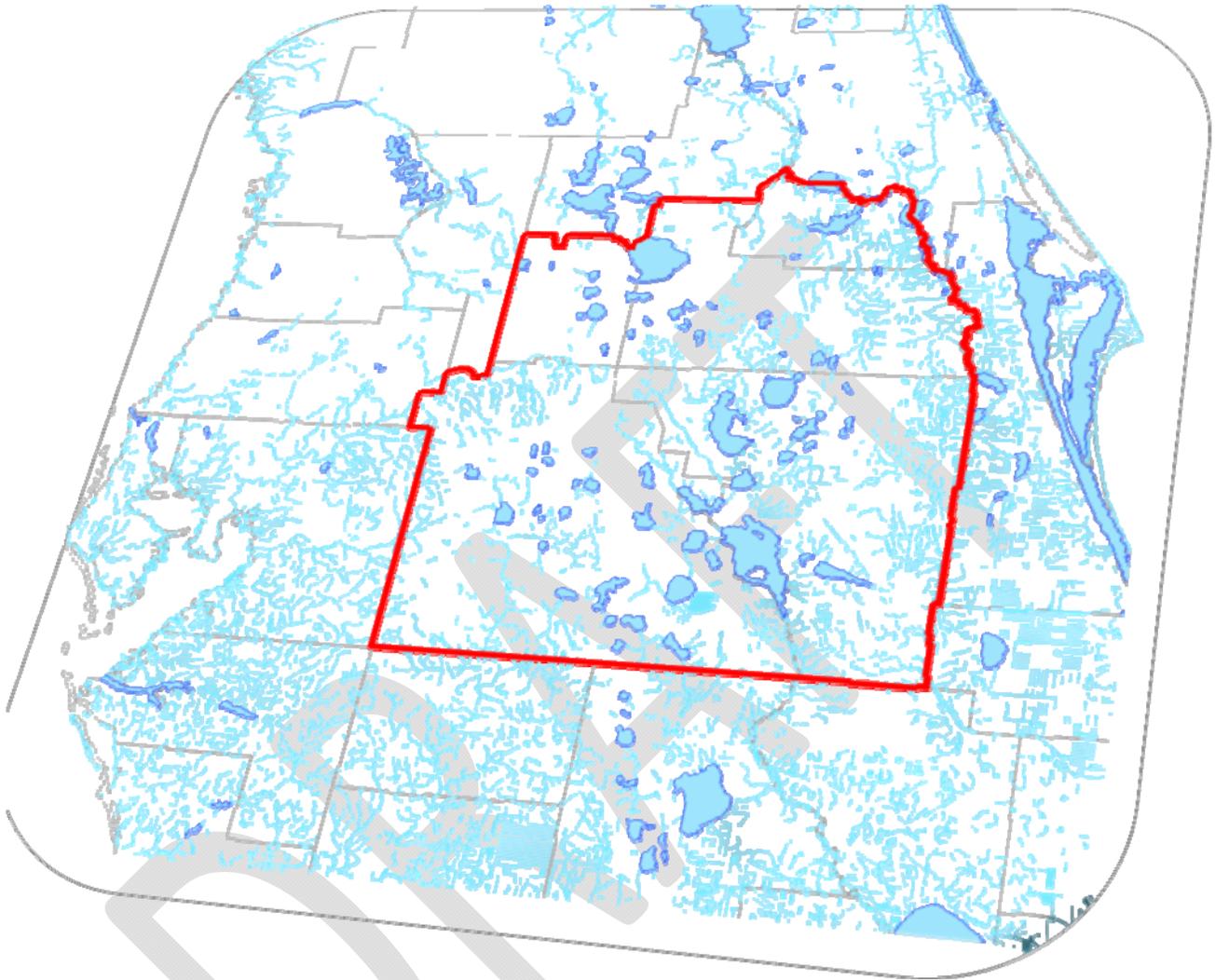


CENTRAL FLORIDA WATER INITIATIVE



... 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 achieved 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

DRAFT

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 Owoosino, David MacIntyre)
- Environmental Measures (~~Robert Fewster~~ 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)

- Deena Reppen, SFWMD
- Dave Fisk, SJRWMD
- Mark Hammond, SWFWMD
- Brian Wheeler, Utilities
- Ann Shortelle, FDEP
- ~~Rich Budell~~ Darrell Smith, DACS

Technical Collaborative Team

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

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. The primary goal of this team is to develop options that will ensure a logical and consistent process is established to evaluate the results of the modeling analyses ultimately achieving the CFWI Goal #1.

6. ~~Recovery and Prevention Strategies~~ 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

DRAFT

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 – ~~Robert Fewster~~ 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 (B×1)

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 ~~To Output Of Hydrologic~~ Model (Bx2)

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 – [Marty Kelly 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—~~Tools~~, Environmental Measures, and Data and Monitoring ~~Strategy and Investigations~~ teams, under the guidance and direction of the Steering 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) 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 ~~a~~ a standard methodology ~~ies~~ to establish MFLs ~~/~~ and Reservations, including:
 - ~~a.~~ options for uniform definitions of “significant harm” for the different water body types (wetlands, lakes, rivers, springs) within the CFWI;
 - ~~b.~~ a. options for definition and application of baselines;
 - ~~c.~~ b. options for uniform metrics to express MFLs ~~s~~ criteria;
 - ~~d.~~ c. a “tool box” ~~of~~ of methods applicable for establishing MFLs for different water body types and settings within the CFWI.
 - ~~e.~~ d. options for uniform definitions of “significant harm” for the different water body types (wetlands, lakes, rivers, springs) within the CFWI;
 - ~~f.~~ e. options for uniform metrics to express Reservations criteria; and
 - ~~f.~~ d. 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)

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

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.

Identify commonalities and differences in the approaches currently used to set criteria (C2)

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 commonalities 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 a standard methodologies to establish MFLs/ and Reservations (C3), including: ~~(C3)~~

- ~~a. options for uniform definitions of “significant harm” for the different water body types (wetlands, lakes, rivers, springs) within the CFWI~~
- ~~b.a.~~ options for definition and application of baselines
- ~~c.~~ 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
- ~~d.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. It is expected that the Team will generate a technical memorandum ~~uma~~ outlining a standard methodology ies 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.

Coordinate with the Environmental Measures and Hydrologic Analysis, and Data Monitoring and Investigations Teams to develop options for evaluation of MFLs and Reservation criteria (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. 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.

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

DRAFT

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)

~~SFWMD contracted with Lotspeich and Associates in 2009 to “identify existing surficial aquifer and surface water elevation monitoring stations within Seminole, Polk, Osceola, Orange, and southern Lake Counties in order to compile hydrologic and vegetation data from assessment sites within these areas.” The information collected during this study will be used as a foundation for the expansion and blending of the data to be included in the “CFWI Monitoring Inventory.” An inventory will be developed of the Lotspeich report data to be used as a basis for expansion.~~ 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 by 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

DRAFT

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 iStandard 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.

Collaboration with other technical initiatives (D5)

Team Schedule

DRAFT

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 – ~~Dave Fisk~~ 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

~~The primary goal of this team is to ensure a logical and consistent process is established to evaluate the results of the modeling analyses ultimately achieving the CFWI Guiding Principle #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"*~~

- ~~• Working with the Hydrologic Analysis, Environmental Measures, Minimum Flows Levels and Reservations and the Regional Water Supply Planning Teams:~~
 - ~~• develop options for a definition of harm caused by hydrologic change to wetlands and surface waters, uniform to the three districts in the CFWI;~~
 - ~~• Evaluate future impacts to wetlands and surface waters in the CFWI due to groundwater withdrawals, using appropriate scientific methods;~~
 - ~~• Develop options for a unified process for the environmental review of Consumptive Use Permits/Water Use Permits (CUPs/WUPs) in the CFWI.~~
- ~~• Identify evaluation measures/methodologies (EM) to provide a technical and scientific quantification of current and future impacts to wetlands, surface waters and groundwater (saltwater intrusion and springs) for consideration by the Steering Committee;~~
- ~~• Identify and frame policy issues for consideration by the Steering Committee;~~
- ~~• Evaluate water level drawdown due to groundwater withdrawals and evaluate potential for future impacts to wetlands, surface waters and groundwater (saltwater intrusion and springs); and,~~
- ~~• Develop planning level Estimates of groundwater availability for consideration by the Steering Committee.~~

