatic systems. Our experience in analyzing SAV communities includes a variety of habitats and water body sizes, ranging from small stormwater ponds to large lakes, rivers and estuaries. Using a combination of proven techniques, we survey species compositions, delineate SAV beds, and develop SAV community statistics such as percent area covered, percent volume inhabited and deep water extent of SAV. Lake and stormwater pond managers can use this data to achieve SAV coverage/biomass goals related to nutrient management, shoreline stabilization, and aquatic habitat restoration, and to assist in the control and treatment of invasive plant species. In estuarine habitats, in addition to seagrass SAV statistics, we can generate digital maps of propeller damage in seagrass beds, using side-scanning sonar technology.



Bathymetric Mapping and Contouring

We use specialized equipment and software to collect and process sounding data to generate digital bathymetric maps of waterbodies. These accurate, geospatial models reveal the complex bathymetry and morphological characteristics of a waterbody. The resulting digital model can be graphically represented or used to perform additional analysis. Our bathymetric maps are ideal for identifying priority management tasks for aquatic systems suffering from sedimentation and erosion issues, such as in recreational lakes and stormwater ponds. They provide accurate surface area and volume measurements which can be used in calculating floodwater capacity, infiltration rates, or chemical treatment amounts. Waterbodies appropriate for this analysis include lakes and ponds, as well as navigable rivers, streams, and creeks. We are also able to process customer-collected data; training is available to ensure proper data collection.

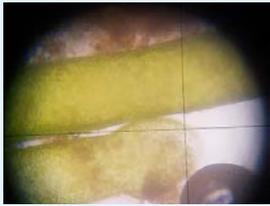


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Regulatory Assessments

Our staff is certified by the Florida Department of Environmental Protection for conducting the following assessments of water quality and biological function, to ascertain compliance with the Impaired Waters Rule of the Clean Water Act:



- **Stream Condition Index** – This composite biological index is used in flowing streams to measure the taxonomic composition and abundance of macroinvertebrate organisms.
- **Stream Habitat Assessment** – This evaluation measures eight attributes that affect stream biota, including substrate diversity and availability, water velocity, habitat smothering, artificial channelization, bank stability, and the habitat quality of the riparian buffer zone.
- **Lake Vegetation Index, Linear Vegetation Survey** – These biological indices characterize the extent of human disturbance in a lake's or stream's vegetation by examining the number of native, invasive, and sensitive species present, and comparing the macrophyte community to that of pristine habitat.
- **Rapid Periphyton Survey** – This assessment quantifies the extent, abundance, and types of attached algae present in a flowing stream, to determine whether there is interference with its designated use.



Infrastructure Mapping

Having a readily-available infrastructure inventory can help stormwater inspection and maintenance crews, utilities planners, emergency operations personnel, and others to be more efficient and effective. Such an inventory can also be useful in pollutant source identification and flood control modeling. Utilizing a combination of high-accuracy GPS equipment, mobile technology, and advanced GIS software, we conduct field survey projects for city and county partners, creating accurate spatial datasets of infrastructure components like stormwater outfalls, impervious surfaces, utility meters, digitally cataloging their geographic locations and detailed attributes.

Field Map: Zone 2

Work Area: February

Date:

