Questions Answered During the Central Florida Water Initiative (CFWI) Webinar

1. **What is going to be the biggest challenge to meeting the water needs in the CFWI?**

   The biggest challenge is to come up with water supply options that are cost effective while also protecting the water resources of the area.

2. **Will there be a regional water supply authority in the CFWI area?**

   The CFWI encompasses most of central Florida. Several years ago St. Cloud, TOHO Water Authority, Polk County, Orange County and Reedy Creek (STOPR) formed to discuss water issues. They work closely together and that is anticipated to continue. Additionally, in Polk County, discussions are under way about creating a water supply entity that will address future water supply needs. Polk County has 17 municipalities as well as the County that provide water. In Southwest Florida Water Management District (SWFWMD), there are three regional entities that have helped address the water supply issues and have been instrumental in meeting the long-term needs. They are very effective programs. One is in Tampa Bay, one in Charlotte Harbor area and one in the Withlacoochee River region.

3. **We have been hearing about the groundwater shortfall for years. What is new now?**

   The water management districts were formed based along surface watersheds. Groundwater does not follow the same boundaries so the three water management districts, working with the utilities and other entities, such as the Florida Department of Agriculture and Consumer Services, have developed a groundwater model that spans the entire region. Then the process looked at the springs, lakes and wetlands in the region and measuring sticks were developed to compare them consistently. Work has now concluded after the past year and a half to determine the groundwater availability.

4. **How are water conservation practices and best management practices important in this process?**

   One of the great findings in the CFWI process is the amount of conservation that has already been accomplished in this area. One of the measuring sticks is gallons per capita per day. That is how much each person uses each day, and there has been a 40 percent decrease in the per capita – gallons per day. There has been an increase of one million people in the area but the same amount of water use, so great strides have been made in this area in water conservation. In agricultural water use over the last several decades, there has been a change to more efficient irrigation systems. There are some specific programs going on in the CFWI area, such as mobile irrigation labs to help farmers evaluate the efficiency of their irrigation systems, look at upgrades to their equipment or just change their best management practices to conserve and get more production with the same amount of water. There is a weather network called the Florida Automated Weather Network. Recently, farm-specific weather stations have

been installed. There are now mobile applications that can be used with the weather stations so farmers can schedule irrigation from their phone and use results from the network to tailor the irrigation practices to the needs of a specific crop. Also in public supply, conservation is the best way to extend the life of our water supply, so it is important to practice conservation and do what is needed to encourage it. Most utilities use various conservation measures and initiatives to encourage citizens to participate, such as toilet replacements and irrigation system monitoring devices, which lead to better and more efficient use of water.

5. **If our springs are below their minimum flows and levels (MFLs), how is it that we have more available for new consumptive use permits?**

   The springs are reaching their MFLs now. One of the sustainable limits of groundwater withdrawal in the CFWI is the springs of the Wekiva because at approximately 850 mgd, those springs will not be able to meet their MFLs. This has been monitored for the past several years and now acknowledged that we are reaching the sustainable limits to not impact those springs.

6. **If a municipality is not a water supplier, than what is their role in this process?**

   If a city is not a supplier, but a bulk water distributor, their responsibility would be to run their system very efficiently and look for additional conservation opportunities, and to encourage their citizens to be conscientious about their water use. Irrigation requires a lot of water and any effort to reduce irrigation is a great way to help. The cities can be involved in regional conservation programs and help educate the water users. All cities and their residents are also encouraged to be involved in the CFWI process, to understand the process and provide input on how to meet our long-term needs for water.

7. **Agriculture is a large water user in the CFWI. What is agriculture doing to conserve water?**

   Improving irrigation efficiency is a primary effort under way in agriculture. There are a couple parts to that: there is improving efficiency of the irrigation system itself, and the monitoring and management of the water use. Water is a primary input for agriculture and it can be a significant cost if you figure in the fuel or electricity that's needed to pump water. So for economic reasons in agriculture, it is an advantage to use the minimum amount of water needed to produce the product.

8. **Will water reduction alternatives and alternative supplies be identified through this process?**

   The process will include an evaluation of alternative water supplies — supplies not from the upper Floridan aquifer, which has been a cheap source of water. Water has been available. You drill a well and you have water. The CFWI process is determining that limited additional groundwater we can pumped. For example, in Polk County,

which is not next to the ocean, a desalination plant for seawater may not be practical, but other sources may be, such as going deeper into the ground and tapping less-than-ideal water quality aquifers and hopefully getting enough water to meet future needs.

