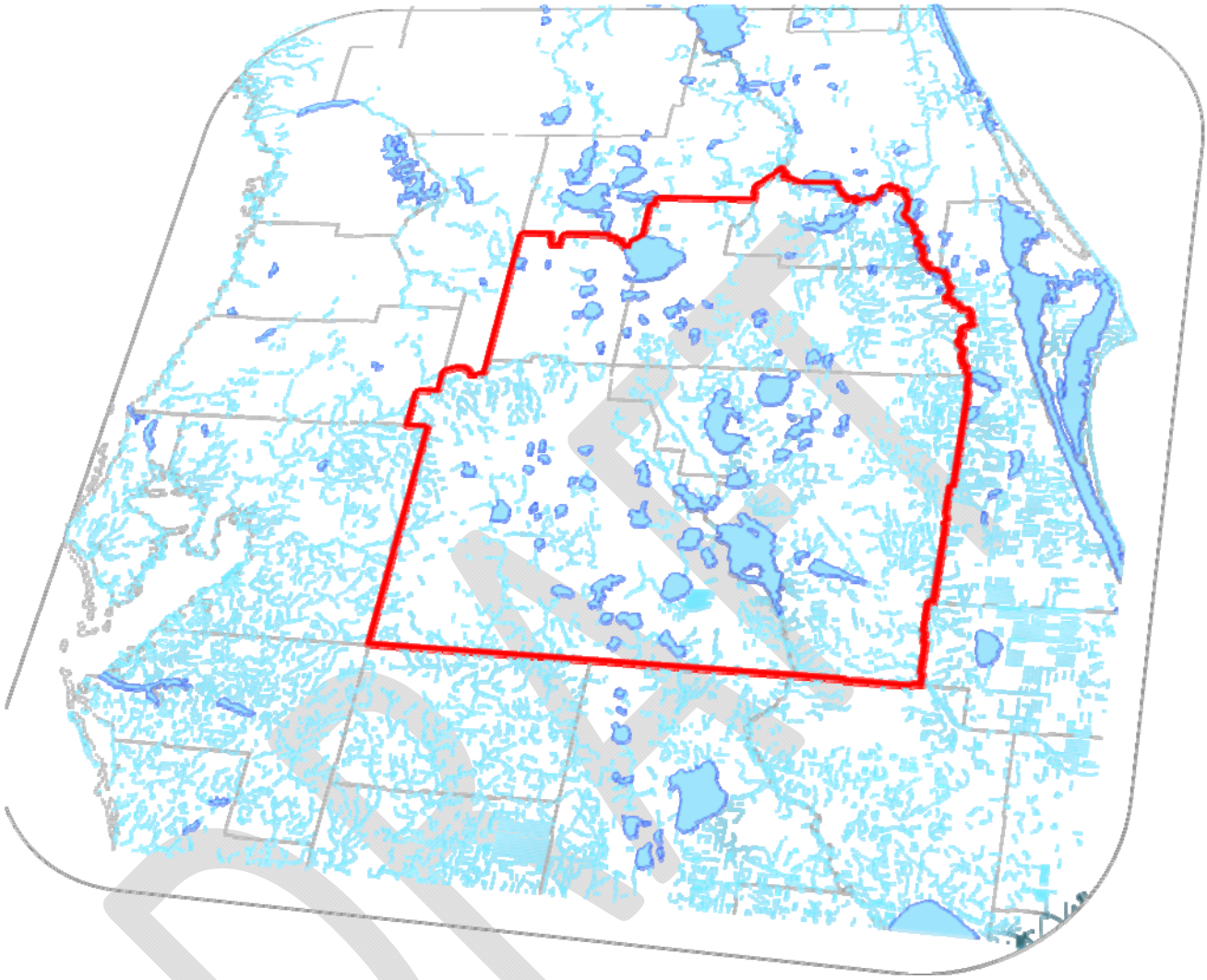
CENTRAL FLORIDA WATER INITIATIVE



... A collaborative water supply endeavor to protect, conserve and restore our water resources

The CFWI document is a constantly evolving document. It is intended to describe the collaborative process being implemented in Central Florida. As such, this version reflects the process underway as of the date shown. Through adaptive management principles it will be revised as appropriate under direction of the CFWI Steering Committee.

CENTRAL FLORIDA WATER INITIATIVE GUIDING DOCUMENT

Preface

To provide for more effective, consistent water resource planning, development and management, a new Central Florida Water Initiative (CFWI) is being developed. This new process replaces the schedule and activities established by the 2006 CFCA Action Plan but will incorporate many of the findings and activities of the previous efforts. The development of new rules, along with a timetable for rulemaking, will be deferred until the completion of the Recovery and Prevention Strategies described in this new initiative.

Background

The St. Johns River Water Management District (SJRWMD), South Florida Water Management District (SFWMD) and Southwest Florida Water Management District (SWFWMD) agreed in 2006 to a Central Florida Coordination Area (CFCA) Action Plan (Action Plan) to address the near-term and long-term development of water supplies in the central Florida region, including southern Lake, Orange, Osceola, Seminole and Polk counties.

In Phase I of the Action Plan, a framework was established to deal with the short-term water resource issues. Phase I concluded with interim water use regulation limiting groundwater withdrawals to projected 2013 demands and requiring development of alternative water supplies (AWS) for future needs. Because the SWFWMD had already adopted rules for its Southern Water Use Caution Area (SWUCA) that were as restrictive, if not more restrictive, as the CFCA rules, and Polk County has portions in both areas, only the portion of Polk County that is outside the SWUCA is subject to the CFCA rules (see Figure #1 in the Appendix). The interim CFCA rules sunset on December 31, 2012.

The Phase II process of the Action Plan was undertaken in 2009. Its primary objective was to establish new rules prior to the sunset date and to implement a long-term approach to water resource management in central Florida. This phase involved coordinated activities on a variety of issues including: regional water supply planning; investigations and development of traditional and Alternative Water Supply projects; assessment of environmental impacts and groundwater sustainability; and development of water use rules and permitting criteria. All the activities attempted to maximize and incorporate local government and public input.

New Direction

The primary planning tool for the Phase II process was the development and calibration of the necessary hydrologic models to determine the sustainability of the groundwater supplies. However, because of the complexity of the effort and the desire for consensus among the stakeholders, including the water management districts, the Phase II effort to meet the mandatory rulemaking deadlines prior to the interim rule sun setting was not possible. Furthermore, because of the severe economic slowdown in Central Florida, the 2013 water demands were delayed at least two years (probably more) into the future so the need to fast track certain activities was no longer critical.

Rather than force decisions to be made with incomplete technical information to comply with the December 31, 2012, sunset date, the Executive Directors of the affected water management districts, in consultation with the public water suppliers, suspended the Phase II process until a more collaborative approach to resolving the technical issues could be developed. The need for a coordinated effort to protect, restore and maintain the water resources of Central Florida remains a priority.

To address the limitations of the 2006 Action Plan yet still fulfill the overarching water resource objectives in Central Florida outlined in that plan, a new Collaborative Process has been created. In addition to revising the implementation date for the new rules, Guiding Principles and Collaborative Process Goals have been established, and an executive level Steering Committee has been formed to direct the coordinated effort of the Central Florida Water Initiative.

The Collaborative Process

The new process to ensure more effective, consistent water resource development and management is called the Central Florida Water Initiative (CFWI).

Central Florida Water Initiative Guiding Principles

1. Identify the sustainable quantities of traditional groundwater sources available for water supply that can be used without causing unacceptable harm to the water resources and associated natural systems.

2. Develop strategies to meet water demands that are in excess of the sustainable yield of existing traditional groundwater sources. Strategies should include optimizing the use of existing groundwater sources, implementing demand management, and identifying alternative water supplies that can be permitted and will be implemented as demands approach the sustainable yield of existing sources.

3. Establish consistent rules and regulations for the three water management districts that meet the Collaborative Process Goals and implement the results of this Central Florida Water Initiative.

Central Florida Water Initiative Goals

1. One model
2. One uniform definition of harm
3. One reference condition
4. One process for permit reviews
5. One consistent process, where appropriate, to set MFLs and reservations
6. One coordinated recovery and prevention strategy (to be acheived through the CFWI RWSP process)

The process will provide flexibility for cases where Recovery Strategies have been adopted, such as for the Southern Water Use Caution Area in the SWFWMD.

Central Florida Water Initiative Governance

The relational hierarchy for the Central Florida Water Initiative is as follows (see Figure #2 in the Appendix):

Steering Committee

This is the primary oversight committee comprised of a cross section of water supply partners meeting regularly to guide a coordinated effort to fulfill the Guiding Principles and Collaborative Process Goals of the CFWI. The Steering Committee shall provide guidance and direction to the collaborative technical teams and technical oversight/management committees regarding the efforts of each of those groups.

The Steering Committee shall conduct its meetings in accordance with the requirements of Section 286.011, Florida Statutes (the "Sunshine Law"), and will operate by unanimity in its decisions. All meetings of the Steering Committee shall be open to the public at all times. The Steering Committee shall provide reasonable notice of all of its meetings in accordance with the Sunshine Law.

The Steering Committee shall be comprised of the following members:

- Utilities - A public water supply utilities representative
- WMDs - One designated Governing Board Member from each of the WMDs
- FDEP - One designated FDEP representative
- DACS - One designated DACS representative

The findings and recommendations of the Steering Committee will be presented for evaluation, assessment and initiation of rulemaking, as appropriate.

Technical Oversight/Management

This committee level provides regular oversight to technical teams to ensure a coordinated effort and is comprised of representatives of the executive management teams from each of the WMDs, FDEP and public water supply utilities. This oversight function is made up of two separate committees. One committee is for routine technical coordination between the teams. The other committee will only meet on an ad hoc basis as the need arises between meetings of the Steering Committee on issues of management and coordination. The Technical Oversight/Management Committees and technical teams will not operate as "Sunshine" committees, as their functions will be limited to fact finding and technical analysis. They will conduct fact-finding regarding the Guiding Principles and Collaborative Process Goals of the CFWI and provide options for implementation of the Guiding Principles and Collaborative Process Goals of the CFWI. They will not be making policy decisions or prioritizing options. The Technical Oversight/Management Committees and technical teams shall obtain instruction from the Steering Committee regarding any potential policy issues that may arise as a result of their investigations.

Technical Oversight

This is the primary committee that provides the routine technical coordination of the effort so that each technical team is able to fulfill their respective work plan and schedule. The design of the Collaborative process requires close attention to inter-group teamwork since many of the end products of the individual tasks will be utilized across the technical teams. The Process Goal of consistency begins at the fundamental technical level.

This committee consists of two members of each technical team (a WMD and Utility member), one representative from DACS to serve as the agriculture liaison and an FDEP representative who will serve to moderate issues amongst the Technical Oversight Committee:

- Moderator (Janet Llewellyn)
- Hydrologic Analysis (Akin Owosino, David MacIntyre)
- Environmental Measures (John Zahina, David MacIntyre)
- Minimum Flows and Levels and Reservations (Doug Leeper, Tony Janicki)
- Data, Monitoring, and Investigations (Mary Thomas, Chris Sweazy)
- Regional Water Supply Plan (Tom Bartol, Teresa Remundo Fries)
- Agriculture liaison (Camilo Gaitan)

Management Oversight

This committee will meet when necessary to identify and prepare a summary of consistency and policy issues that have evolved in the technical team efforts, so that such issues may be brought before the Steering Committee at its next scheduled meeting. Consistency issues that have their genesis in laws or rules will need to be clearly identified as such when brought before the Steering Committee. Final resolution of some of these issues may require Governing Board or Legislative resolution.

(WMD Deputy Directors, Utility Representative, FDEP Representative, DACS Representative)

- Sharon Trost, SFWMD
- Woody Boynton, SJRWMD
- Robert Beltran , SWFWMD
- Brian Wheeler, Utilities
- Janet Llewellyn (acting) , FDEP
- Ray Scott, DACS

<u>Technical Collaborative Team</u>

See below.

Public Input

A key objective of the Central Florida Water Initiative will be to seek input from other interested parties in a regularly scheduled open forum at each meeting of the Steering Committee.

Technical Collaborative Teams

To build the strong technical foundation necessary to achieve the Guiding Principles, several teams will work together collaboratively refining and developing the ongoing technical work that was started by the CFCA Action Plan and subsequent work efforts. The teams will not operate as "Sunshine" committees, as their functions will be limited to fact finding and technical analysis. They will conduct fact-finding regarding the Guiding Principles and Collaborative Process Goals of the CFWI and provide options for implementation of the Guiding Principles and Collaborative Process Goals of the CFWI. They will not be making policy decisions or recommendations or prioritizing options. The technical teams shall obtain instruction from the Steering Committee regarding any potential policy issues that may arise as a result of their investigations. The technical teams are shown below. The current list of individuals assigned to each team is shown on the CFWI website.

Each Technical Collaborative Team will have a work plan and schedule to accomplish their effort. Each team will be expected to present their progress at each Steering Committee meeting.

1. Hydrologic Analysis

Ensure that the most appropriate science is applied to the modeling and data analysis to support decision making for the CFWI and that the work completed is defensible, understood by the initiative participants and collaboratively developed.

2. Environmental Measures

Perform environmental assessments of wetlands and surface waters, and other related work in support of determining sustainable groundwater withdrawals in the CFWI. .

3. Minimum Flows and Levels and Reservations

Develop options for consistent processes to set and implement MFLs and Reservation criteria for priority water bodies in the CFWI.

4. Data, Monitoring and Investigations

The primary goal of this team is to ensure that available hydrologic, environmental, and other pertinent data collected throughout the region, that is of a quality that can be used for the CFWI, is identified, inventoried, and

accessible to support the CFWI technical initiatives and CFWI regulatory activities. The team may also be tasked with conducting supplemental investigations or data analysis as necessary, and with retaining data collected by the other Technical Initiative Teams.

5. Groundwater Availability

Develop planning level estimates of groundwater availability for consideration by the Steering Committee in addressing CFWI Guiding Principal #1.

6. CFWI Regional Water Supply Plan

Develop a regional water supply plan for the CFWI that ensures the protection of the water resources and related natural systems and identifies sustainable water supply for all water uses in the CFWI through the planning horizon.

Hydrologic Analysis Team

- Team Leader- Akin Owosina

The Hydrologic Analysis Team is made up of representatives from the three water management districts and technical representatives of the public water supply utilities. The team is charged with developing the necessary modeling tools and data analysis to support the CFWI.

Team Goals

Ensure that the most appropriate science is applied to the modeling and data analysis to support decision making for the CFWI and that the work completed is defensible, understood by the initiative participants and collaboratively developed.

Team Approach

The team will work within a collaborative environment under the guidance and direction of the Steering Committee with open and full information sharing as well as joint responsibility and accountability for completing team assigned work products.

Team Objectives

Provide necessary modeling tools and data analysis and work collaboratively with other Initiative teams to:

1) Evaluate the current and future availability of groundwater;
2) Assess future water supply and management strategies;
3) Develop processes to assess the long-term effectiveness of the management strategies;
4) Support collaborative water supply planning;

5) Support future regulatory actions.

Team Scope of Work (A)

Modeling and Hydrologic Analysis Support (A)

This effort is the responsibility of the Hydrologic Analysis Team (HAT) of the CFWI. The goal of this initiative is to ensure that the most appropriate science is applied to the hydrologic modeling and data analysis to support decision making for the CFWI and that the work completed is defensible, understood by the initiative participants and collaboratively developed. Information and analysis developed will be used by the Hydrologic Analysis Team in collaboration with other Initiative teams to:

- Evaluate the current and future availability of groundwater;
- Assess future water supply and management strategies;
- Develop processes to assess the long-term effectiveness of the management strategies;
- Support collaborative water supply planning;
- Support future regulatory actions.

There are a number of analyses utilized to support the assessment of groundwater availability in the Central Florida region. The principal groundwater modeling tool that will be used is an expansion of the East-Central Florida Transient Model (ECFT). This model extends the western boundary of the ECFT model close to the western boundary of Polk County and is being developed by the United States Geological Survey (USGS) in coordination with the staffs of the three water management districts and utility stakeholders.

A future phase of model development that is expected to begin in 2012 will further extend this boundary to the Gulf of Mexico so that one groundwater model can be used to address groundwater availability within the entire area. The model is a regionally based numerical groundwater flow model that will be used to make predictions of water level and flow conditions within the aquifers. Information developed from the Environmental Measures (EM) and Minimum Flows and Levels (MFLs) and Reservations teams will be incorporated in the model as environmental constraints to assess current and future groundwater availability. Additional hydrologic assessments that are ongoing include two statistical analysis efforts to characterize hydrologic trends and assess factors affecting long-term water level fluctuations in the region.

Key Components Model Calibration (A1)

The USGS model incorporates advanced modeling techniques to simulate recharge, evapotranspiration, and runoff processes and actively simulates lake levels and runoff. The model is being calibrated to observed hydrologic conditions for the period 1995 to 2006 using an iterative, two step approach. The first step is to calibrate the model to steady-state conditions observed in 1999 and 2003 and then to transient conditions observed for the period 1995 to 2006. This process will be repeated until an acceptable calibration is achieved. Calibration is accomplished through use of parameter estimation

software (i.e., PEST). After the model has been calibrated, an analysis will be performed to identify the sensitivity of model predictions to the uncertainty that exists in the different model parameters and assumptions.

Statistical Trends in Hydrologic Data (A2)

This is a cooperative effort among the three districts to perform a systematic, regional analysis of long-term groundwater levels, lake levels, spring discharge, and rainfall within central Florida. The first phase of this work was completed in June 2010 and included evaluating statistical trends at 120 individual sites and using cluster analysis to identify correlations between these sites. The second phase of this work is developed to determine factors affecting the clustering of different sites. This includes correlating results of the trend and cluster analyses with supplementary data, such as hydrogeologic setting, land use changes, and water use, to describe the condition of water resources in central Florida. Results of this project will be used along with results of the environmental assessments and other analytical efforts to supplement and corroborate groundwater modeling results.

USGS Project to Quantify Factors Affecting Groundwater and Lake Levels in the Central Florida Area (A3)

This effort is being conducted by the USGS and will use Artificial Neural Networks (ANNs) models and data mining techniques to identify and quantify factors affecting historical groundwater and lake levels. ANNs use advanced statistical modeling methods to assess complex relationships between input and output variables and data mining uses statistical methods to search for valuable knowledge in massive volumes of data. Both techniques are used to evaluate cause and effect relationships. An important component of this project will be to compare water level changes predicted by the ANNs models with the groundwater flow model being developed by the USGS. Hydrologic relationships developed for this project will be used to supplement and corroborate groundwater modeling results.

Initial Model Scenarios (A4)

Following completion of the USGS groundwater model, the HAT will prepare initial water management scenarios to quantify effects of historic and projected levels of groundwater withdrawals. Together with results of the data analyses efforts, these simulations will provide the framework for assessing impacts of withdrawals on natural systems in the area.

Documentation (A5)

The HAT will prepare documentation of work performed. The document will provide a description of the hydrology and hydrogeology of the area and a historical overview of trends in hydrologic and water use data. The report will also summarize the development of the USGS groundwater model and data analyses that are prepared, and describe the use of the different analyses to assess groundwater availability.

Team Schedule

See CFWI Schedule in the Appendix.

Environmental Measures Team

- Team Leader – John Zahina

The Environmental Measures Team consists of environmental scientists from the three water management districts as well as representatives of the public water supply utilities.

Team Goals

The Environmental Measures Team will perform environmental assessments of wetlands and surface waters, and other related work in support of determining sustainable groundwater withdrawals in the CFWI. The Team will also support options for development of definitions and methodologies for use by all three water management districts for implementing environmental review in water supply planning and consumptive use permitting.

Team Approach

The Environmental Measures Team will meet on a regular basis under the guidance and direction of the Steering Committee to complete its stated objectives and goals and will collaborate with and provide expertise on environmental issues to the Hydrologic Assessment Team, MFLs, Prevention/Recovery Strategies & Reservations Team, and other CFCA teams as appropriate.

Team Objectives

The Environmental Measures Team will:

1) Evaluate current environmental condition of wetlands and surface waters in the CFWI, and develop options for quantitative relationships to hydrologic conditions using appropriate scientific methods;
2) Apply model output to quantitative assessment relationships developed.

Team Scope of Work (B)

The Environmental Measures Team will examine scientific approaches and assessment techniques to evaluate potential harm to wetlands and surface waters that may result from groundwater pumping. The Environmental Measures Team will coordinate with the Hydrologic Analysis Team, Groundwater Availability Team and Minimum Flows and Levels and Reservations Teams to develop options for a definition of harm to be used by the three districts within the CFWI.

Evaluate Current Conditions (B1)

The Environmental Measures Team will evaluate the current ecological condition of selected wetlands and surface waters in the CFWI. The districts have conducted field assessments of the environmental condition of approximately 400 wetlands and lakes in the CFCA. This database will be used to identify specific sites for further analysis, relating ecological condition to the site's and the region's hydrology. Other sites will be added to the database as needed based on input from team members. Using a subset of surface water and wetland sites the Environmental Measures Team will develop the options for and apply methods to quantify the link between ecological condition and the historical or estimated record of water levels or flows. Time series will allow for the characterization of the dynamics in the hydrologic regime of a given water body. The analysis and methods development and testing will maximize the use of existing assessment information.

Relate Current Conditions Model (B2)

The hydrologic models will produce a time series of water levels or flows that can be direct inputs into the ecological condition assessment method. The Environmental Measures Team will evaluate the relationship between the hydrologic regime within surface waters and wetlands to the output of hydrologic models. Alternative analytical techniques may be necessary to link projected water levels to future environmental conditions. Working with the HAT, develop options for alternative analytical techniques to be utilized by the Groundwater Availability This relationship will then be utilized by the Groundwater Availability Team for their analyses.

Team Schedule

See CFWI Schedule in the Appendix.

Minimum Flows and Levels and Reservations Team

- Team Leader – Doug Leeper

Team Goals

Develop options for consistent processes to set and implement MFLs and Reservation criteria for priority water bodies in the CFWI.

Team Approach

The MFLs and Reservations Team will participate in a collaborative process with the Hydrologic Analysis, Environmental Measures, and Data and Monitoring and Investigations teams, under the guidance and direction of the Steering Committee, to meet the goals of the CFWI. Coordination with the Department of Environmental Protection's statewide Consumptive Use Permitting Consistency (CUPcon) effort will also be required. Our approach will be a

collaborative sharing of ideas, information, strategies, and responsibilities for achieving the CFWI's Guiding Principles and Goals through frequent and efficient interactions among our team members and other teams.

Team Objectives

1) Review and understand the various approaches used by the WMDs to set MFLs/Reservations;
2) Identify commonalities and differences in the approaches currently used to set criteria;
3) Develop options for standard methodologies to establish MFLs and Reservations, including:
    a. options for definition and application of baselines;
    b. options for uniform metrics to express MFLs criteria;
    c. a "tool box" of methods applicable for establishing MFLs for different water body types and settings within the CFWI.
    d. options for uniform definitions of "significant harm" for the different water body types (wetlands, lakes, rivers, springs) within the CFWI;
    e. options for uniform metrics to express Reservations criteria; and
    f. a "tool box" of methods applicable for establishing Reservations for different water body types and settings within the CFWI.
4) Evaluate current peer review process of each WMD in order to develop options for a standard procedure to peer review MFLs and Reservations within the CFWI and peer review the methods developed under #3 if appropriate;
5) Develop guidelines for implementing MFLs in the consumptive use permit program, planning efforts, and water shortage determinations where appropriate;
6) Coordinate with the Environmental Measures and Hydrologic Assessment Teams to develop measures to evaluate MFLs and Reservation criteria in the model application; and
7) Establish a collaborative process to update the priority water body lists to adopt new MFLs and Reservations or reassess established MFLs.

Team Scope of Work (C)

<u>Review and understand the various approaches used by the WMDs to set MFLs/Reservations (C1)</u>

The MFLs/Reservations Team will review the methodologies currently used by the districts in some detail so that all team members will develop a common understanding of the approaches used. This will necessitate detailed presentations by the WMDs on their approaches for lakes, wetlands, rivers and springs. It is anticipated that this will best be accomplished over a series of face-to-face meeting.

<u>Identify commonalities and differences in the approaches currently used to set criteria (C2)</u>

The MFLs/Reservations Team will, after consideration of presentations under C1 above and review of materials available from the WMDs on waterbodies where MFLs and reservations have been adopted, identify commonalties and differences in the approaches currently employed by the WMDs. This evaluation will to some extent occur concurrently with work item C1 above. It is expected that the Team will generate a technical memorandum summarizing their review.

Develop options for standard methodologies to establish MFLs and Reservations (C3), including:

a. options for definition and application of baselines
b. options for uniform metrics to express MFL criteria
c. a "tool box" of methods applicable for establishing MFLs for different water body types and settings within the CFWI
d. options for uniform definitions of "significant harm" for the different water body types (wetlands, lakes, rivers, springs) within the CFWI
e. options for uniform metrics to express Reservations criteria; and
f. a "tool box" of methods applicable for establishing Reservations for different water body types and settings within the CFWI.

This task will likely be the Team's most difficult to accomplish, and will require concurrence on a number of important definitions (e.g., significant harm, baseline) and sub-topics as outlined above. The Team will develop options for uniform metrics and a set of methods ("tool box") adaptable to specific water body types in various hydro-geologic settings within the CFWI. This will be done in consideration of knowledge gained in items C1 and C2 above and other relevant information (scientific literature) shared between Team members. This will require coordination with the Environmental Measures, Hydrologic Analysis, and Data Monitoring and Investigations Teams. Coordination with the Department of Environmental Protection's statewide Consumptive Use Permitting Consistency (CUPcon) effort will also be required. It is expected that the Team will generate technical memoranda outlining standard methodologies for establishing MFLs and Reservations.

Evaluate current peer review process of each WMD in order to develop a standard procedure to peer review MFLs and Reservations within the CFWI (C4a) and peer review the methods developed under C3 if appropriate (C4b)

The three WMDs all employ some form of peer review in their respective processes. The Team will develop a standard procedure for conducting peer review of proposed MFLs/Reservations within the CFWI. It may also be desirable to formally peer review the work product produced on C3 above.

Develop options for implementing MFLs in the consumptive use permit program, planning efforts, and water shortage determinations where appropriate (C5)

Methods and analytical tools for the environmental review of consumptive use permits have been independently developed by the WMDs participating in the CFWI effort. The MFL/Reservations Team will examine the existing processes and develop options for a

uniform protocol for the environmental review of CUP/WUPs that can be applied by each WMD within the CFWI. This effort will require coordination with the Environmental Measures, Hydrologic Analysis, and Data Monitoring and Investigations Teams. Coordination with the Department of Environmental Protection's statewide Consumptive Use Permitting Consistency (CUPcon) effort will also be required.

Coordinate with the Environmental Measures and Hydrologic Analysis, and Data Monitoring and Investigations Teams to develop options for evaluation of MFLs and Reservation criteria using the EFCT model as one of the available tools (C6)

Establish a collaborative process to update the priority water body lists to adopt new MFLs and Reservations or reassess established MFLs (C7)

Review each WMDs approach to prioritizing waterbodies for MFLs/Reservations development, and establish options for a common prioritization/reassessment approach consistent with the MFLs statute, and have in place for submission to FDEP by November 15, 2013.

Team Schedule

See CFWI Schedule in the Appendix.

Data Monitoring and Investigations Team

- Team Leader – Mary Thomas

The Data Monitoring and Investigations Team is comprised of representatives from the three water management districts and technical representatives of public water supply utilities. The team is charged with developing an inventory to act as a single reference source for regional monitoring data to support CFWI technical activities and regulatory activities. This Team may also collect additional data or conduct data analysis as-needed in support of the other Technical Initiative Teams.

Team Goals

The primary goal of this team is to ensure that available hydrologic, environmental, and other pertinent data collected throughout the region is identified, inventoried, and accessible to support the CFWI technical initiatives and CFWI regulatory activities. Using the inventory of existing data collection activities, the team will collaborate with the other technical initiative teams to develop recommendations for future regional monitoring activities. The team may also be tasked with conducting supplemental investigations or data analysis as necessary, and with retaining an inventory of data collected by the other CFWI Technical Initiative Teams.

Team Approach

The team will work under the guidance and direction of the Steering Committee within a collaborative environment, with open and full information sharing, and with joint responsibility and accountability for completing team assigned work products. This team will act as a resource to the other Technical Initiative Teams, and therefore, will maintain close contact with each of the Technical Team Leads.

Team Objectives

The team's main objective is to provide a single reference point for available data and investigations. This team will work collaboratively with other Technical Initiative Teams and agencies to:

1) Develop and maintain an inventory of available hydrologic, environmental, and other pertinent data and investigations in the region;
2) If approved by the Steering Committee, investigate the feasibility of developing a web-based portal that enables users to access available data and investigation reports from the different sources responsible for collecting and producing this information in the CFWI;
3) Establish minimum standards for future CFWI data collection, including data collected to meet regulatory requirements;
4) Inventory investigations and data collected in support of the other Technical Initiative Teams;
5) Identify areas of insufficient or potentially redundant data collection.
6) Develop an implementation plan for improvements to the regional monitoring program.

Team Scope of Work (D)

The DMIT will work together to identify, review and organize available regional monitoring data such that a single inventory can be developed to support both the Technical Initiative Teams within the CFWI and future regulatory initiatives. The DMIT may also conduct further investigations or data analysis as needed to support the other Technical Initiative Teams.

The DMIT will first collaborate to identify all existing monitoring data. The monitoring data is expected to include, but is not limited to:

- Surficial aquifer system water levels
- Upper Floridan aquifer water levels
- Lower Floridan aquifer water levels
- Lake stage data
- Rainfall data
- Vegetative and soil transect data
- Ecological investigations
- Physiographic data

- Water quality data
- Flow data
- Geological investigations
- Any other data supportive of the other technical initiatives

There currently exists a large amount of monitoring data across the region. However, data is available from numerous data sources and there is no single interface that enables a user to obtain a comprehensive snapshot of information available for any single location. The data is also available in varied formats with inconsistent periods of record. The WMDs, the United States Geological Survey (USGS), and the Florida Department of Environmental Protection (FDEP) are examples of entities that have collected or compiled historical monitoring data, but each entity maintains data in different ways. It is necessary for all data available in a single location to be identified so that thorough, more effective analyses can be conducted.

Development of a single inventory and eventually an interface will serve the CFWI in a number of ways:

1) it will enable other CFWI Technical Initiatives to identify the availability of empirical data in a single location for use in model calibration;
2) it will serve as a quality control exercise, identifying opportunities for data collection agencies to modify their practices to develop uniform methods for future monitoring; and
3) it will assist regulatory agencies to avoid monitoring redundancy, as can often occur during the permitting process.

Development of a Standard Data Inventory Sheet (D1)

The DMIT will develop an inventory data form so that incoming data and sources can be categorized and sorted. A statistical analysis may also be conducted to determine if the types of data collected correlate with one another, making them redundant.

Each participating agency will be responsible for ensuring all data collected within their respective agencies are captured in the inventory. Non-participating agencies will be polled by the team, so that the list of available regional data is thorough. An initial screening may be conducted to identify areas in which data is absent.

As the other Technical Initiative Teams evolve, the collection of supplemental data to support their studies may occur. The DMIT will support these data collection efforts be retaining an inventory of the data sets in a single location for use by all Technical Initiative Teams.

Inter/intra Agency Investigations of Other Existing Data (D2)

The data collection phase of this initiative will enable the team to understand what data is available and what format it is in. A future phase would result in an interface that

links a user to all available data so the user will be able to perform queries on a particular area of the region, and obtain a complete listing of available data in a consistent format. The interface links must be live, as data collection is an ongoing effort.

Further development of the interface will be determined by the Steering Committee. For example, a singular reporting feature that enables to the user to print or save all available data from one location to a single file would be ideal. However, this feature is not critical to the intent of the CFWI.

Inventory Development (D3)

Data collection is an ongoing, region wide activity. Not only will data points for a single site or category be ever-expanding, so will the number and location of the individual data points. It may be determined by the Steering Committee or other CFWI Technical Initiatives Teams that specific monitoring data currently unavailable would be critical to validate their models. Should this occur, the DMIT will work closely with the other teams to determine how to initiate such data collection.

Collaboration with Other Technical Initiatives (D4) Expansion of the inventory over time will require a significant level of coordination with the agencies supplying the data. Not only will there need to be constant communication amongst the entities, but it will be desirable to establish a uniform reporting format for all agencies. This level of effort will be discussed and determined collaboratively by the team in partnership with the supplying agencies.

Establish Minimum Standards for Data Collection (D4)

In keeping with the CFWI Guiding Principles, the DMIT intends to initiate the development of minimum standards for data collection. The standards will initially target regulatory data collection conducted by water use permittees, but may expand to water management district resource data collection if requested by the Steering Committee.

Minimum standards for data collection will begin with the use of the Standard Inventory Sheet to formulate a standard data reporting method. The use of this sheet will encourage easier upkeep of the DMIT inventory. Minimum standards for data collection will also need to be established based on the type of data to be reported. Minimum quality control and reliability standards must be set so that all data collected by water use permittees is useful and beneficial.

If requested by the Steering Committee, the data collection standardization will be applied to WMD resource data and could evolve into a regional database.

Develop Recommendations for Regional Monitoring (D5)

The DMIT will collaborate with other CFWI teams to identify areas within the CFWI and recommend areas for additional data collection. There may also be areas identified within the CFWI with adequate or redundant monitoring which result in recommendations for decreased data collection. With the Steering Committee's approval, the DMIT may also develop an implementation plan for these modifications.

Team Schedule

An initial screening of available data has already been conducted by SFWMD agents. This data must be validated, inventoried, and standardized before an expansion can take place.

See CFWI Schedule in the Appendix.

Groundwater Availability Team

- Team Leader – Mark Hammond

The Groundwater Availability Team will be comprised of select members of the Hydrologic Analysis, Environmental Measures, and MFLs teams. The work of this Team will begin after sufficient progress has been made by each of the aforementioned Teams with respect to their individual Team's scope of work.

Team Goals

Develop planning level estimates of groundwater availability for consideration by the Steering Committee in addressing CFWI Guiding Principal #1.

Team Approach

The Groundwater Availability Team will work in a collaborative environment with the Hydrologic Analysis, Environmental Measures, MFLs, and RWSP teams and under the overall direction of the Steering Committee.

Team Objectives

The Groundwater Availability team will:

1) Develop flowcharts describing the process to achieve the Team Goal;
2) Review and understand the products and deliverables from the Hydrologic Analysis, Environmental Measures, and MFLs teams;
3) Review and understand the water resource conditions within the CFWI area;
4) Provide the Steering Committee with planning level estimates of groundwater availability within the CFWI area under current and future conditions.

Team Scope of Work (E)

<u>Identify evaluation methodologies (E1)</u>

Collaboratively work with the Hydrologic Analysis, Environmental Measures, MFLs, and RWSP teams to review, understand, and identify the evaluation methodologies used to develop planning level estimates of groundwater availability. This includes the "measuring sticks" from the EMT and MFL teams and the model output and analysis from the HAT team.

Groundwater withdrawal impacts (E2)

Collaboratively work with the Hydrologic Analysis, Environmental Measures, MFLs, and RWSP teams and use the identified evaluation methodologies to determine:

(1) Locations where current/permitted/planned withdrawals and water management activities are less than groundwater availability under current conditions

(2) Locations where current/permitted/planned withdrawals and water management activities are in approximate balance with groundwater availability under current conditions

(3) Locations where current/permitted/planned withdrawals appear to exceed groundwater availability under current conditions. For this case, current or permitted withdrawal reductions and other water management activities will be evaluated for reducing, eliminating, or managing areas of impact.

Develop Planning Level Estimates of Groundwater Availability (E3)

Maps of predicted hydrologic changes, statistical results, wetland assessment data, land use changes from historical times to present, and other information will be used to identify the locations where additional groundwater supplies may be accommodated and planning level estimates of the availability.

CFWI Regional Water Supply Plan Team

- Team Leader – Tom Bartol

Team Goal:

Develop a regional water supply plan for the CFWI that ensures the protection of the water resources and related natural systems and identifies sustainable water supply for all water uses in the CFWI through the planning horizon.

Team Approach:

The CFWI Regional Water Supply Team will participate in a collaborative process with the Groundwater Availability, Hydrologic Analysis Tools, Environmental Measures, MFLs and Reservations, and Data and Monitoring Strategy teams, under the guidance of the Steering Group and Management Oversight Committee, to meet the goals of the CFWI. Our approach will be a collaborative sharing of ideas, information, strategies, and responsibilities for achieving the CFWI's Guiding Principles and Goals through frequent and efficient interactions among our team members and other teams.

Team Objectives:

1) Develop and assimilate population and water demand projections
2) Review, understand and utilize resource protection criteria developed by the CFWI process
3) Develop water conservation component for the CFWI
4) Evaluate and assess water sources
5) Develop water supply development component options
6) Develop water resource development component options
7) Conduct workshops and public meetings on the Regional Water Supply Plan

Scope of Work:

The development of a CFWI Regional Water Supply Plan is dependent on several factors, such as, population and water demand projections, resource evaluation criteria, and water supply development options. Timely input from other technical collaborative teams is critical to ensure the CFWI Regional Water Supply Plan will be completed by the end of 2012.

The scope of work and schedule below takes into account the relation between this effort and those of the technical collaborative teams. An example of which is the availability of the East-Central Florida Transient Groundwater Flow Model being developed by the U.S. Geological Survey. Completion of the model is necessary for predicting changes to water resources due to projected water demands.

Develop and assimilate population and water demand projections (F1)

The CFWI Water Supply Team will utilize a consistent methodology for water demand projections. The population projections shall be perform based on provision of Subsection 373.709(2)(a)1, F.S. The team will need to reach consensus on the methodology for projecting and distributing water demand in the CFWI.

Develop water conservation component for the CFWI (F2)

The CFWI Water Supply Team will to utilize a consistent methodology for determining conservation potential in CFWI.

Evaluate and assess water sources done by Groundwater availability team (F3)

Similar to Task G1, this task will require the CFWI Regional Water Supply Team to review water source evaluation methodologies used by the WMDs. The Team will need to reach consensus on the uniform metrics and a set of methods adaptable to specific water body types in various hydro-geologic settings within the CFWI. This will require coordination with the Groundwater Availability, Environmental Measures, Hydrologic Analysis, MFLs and Reservations, and Data Monitoring and Investigations Teams.

The Team will work in coordination with utilize tools developed by other CFWI Teams to assess water resources of the CFWI, such as, the East-Central Florida Transient Groundwater Flow Model (developed by the U.S. Geological Survey). This Task is highly dependent on the availability of tools.

Develop water supply development component options (F4)

The CFWI Water Supply Team will reach consensus on a consistent methodology for water supply component project description, yield, cost estimates, source, water resource constraints (MFLs), supply entity(ies), feasibility and permittability, funding analysis, and public interest. This will ensure the Plan complies with Subsection 373.709(2)(a)3, F.S.

Develop water resource development component options (F5)

The CFWI Water Supply Team will reach consensus on a consistent methodology for water resource development component project descriptions, water made available, and cost estimates. This will ensure the Plan complies with Subsection 373.709(2)(b), F.S.

Conduct public workshops and meetings on the Regional Water Supply Plan (F6)

The CFWI Water Supply Team will conduct public workshops and meetings to review methods used to develop the Regional Water Supply Plan, present the draft Plan and solicit public input on the Plan. The CFWI Water Supply Team will provide comments and recommendation to the CFWI Steering Committee.

Produce Draft Regional Water Supply Plan (F7)

The CFWI Water Supply Team will compile and produce a draft of the Regional Water Supply for review for the CFWI Steering Committee.

Team Schedule – See CFWI Schedule on page xx

APPENDICES

CFWI Schedule (components shaded have been completed)

Technical Collaborative Team	Key Components	Start	End
Hydrologic Analysis Team ---------- Modeling and Tools Support (A)	Key Components Model Calibration (A1)		9/30/11
	Technology Transfer Protocol (A1B)	11/10/11	12/30/11
	Statistical Trends in Hydrologic Data (A2)		2/28/12
	USGS Project to Quantify Factors Affecting Groundwater and Lake Levels in the Central Florida Area (A3)		10/31/12
	Initial Model Scenarios (A4)		1/31/13
	Documentation (A5)		3/29/13
Environmental Measures Team ---------- (B)	Evaluate current conditions (B1)		3/31/12
	Relate current conditions to output of hydrologic model (B2)		2/28/2013
Minimum Flows and Levels and Reservations Team ---------- (C)	Review and understand the various approaches used by the WMDs to set MFLs/Reservations (C1)	6/22/2011	9/30/2011
	Identify commonalities and differences in the approaches currently used to set criteria (C2)	6/22/2011	11/30/2011
	Develop options for a standard methodology to establish MFLs and Reservations (C3 a,b,c- MFLs Sub-Tasks)	9/30/2011	3/31/2013
	Develop options for a standard methodology to establish MFLs and Reservations (C3 e,f – Reservations Sub-Tasks)	3/31/ 2011	5/31/2013
	Develop options for uniform definitions of "significant harm" for different water body types (wetlands, lakes, rivers, springs) (C3d – MFLs Sub-Task)	9/30/ 2011	6/30/2013 To be coordinated with CUPcon
	Evaluate current peer review process of each WMD in order to develop options for a standard procedure to peer review MFLs and Reservations within the CFWI (C4a) and peer review the methods developed under C3 if appropriate (C4b)	6/22/2011 (C4a)	1/31/2012 (C4a)
		2/28/2012 (C4b)	10/31/2013 (C4b)
	Develop options for guidelines for implementing MFLs in the consumptive use permit program, planning efforts, and water shortage determinations where appropriate (C5)	4/30/ 2012	6/30/2013 To be coordinated with CUPcon
	Coordinate with the Environmental Measures and Hydrologic Assessment Teams to develop options for measures to	1/1/2012	2/28/2013

	evaluate MFLs and Reservation criteria in the model application (C6)		
	Establish options for a collaborative process to update the priority water body lists to adopt new MFLs and Reservations or reassess established MFLs (C7)	1/1/2012	4/30/2013

