

Central Florida Water Initiative



ENVIRONMENTAL MEASURES TEAM

What is the Environmental Measures Team? The Environmental Measures Team (EMT) consists of environmental scientists from the three water management districts and representatives from public water supply utilities. It is one of the technical teams supporting the objectives of the Central Florida Water Initiative (CFWI).

What is the EMT's role within the CFWI effort? The EMT was created to perform environmental assessments of wetlands and surface waters, and other related work, in support of determining sustainable groundwater withdrawals in the CFWI.

The EMT will also support options for developing definitions and methodologies for use by all three water management districts for implementing environmental review in water supply planning and consumptive use permitting.

In support of the above objectives, the EMT will carry out the following tasks:

- 1) Evaluate the current state of wetlands and surface water in the CFWI and develop options for quantitative relationships between observed wetland condition and hydrology
- 2) Apply model output to quantitative the assessment relationships developed above

The EMT will coordinate with the Hydrologic Analysis Team, Groundwater Availability Team and Minimum Flows and Levels and Reservation Team to develop options for a definition of harm to be used by the three districts within the CFWI.

Where are the wetland and lake sites that have been investigated? The EMT evaluated the current ecological condition of selected wetlands and surface waters within the CFWI project area.

- The districts previously conducted field assessments of approximately 400 wetlands and lakes within the CFWI project area, as part of the Central Florida Coordination Area effort.
- Another 45 wetland assessment sites with water level monitoring data have been examined for quantitative relationships between hydrology and the observance of stress indicators. These sites will be used to quantify the link between ecological condition and the historic water regime.

What analyses are being done? 1) Statistical analysis of hydrologic data to identify metrics that may be suitable for differentiating between hydrologically stressed and unstressed wetlands. 2) Cluster analysis of study site data to discern how wetlands may be best categorized into groups (mostly unstressed, mixed stressed and unstressed, and mostly stressed). 3) Generalized risk for harm model based on level of drawdown. Fitting probability distributions to the wetland hydrology data to determine the likelihood that a site will be categorized as stressed or unstressed as a function of hydrologic alteration. This approach allows for the extrapolation from sites with water level records to the much larger number of CFWI sites for which there are no hydrologic monitoring data.