~~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 use the results of the work completed by the technical teams, including tools, evaluation methodologies and evaluation criteria, to establish the status of the groundwater resource in the region based on current and permitted water use. The initial scope of the team will be the determination of regions of availability (or excessive stress due to water use) within the CFWI area. The scope includes quantification of groundwater availability (necessary to achieve CFWI Guiding Principle #1) in conjunction with the determination of need for prevention and recovery strategies.~~

~~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 team's main objectives are to apply modeling tools (and work documentation) to evaluate resource impacts to:~~

- ~~● Lakes~~
- ~~● Wetlands~~
- ~~● Rivers/Springs~~
- ~~● Saltwater Intrusion~~

~~Future groundwater availability will be based on analysis of modeled drawdowns, the environmental impacts that are expected to be associated with those drawdowns, and available water management activities to selectively offset predicted future environmental impacts. The amount and location of groundwater that can be withdrawn, with other water management activities, without causing unacceptable impact to the environmental conditions associated with wetlands, springs and lakes will be evaluated.~~

~~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)

~~Identify evaluation measures methodologies (E1).~~

<u>Tasks</u>	<u>Begin</u>	<u>End</u>
<u>Review conceptual EM Plan with Steering Committee</u>		<u>3/23/2012</u>
<u>Draft EMs</u>	<u>4/2/2012</u>	<u>4/28/2012</u>
<u>Final EMs</u>	<u>5/1/2012</u>	<u>8/2012</u>

Develop options for a Uniform Definition of Hydrologic Harm Caused by Hydrologic Change to Wetlands and Surface Waters (Bx)

The three districts have similar concepts of environmental harm, but have developed different rules and methods of assessing hydrologic impacts to wetlands. The Groundwater Availability Team will examine scientific approaches and assessment techniques to evaluate potential future harm to wetlands and surface waters that may result from groundwater pumping, and develop options for a definition of harm to be used by the three districts within the CFWI.

Identify and frame policy issues for consideration by the Steering Committee through the Management Oversight Committee(E2).

<u>Tasks</u>	<u>Begin</u>	<u>End</u>
<u>Collect and organize input on policy issues</u>	<u>2/16/2012</u>	<u>3/12/2012</u>
<u>Organize & frame policy issues; joint GAT/TOC/MOC</u>		<u>3/12/2012</u>
<u>Regular Policy Issues reviewed with Steering Committee</u>	<u>3/23/2012</u>	<u>12/30/2012</u>

Groundwater withdrawal impacts (E2)

<u>Tasks</u>	<u>Begin</u>	<u>End</u>
<u>Evaluate and report to the Steering Committee the evaluation of impacts to wetlands, surface waters and groundwater (saltwater intrusion) from groundwater withdrawals (see E2 above)</u>	<u>5/18/2012</u>	<u>8/2012</u>

Evaluate Future Impacts to Wetlands and Surface Waters (Bx)

The Groundwater Availability Team will examine environmental data previously collected by the districts to ensure that they are appropriate to meet the objectives. Where necessary, new data will be collected and options for new approaches to analyze data will be developed

A series of initial model simulations will be performed by the USGS in March and April and delivered to the HAT with the model release (by April 30, 2012). Post-processing using the SFWMD PM Viewer tool (and/or other post processing tools) is expected to be available by May 18, 2012. Results from these simulations will be compared with ato utilized in the evaluation methodologies measures identified at E1 above. and the

regional evaluation of wetlands performed by the EM Team and MFLs proposed for priority water bodies by the MFLs and Reservations Team. . These simulations include:

- 1) ——— 2006 water use scenario,
- 21) ——— 1995 water use scenario,
- 32) ——— Reduced pumpage scenario
- 43) ——— End of permit water use scenario, and
- 54) ——— The reference condition scenario..

Additional model scenarios will be performed by HAT to support the estimation of groundwater availability and other CFWI teams subsequent to delivery of the USGS ECFT model.

Model output will be used to relate potential aquifer water level changes due to groundwater withdrawals and other water management activities to the existing condition of wetlands, springs, and lakes and saltwater intrusion in the CFWI and to predict potential future changes to these natural resources. It is important that the observed environmental conditions, analyses of hydrologic trends and other information be used to corroborate model predictions while considering the scales of the natural system features with the resolution and accuracy of the model and its predictions. The models may be refined through a feedback loop process with existing environmental and hydrologic data to correlate the potential for cause and effect relationships between current/permitted/planned withdrawals and water management activities to modeled and/or measured water level changes at natural system features. Additional wetland evaluations will be conducted as necessary during this process.

A comparison of results from these simulations will be made to quantify changes in water levels that occur due to different groundwater withdrawal rates, land use/runoff changes, and water management activities, such as artificial recharge. These changes will then be compared to results of the wetland field assessments and MFLs, along with results of the hydrologic trend analysis and other related information to corroborate model results. These comparisons will be used to determine the regional extent of impacts and provide an initial assessment of groundwater availability. Additional simulations will be made as needed to better define:

(1) Locations where additional groundwater supplies can be accommodated assuming continuation of current conditions

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

(33) 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 options for a Unified Process for the Environmental Review of CUP/WUPs (Bx)

Methods and analytical tools for the environmental review of consumptive use permits have been independently developed by each of the three districts participating in the CFWI effort. The Groundwater Availability 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 of the districts within the CFWI.

Model Simulations to Estimate Water Level Drawdown Due to Groundwater Withdrawals (E1)

A series of model simulations will be performed by the HAT. Results from these simulations will be compared with a regional evaluation of wetlands performed by the EM Team and MFLs proposed for priority water bodies by the MFLs and Reservations Team. These simulations include:

- (1) Baseline Reference Conditions: A no pumping, a reduced pumping and water management activity condition, or a condition to be considered as the baseline reference condition to assess drawdown for other withdrawal conditions
- (2) 1995–2006 calibration period
- (3) 1995 estimated water use as the early book-end of the calibration period
- (4) 2006 estimated water use as the late book-end of the calibration period and the near peak of water use
- (5) Validation (to the extent that the concept is accepted by the HAT)
 - a) Simulation of 2007–2009 pumping and resultant groundwater levels (encompasses the pumping condition coincident with field data collected by the EM team)
 - b) 2010 estimated water use as the most recent condition (for discussion...however, I can't figure out how to comment or make a discussion item)
- (6) Projected changes using current end-of-permit waters uses and conditions
- (7) Other simulations as needed from evaluation of above simulations

A comparison of results from these simulations will be made to quantify changes in water levels that occur due to different groundwater withdrawal rates, land use/runoff changes, and water management activities, such as artificial recharge. These changes will then be compared to results of the wetland field assessments and MFLs, along with results of the hydrologic trend analysis and other related information to corroborate model results. These comparisons will be used to determine the regional extent of impacts and provide an initial assessment of groundwater availability. Additional simulations will be made as needed to better define:

- (1) Locations where additional groundwater supplies can be accommodated assuming continuation of 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.

Modeling Evaluation (E2)

Model output will be used to relate potential aquifer water level changes due to groundwater withdrawals and other water management activities to the existing condition of wetlands, springs, and lakes and saltwater intrusion in the CFWI and to predict potential future changes to these natural resources. It is important that the observed environmental conditions, analyses of hydrologic trends and other information be used to corroborate model predictions while considering the scales of the natural system features with the resolution and accuracy of the model and its predictions. The models may be refined through a feedback loop process with existing environmental and hydrologic data to correlate the potential for cause-and-effect relationships between current/permitted/planned withdrawals and water management activities to modeled and/or measured water level changes at natural system features. Additional wetland evaluations will be conducted as necessary during this process.

Develop Planning Level Estimates of Groundwater Availability (E34)

<u>Tasks</u>	<u>Begin</u>	<u>End</u>
<u>Develop estimates of groundwater availability</u>	<u>5/18/2012</u>	<u>8/2012</u>

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 can be accommodated, the locations where withdrawals and water management activities are in approximate balance with groundwater availability, and the locations where withdrawals are limited due to the extent of current and/or predicted impacts to wetlands, springs and lakes in the CFWI. An evaluation of whether adopted minimum flows and levels will be met shall also be performed. Based on results of the analyses and consideration that regulatory constraints be met including a requirement that minimum flows & levels not be violated, estimates of groundwater availability will be determined for specific withdrawal conditions. Model simulations of currently permitted and, projected 2013 and 2030 demands (or other future condition as agreed upon by the stakeholders) will also be performed to assess potential groundwater availability beyond the current time frame.