Data Monitoring & Investigations Team --- (D)	Standard data inventory sheet (D1)		8/31/2011
	Intra-and inter-agency investigation of other existing data (D2)		10/31/2011
	Inventory Development (D3)		1/31/2012
	Establish Minimum Standards for Data Collection (D4)		12/31/2012
	Develop Recommendations for Regional Monitoring (D5)		5/31/2013
Groundwater Availability Team --- (E)	Identify evaluation methodologies (E1)	1/1/2012	5/31/2013
	Groundwater Withdrawal Impacts (E2)	5/18/2012	5/31/2013
	Estimate of Groundwater Availability (E3)	5/18/2012	5/31/2013
CFWI Regional Water Supply Plan Team (F)	Develop and assimilate population and water demand projections (F1)	12/19/2011	9/29/2012
	Develop water conservation component for the CFWI (F2)	12/19/2011	9/29/2012
	Evaluate and assess water sources by Groundwater availability team (F3)	7/2/2012	5/31/2013
	Develop water supply development component options (F4)	2/1/2012	12/31/2012
	Develop water resource development component options (F5)	2/1/2012	4/30/2013
	Conduct public workshops and meetings on the Regional Water Supply Plan (F6)	3/30/2012	12/31/2013
	Produce Draft Regional Water Supply Plan (F7)	2/1/2012	9/30/2013

Figure 1- County, WMD and SWUCA Boundaries

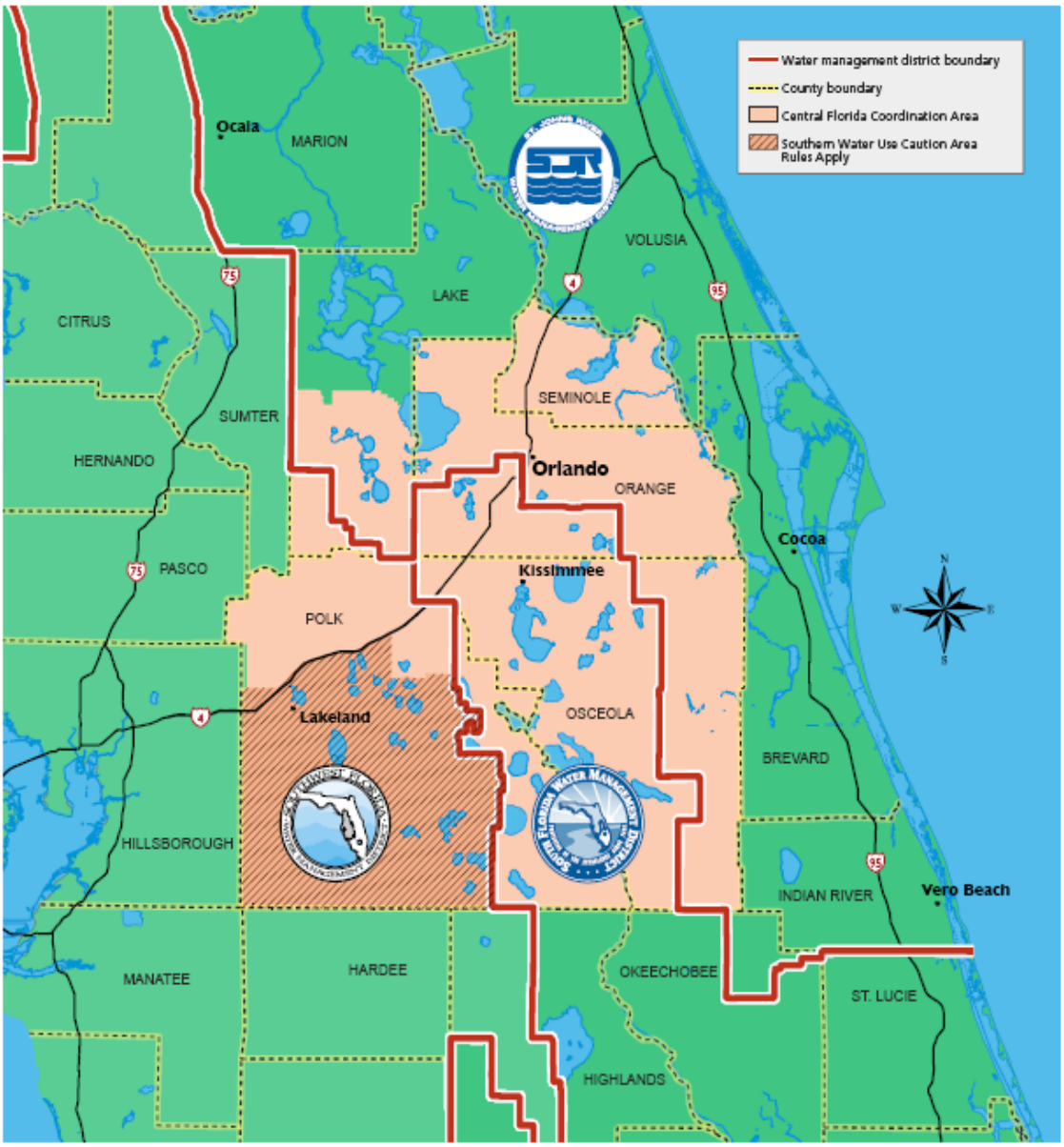
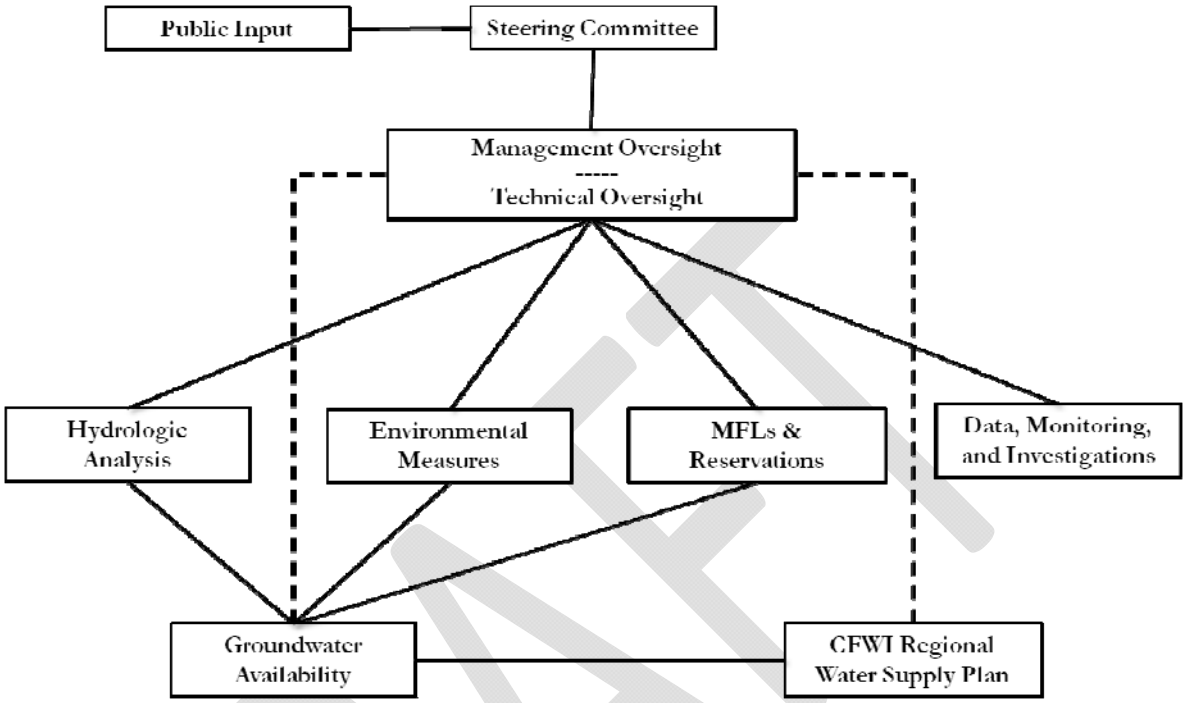