9. What will be done about existing groundwater deficits and impacts to surface waters?

There is not enough groundwater to meet all future needs. The water supply plan will identify options for how to meet those needs or deficits. The Solutions Team will work on identifying specific strategies. Those strategies will be for Public Supply Utilities and Agriculture. In areas where there have been impacts, strategies will be identified to offset those impacts. There are management strategies that are ongoing right now, such as deepening wells, or relocating wells, or in some cases recharging the aquifer with reclaimed water or other sources.

10. Is the groundwater model available?

The East Central Florida Transient Model (ECFT)] is a high-powered model, so in terms of some of the computer technology needed to run the model – and the amount of data that is in the model – some systems may be limited in their ability to run the model. An average user may not be able to run it.

There is a technical methods workshop on November 7 in Osceola County at the Extension Service Office in Heritage Park. The modelers will attend and be available. So if anyone is interested in the details of that model that would be a great opportunity to talk to that team.

11. How is all of this going to affect the average home water consumer?

As the limits of fresh groundwater are reached, alternatives supplies will cost more. There are techniques to blend water from different sources to keep costs down, but eventually there will be some slight increases in potable water. But, there will be sustainable water supplies for future generations.

12. How in-depth will the Regional Water Supply Plan (RWSP) be in identifying sources and future projects to meet demands?

The RWSP will have a list of more than 125 projects. And, the information will be quite extensive. It will have a project description, how much water could be provided by that project, and who we anticipate will be the project sponsor(s). Through the groundwater analysis there may be some additional groundwater available in parts of the region, and the RWSP will identify management activities that may allow that additional pumping.

13. **In the future, with an approved regional water supply plan, will consumptive use permits be addressed differently?**

    In the CFWI, there are three guiding principles. The first is determining the sustainable groundwater available, and that information is now available. The second is identifying the solutions – what are the strategies for meeting the additional future demands. And, the third is the development of consistent rules and regulations across the boundaries of the water management districts so those resources can be managed going forward.

14. **Who will control the one modeling effort for this initiative and will it be used within the districts in other areas?**

    It will be a collaborative effort among the three water management districts with jurisdiction within the CFWI.

15. **What demographic numbers will you use to determine where water is needed? All areas are not growing at the same rate.**

    In the water supply planning process, the water management districts use population projections from the University of Florida's Bureau of Economic and Business Research. They are the official demographers of the state and the districts are required by state law to use their information. The population projections are at the county level, so the next task is to take the projections and assign the population into public water supply service areas. Demands are regional in nature and water resources are considered on a regional basis. So the planning level numbers work well to look at future demands.

16. **Will the water supply plan be close to finalization before you receive public input such that the districts will not want to make changes or adjustments?**

    No, that is not the intent. The process began more than a year ago with a public meeting and is now just reaching the point of having a document to read and comment on. In late November, a draft plan will be available, and at that point, comments will be actively solicited. Comments will be responded to and changes will be made as needed to the plan as it is finalized. There will be an official 45-day comment period and there will be other opportunities for comment at upcoming public meetings and on the website during the comment period. Final approval of the plan by the water management district governing boards is scheduled for late spring ― April or early May.

17. **South Florida Water Management District (SFWMD) currently has pilot projects using agricultural lands to store water during rainfall events without the need to build expensive infrastructure. Has this group looked into similar projects, as well as how to fund dispersed water storage projects?**

The RWSP team has discussed similar projects, and has identified some of the programs that are currently under way. The process may not look specifically at the Payment for Environmental Services program under way in the SFWMD, but will look at similar projects and where they may be most applicable in the CFWI region.

18. **Is it too late to get involved in the development of the Central Florida Water Supply Plan?**

    It is not too late. If you want to get involved before the release of the draft plan, please contact one of the people listed on the bottom of the homepage of *cfwiwater.com* and a team member will work with you on your concerns and feedback on the water supply plan. Public meetings are scheduled over the next few months where you can participate.