Groundwater Availability Summary Report (E4)

A summary report describing the results of the data and information described in the previous sections will be compiled. The report will present unified conclusions and options regarding sustainable groundwater withdrawals and water management activities in the CFWI that will support future water supply planning and rulemaking by

all three water management districts. The final report, conclusions and options will be presented and discussed at public workshops.

Identify evaluation methodologies (E1).

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.

Recovery and Prevention Strategies – future phase activity

CFWI Regional Water Supply Plan

_____ This activity follows the determination of groundwater availability.

_____ The types of activities included are:

- _____ Minimum flows and levels
- _____ Recovery Strategy

- ~~Regional water supply planning~~
- ~~Water Conservation~~
- ~~Storage, Flows and Ecosystem Protection/Restoration Projects~~
- ~~Regulatory~~
- ~~Long term monitoring to assess compliance and effectiveness of the strategies that are implemented~~
- Financial

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.

Identify planning horizon for CFWI Regional Water Supply Plan (F1)

The CFWI Water Supply Team will need to reach consensus on the planning horizon for the Plan.

Develop and assimilate population and water demand projections (F12)

The CFWI Water Supply Team will utilize a consistent methodology for water demand projections. The population projections shall be performed 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.

Review and understand evaluation measures (F23)

The CFWI Water Supply Team will review evaluation measures in development of the Regional Water Supply Plan used by each WMD. The Team will develop a consensus approach for the utilization of evaluation measures in CFWI to ensure a consistent application of the evaluation measures in the planning process. It is anticipated that this will best be accomplished over a series of face-to-face meetings.

Develop water conservation component for the CFWI (F34)

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

Evaluate and assess water sources done by Groundwater availability team (F45)

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 CFWIWF, 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 (F56)

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 (F67)

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 (F78)

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 (F89)

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

DRAFT

APPENDICES

DRAFT

CFWI Schedule

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)		6/30/12
	Initial Model Scenarios (A4)		4/30/12
	Documentation (A5)		5/30/12
Environmental Measures Team ----- (B)	Evaluate current conditions (B1*)		3/31/12
	Relate current conditions to output of hydrologic model (B2x)		6/30/12
Minimum Flows and Levels and Reservations Team ----- (C)	Review and understand the various approaches used by the WMDs to set MFLs/Reservations (C1)	June 22, 2011	Sep. 30, 2011
	Identify commonalities and differences in the approaches currently used to set criteria (C2)	June 22, 2011	Nov. 30, 2011
	Develop options for a standard methodology to establish MFLs and Reservations (C3 a,b,c- MFLs Sub-Tasks)	Sep. 30, 2011	Mar. 31, 2012 <u>Aug 31, 2012</u>
	<u>Develop options for a standard methodology to establish MFLs and Reservations (C3 e,f – Reservations Sub-Tasks)</u>	<u>March 31, 2011</u>	<u>October 31, 2012</u>
	<u>Develop options for uniform definitions of “significant harm” for different water body types (wetlands, lakes, rivers, springs) (C3d – MFLs Sub-Task)</u>	<u>Sep. 30, 2011</u>	<u>Oct. 31, 2012</u>
	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)	June 22, 2011 (C4a) Feb. 28, 2012 (C4b)	Jan 31, 2012(C4a) Aug. 31, 2012 <u>Mar 31, 2013</u> -(C4b)
	Develop options for guidelines for implementing MFLs in the consumptive use permit program, planning efforts, and water shortage determinations where appropriate (C5)	Apr. 30, 2012	Sept 30, 2012 <u>Nov 30, 2012</u>
	Coordinate with the Environmental Measures and Hydrologic Assessment Teams to develop options for measures	<u>Jan 1, 2012</u>	June 30, 2012

	to 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)	Jan. 1, 2012	June 30, 2012 <u>Dec 31, 2012</u>