Figure 2- Central Florida Water Initiative Organization



Groundwater Availability will follow work conducted by the Hydrologic Analysis, Environmental Measures, and MFLs & Reservations Technical Teams

CFWI Regional Water Supply Plan will follow completion of the Groundwater Availability team and include: water supply planning, regulatory, mitigation/ augmentation projects, and development of Alternative Water Supplies (AWS), long-term monitoring, funding, and others

The staffs involved with establishment of MFLs are not necessarily the same as those who will develop the MFL recovery/protection strategies

CFWI Steering Committee

This is the primary oversight Committee comprised of a cross section of water supply partners meeting regularly to guide a coordinated effort to fulfill the Guiding Principles and Collaborative Process Goals of the CFWI.

	Utility	**Representative**
	TOHO Water Authority	Brian Wheeler bwheeler@tohowater.com
	Water Management Districts	
	SFWMD	Dan O'Keefe Dokeefe@shutts.com
	SWFWMD	Paul Senft Senft1hp2u@aol.com
	SJRMWD	John Miklos john@btc-inc.com
	Deputy Secretary, Water Policy and Ecosystem Projects	
	FDEP	Greg Munson Greg.munson@dep.state.fl.us
	Director, Office of Agricultural Water Policy	
	DACS	Rich Budell Rich.Budell@freshfromflorida.com

OPERATIONAL PROCEDURES
CENTRAL FLORIDA WATER INITIATIVE
STEERING COMMITTEE

I. COMPOSITION

The composition of the Central Florida Water Initiative (CFWI) Steering Committee (SC) is described in the Central Florida Water Initiative Guiding Document to which this document is attached as an appendix. A member of the SC may provide one alternate for his or her seat on the SC upon written notice to the SC.

II. COORDINATION

A. A Coordinator shall be selected from among the SC members by unanimous vote of the SC.
B. The Coordinator is the presiding officer at meetings of the SC, and is to execute all documents authorized by the SC that may require his or her signature.
C. The Coordinator may designate a SC member to serve as the meeting Moderator .

III. MEETINGS

A. All meetings of the SC are subject to the Florida Sunshine Law. The public shall be allowed to comment on matters coming before the SC at appropriate times as determined by the Coordinator. The SC reserves the right to limit the public comment time to a specific length of time and to require speakers to fill out speaker cards. All meeting sites shall meet accessibility standards for public meetings.
B. The SC shall meet at least quarterly or more frequently at the call of the Coordinator.
C. An agenda for the meeting shall be prepared by the Coordinator or his or her designee and made available to the public in a manner consistent with the requirements of the Sunshine Law.
D. The SC shall publish notice of its meetings in the Florida Administrative Weekly in a manner consistent with the requirements of the Sunshine Law. The contents of the notice shall conform to the template attached to these procedures.

IV. ACTIONS

Actions of the SC are to be recorded by the Coordinator in meeting minutes.

V. INSPECTION AND COPYING OF PUBLIC RECORDS

The inspection and copying of the SC public records will be in accordance with the Florida Public Records Law. CFWI and SC records shall be maintained and available for public inspection and copying at the offices of the Florida Department of Environmental Protection, 3900 Commonwealth Blvd, MS 23
Tallahassee, Florida 32399.

VI. AMENDMENT

These operational procedures may be amended at any time at a meeting by a unanimous vote of the SC members.

DRAFT

NOTICE TEMPLATE

The Central Florida Water Initiative (CFWI) Steering Committee consisting of a Governing Board member from each of the South Florida Water Management District, the Southwest Florida Water Management District, and the St. Johns River Water Management District, and a representative from each of the Florida Department of Environmental Protection, the Florida Department of Agricultural and Consumer Services and the Tohopekaliga (Toho) Water Authority, representing public water supply utilities within the Central Florida Coordination Area, announces a public meeting to which all persons are invited.

DATE AND TIME:

PLACE:

GENERAL SUBJECT MATTER TO BE CONSIDERED: The CFWI Steering Committee is a collaborative effort among government agencies formed to address water resource issues in the area known as the Central Florida Coordination Area. The CFWI Steering Committee will consider matters appearing on the agenda for the meeting or matters added to the agenda as determined by the Chairman of the Committee. Additional information about this effort may be found at: cfwiwater.com.

A copy of the agenda may be obtained by contacting: _____, or at http://cfwiwater.com/ seven days prior to the meeting.

Pursuant to the provisions of the Americans with Disabilities Act, any person requiring special accommodations to participate in this workshop/meeting is asked to advise the agency at least 5 hours before the workshop/meeting by contacting: South Florida Water Management District Clerk, (800) 432-2045, ext. 2087 or (561) 682-2087. If you are hearing or speech impaired, please contact the agency using the Florida Relay Service, 1(800)955-8771 (TDD) or 1(800)955-8770 (Voice).

For more information, you may contact: _____, St. Johns River Water Management District, P.O. Box 1429, Palatka, Florida 32178-1429, 386/329-_____, _____@sjrwmd.com;
_____,Southwest Florida Water Management District, 2379 Broad Street, Brooksville, Florida 34604-6899, 352/796 _____, _____@swfwmd.state.fl.us;
_____, South Florida Water Management District, 3301 Gun Club Road, West Palm Beach, Florida 33406, 561/682-_____, _____@sfwmd.gov;
John Shearer: Shearer Consulting Inc., 1917 Wingfield Drive, Longwood, Florida 32779, 321/297-7372, johnshearer@cfl.rr.com