<u>Questions Not Responded To During the Webinar</u> (Due to Time Constraints)

1. **I live on Lake Minnehaha in south Lake County. The Clermont Chain-of-Lakes has been down in its water levels for a number of years now while neighboring John's Lake has sometimes been overflowing, and also we have seen the Harris Chain come way up the last year or so. My neighbor has been meticulously monitoring the lake level. We are nearly four feet below "normal." He says that even in the very hard rains we have had over the past few months that the lake will come up to a certain point then stop no matter how much more rain comes. After the rains subside, the lake begins to go back down and then the same process repeats itself in the next big rain. Can you explain what might cause this phenomenon?**

   Lake levels are a function of many factors, including climate, land use, landscape alterations and water withdrawals. In the Clermont Chain-of-Lakes, climate is by far the greatest factor influencing lake levels. St. Johns River Water Management District (SJRWMD) has performed hydrologic analysis of the water bodies in this system. Withdrawal effects tend to be minimal compared to climate. Since 2005, the area has experienced a large deficit in rainfall of more than 50 inches and this rainfall deficit is the primary cause of the low lake levels.

2. **Can water be moved from one water management district to another water management district?**

   Transfer of water across water management district boundaries and county boundaries is allowable and addressed in Chapter 373, *Florida Statutes* (F.S.), when specific considerations are met.

   <u>Transfers of groundwater across water management district boundaries</u>

   Section 373.2295, F.S., describes the process the water management districts follow when reviewing applications for consumptive uses of water that involves the withdrawal of groundwater from one water management district for use outside that district in another county. Such transfers of groundwater are referred to as inter-district transfers of

groundwater. It is not an inter-district transfer of groundwater if the withdrawal and use are located in the same county. Regardless of the location of the use, the permitting water management district must consider the projected populations of the area where the withdrawal is located, the projected population of the proposed use area, other evidence on future needs of the areas and the water management district's CUP criteria.

Transfers of water across county boundaries

The "local sources first" provisions found in Subsection 373.016(4), F.S., encourages the use of water from sources closest to the area of use before transferring water over long distances to meet demand in areas far from the water source. However, the Legislature acknowledged that under certain circumstances the need to transport water from distant sources might be necessary for environmental, technical or economic reasons.

Section 373.223 (3), F.S., allow water management districts to authorize the transport of ground or surface water across county boundaries, or outside of the watershed from which water was taken, as long as the transfer is consistent with the public interest.

3. **Is the 800/850 mgd the amount now permitted or the amount actually being used?**

   800 mgd is the average amount of groundwater that was used between 1995 and 2010. 850 mgd is the estimated sustainable level of traditional groundwater available for water supply without causing unacceptable harm to water resources and associated natural systems.

4. **Who would be the best person to submit an idea for a partial solution?**

   Please visit our website at *cfwiwater.com* for appropriate contacts or to sign up for periodic information updates.

5. **Can water from the Kissimmee River Basin, which is now sent to Lake Okeechobee, be sent west to other areas of the state that need it (such as western Polk County)? The water is now being discharged to tide, often.**

   Lakes, rivers and creeks in the CFWI area support significant ecological resources, which are protected from harmful impacts that could be caused by proposed withdrawals. However, during wet times, there may be water in excess of what the environment needs and these excess volumes of water can be captured for human uses without negatively affecting the environment. Since these excess flows are generally available only during wet times, they must be stored for later use or augmented by another source that can satisfy demands when the surface water is not available. Further analysis will be conducted to ensure that hydrologic functions of lakes, and downstream environmental needs, are maintained when attempting to identify potentially available quantities of surface water. Surface water availability from specific water bodies will be evaluated by the Solutions Team.

   For the Kissimmee River, the SFWMD is proposing initiating development of a water reservation for the system of lakes that are the headwaters to the Kissimmee River that

support the restored river, including ecological functions. A water reservation sets aside water for the protection of fish and wildlife or the public health and safety. When a volume of water is reserved, it is not available for allocation to consumptive uses. Any volume of water not necessary for the protection of fish and wildlife or public health and safety may be certified as available and allocated to consumptive uses.

6. **Who is the water co-op of Central Florida?**

   The Water Cooperative of Central Florida (Cooperative) was created in 2011 via interlocal agreement pursuant Section 163.01(7)(g) and Chapter 189, F.S. The Cooperative was established to form a cooperative entity of Central Florida utility providers to address the funding, planning, preliminary design, final design and construction, comprehensive plan amendments, zoning and land use approvals, and water use permitting for water supply projects to benefit the customers and stakeholders of the Cooperative. The Cooperative recognizes the benefits of regional cooperation and has determined that such partnership is in the best interest of the public. The Cooperative members currently consist of Toho Water Authority, City of St. Cloud, Orange County and Polk County.