Data Monitoring & Investigations Team ----- (D)	Standard data inventory sheet (D1)		Aug 31, 2011
	Intra-and inter-agency investigation of other existing data (D2)		Oct 31, 2011
	Inventory Development (D3)		Jan 31, 2012
	<u>Establish Minimum Standards for Data Collection (D4)</u>		<u>Dec 31, 2012</u>
	Collaboration with other technical initiatives (D45)		Dec 31, 2012
Groundwater Availability Team ----- (E)	<u>Identify evaluation measurement methodologies (E1)</u>	<u>1/1/2012</u>	<u>8/31/2012</u>
	<u>Ongoing Policy Issues for SC (E2)</u>	<u>2/16/2012</u>	<u>12/31/2012</u>
	<u>Groundwater Withdrawal Impacts (E23)</u>	<u>5/18/2012</u>	<u>8/31/2012</u>
	<u>Estimate of Groundwater Availability (E34)</u>	<u>5/18/2012</u>	<u>8/31/2012</u>
CFWI Regional Water Supply Plan Team ----- (F)	<u>Identify planning horizon for CFWI Regional Water Supply Plan (F1)</u>	<u>12/12/2011</u>	<u>12/30/2011</u>
	<u>Develop and assimilate population and water demand projections (F12)</u>	<u>12/19/2011</u>	<u>6/29/2012</u>
	<u>Review and understand evaluation measures (F23)</u>	<u>12/12/2011</u>	<u>3/30/2012</u>
	<u>Develop water conservation component for the CFWI (F34)</u>	<u>12/19/2011</u>	<u>7/2/2012</u>
	<u>Evaluate and assess water sources done by Groundwater availability team (F45)</u>	<u>7/2/2012</u>	<u>8/31/2012</u>
	<u>Develop water supply development component options (F56)</u>	<u>2/1/2012</u>	<u>11/30/2012</u>
	<u>Develop water resource development component options (F67)</u>	<u>2/1/2012</u>	<u>11/30/2012</u>
	<u>Conduct public workshops and meetings on the Regional Water Supply Plan (F78)</u>	<u>3/30/2012</u>	<u>3/29/2013</u>
	<u>Produce Draft Regional Water Supply Plan (F89)</u>	<u>2/1/2012</u>	<u>12/28/2012</u>

DRAFT

Figure 1- County, WMD and SWUCA Boundaries

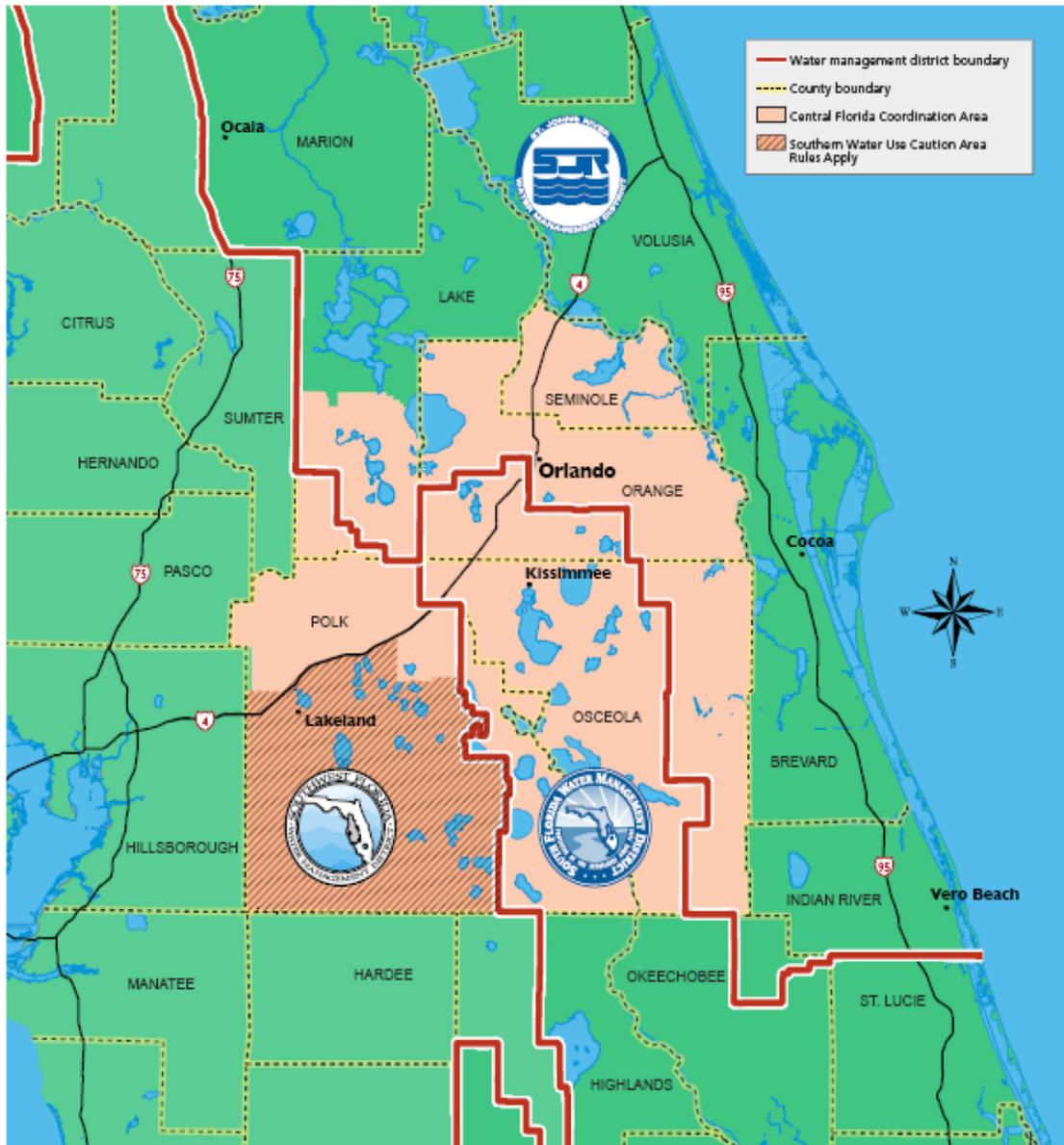
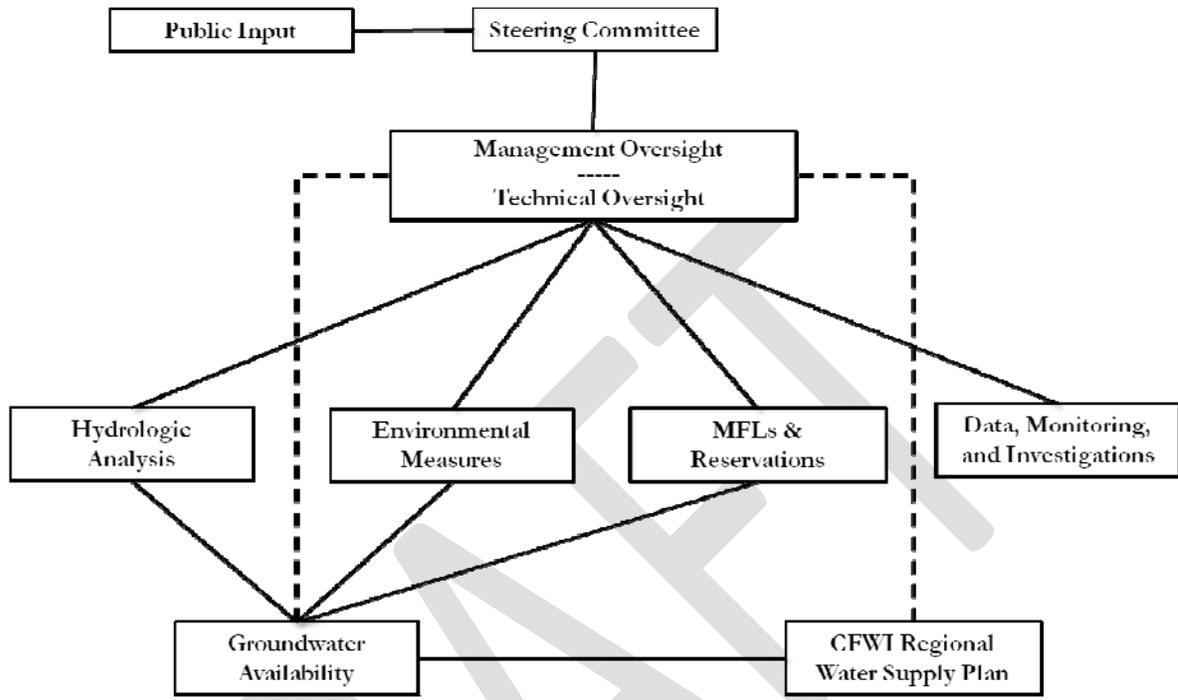


Figure 2- Central Florida Water Initiative Organization



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

~~Recovery/Prevention Strategies~~ **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 Buddell 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.

DRAFT

VI. AMENDMENT

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

DRAFT

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