7. **Are we having more sinkholes and foundation problems than has existed in the past? I feel this issue can be related to depleting underground water supplies, but I know there are many other issues.**

   Sinkholes form naturally under standard geologic and hydrogeologic conditions throughout much of Florida. Recently, sinkholes have been featured in the media and seem to be occurring more frequently. However, under standard geologic time and processes, sinkholes are likely forming at the same rate they always have in Florida. Several factors influence the perception that sinkholes are occurring more frequently in Florida now than in the past including population growth, sinkhole insurance claims, and triggering events such as heavy rainfall and drought followed by heavy rainfall.

8. **Are any of the districts working on the conjuctive use of water? In other words, use surface water when it is plentiful and allow your wells to rest so that they may be pumped harder when surface water is not available.**

   Yes, for example, in the SWFWMD, Tampa Bay Water uses a blend river water, desalinated seawater and groundwater aimed at ensuring water quality, environmental sustainability, source reliability and adequate supplies for the future.

9. **Do we introduce harmful nutrients by recharging groundwater via wells?**

   Drainage wells can be a source of contamination to groundwater aquifers. However, in the Orlando area in the early 2000s the SJRWMD conducted a study that determined urban drainage wells were not a significant issue to aquifer water quality.

10. **Does the restoration of natural systems play a role in long-term solutions?**

Water supply plans are developed by the water management districts to ensure that an adequate supply of water exists to protect natural systems and to meet existing and future reasonable-beneficial uses. To ensure the sustainability of Florida's water resources, Chapter 373, F.S., provides water management districts with several tools to protect water resources including consumptive use permitting, minimum flows and levels, water reservations and water shortage restrictions. Where impacts have occurred, the water supply plan will include recovery strategies for these water bodies.

11. Are the long-term effects of climate change being factored into the CFWI long-term water supply plan?

Yes, understanding the magnitude of climate change effects is necessary to identify vulnerable infrastructure and to implement an adaptive water supply plan. As part of future water supply development and long-term water supply planning, local governments and utilities can integrate climate change uncertainty into infrastructure planning and incorporate a projected range of climate change effects as constraints when evaluating water supply options.

12. Will the water supply plan be close to finalization before you receive public input such that the districts will not want to make changes or adjustments?

Three workshops are scheduled before the RWSP becomes final. The first public workshop is on September 26 in Winter Park; the second is a technical methods workshop in Osceola County on November 7; and the third public workshop will be held in Clermont on December 12, after the release of the draft plan at the end of November. There will be a 45-day comment period beginning in late November. The draft plan, with modifications based on public input, will not be considered by the water management district governing boards until Spring 2014 so staff has time to make modifications to the draft plan early next year. Please visit *cfwiwater.com* for updates and current information on development of the CFWI RWSP.

13. How will the resulting Central Florida Water Supply Plan affect the consumptive use permitting process?

One of the next phases of the CFWI will include a regulatory group to address permitting issues. It is anticipated the regulatory team will be formed and begin work in early 2014.

14. Will CFWI be encouraging the reduction of use of St. Augustine and other turf grasses for home lawns?

Each water management district promotes, through educational programs, publications, and other district activities, the use of Florida-Friendly landscaping practices.

15. Is anyone at the state level reviewing the need to provide design and financial assistance to maintain aquifer levels in land locked areas of the state such as Polk and Lake counties? The Floridan aquifer and MFLs in this area seem to be

disproportionately impacted by regional withdrawals outside of their area and they currently do not have access to alternative water supplies.

The next phase of the CFWI will include solutions and regulatory teams. These teams will determine appropriate solutions and regulatory initiatives to ensure the future water supply needs of the area are met without causing unacceptable impacts on the water resources of the area. The water management districts anticipate continuing cost-share support to water suppliers in the area.

16. How are local government comprehensive plans affected by the adoption of the regional water supply plan?

In 2005, legislation was passed that requires local governments to amend their comprehensive plans to include a Water Supply Facilities Work Plan within 18 months of the approval of the water supply plan by the water management district governing boards. The work plan is submitted to the Department of Economic Opportunity. The work plan must demonstrate sufficient water supply for at least the next 10 years and identify projects to be developed to meet water demands.