South Florida Water Management District
2011 Upper East Coast Water Supply Plan Update
Comments and Responses
March 9, 2011

The development of a water supply plan is a considerable process that requires collaboration with many stakeholders to complete a plan that meets our needs. The SFWMD appreciates the time and input from the many stakeholders who attended and even presented at the public workshops, reviewed and commented on the plan documents, and provided technical input to the plan.

During this process, chapters were distributed to participants in the process for review and comment. These comments were considered and addressed as appropriate in the draft 2011 Upper East Coast Water Supply Plan Update (plan and appendices) that were distributed in December 2010. This document lists the comments received regarding the complete plan and does not include the remarks that indicated 'no comment'.

Comments are shown as submitted (in black). District responses (in blue) to the comments include explanations, commentary about revisions, or specific revised text (underlined).

Florida Power and Light, Ron Hix

1. **Comment:** Chapter 2, page 31 2nd paragraph 3rd sentence change "The Martin facility uses ~~once-through~~ cooling and cooling tower technology… to The Martin facility uses cooling pond and cooling tower technology…

   District Response: The text has been revised as suggested.

2. **Comment:** Chapter 2, page 31, 4th sentence Add "The use of the cooling pond and cooling tower technology significantly decreases…"

   District Response: The text has been revised as suggested.

3. **Comment:** Chapter 2 page 30 and Page A-45 Both include sentences indicating, "Both power plants anticipate using reclaimed water for part of their needs at some point in the future". In the case of the Martin Plant, it is so geographically remote and Indiantown so small, that use of any significant amount of reclaimed water in the foreseeable future is unlikely (of course we would use it if it is ever available). That being said, the Martin Plant does reuse effluent from its on-site package sewage plant by discharging it to the cooling pond, which is, in fact, the reuse of reclaimed water.

   District Response: The document has been revised as follows with added text underlined: The TCEC plans to use reclaimed water for part of their needs in the future as reclaimed water becomes available.

   The Martin Plant reuses effluent from its on-site package sewage plant by discharging it to the cooling pond.

4. **Comment:** Chapter 2, pg 31, 4th sentence Add "The use of the cooling pond and cooling tower technology significantly decreases…"

   District Response: The text has been revised as suggested.

City of Port St. Lucie Utilities Department, Denise Burton

1. **Comment:** Chapter 4, page 80, paragraph under Figure 2. Modify sentence: ~~The Ft. Pierce Utilities Authority's 10 MGD facility~~ The City of Port St. Lucie's 12-MGD Glades facility is the area's largest wastewater treatment plant.

   District Response: The text has been revised as suggested.

2. **Comment:** Chapter 4, page 81, 5th paragraph: add the following: The Glades WWTF was operational at 6 MGD in 2007 and 12 MGD in 2009. With the opening of the Glades WWTF, Northport was decommissioned in January 2007. Southport will also be decommissioned in early 2011. Due to lack of reuse customers, Glades is currently disposing effluent via the deep injection well. Westport is currently using reuse as its primary means of wastewater management.

   District Response: The document has been revised as follows with added text underlined: The Glades WWTF was operational at 6 MGD in 2007 and 12 MGD in 2009. The primary means of wastewater management at these regional facilities will be reuse via public access irrigation of residential lots and golf courses. In anticipation of future reclaimed water use, the city installed numerous reclaimed water transmission mains. With the opening of the Glades WWTF, the Northport WWTF was decommissioned in January 2007. The Southport WWTF will also be decommissioned in early 2011. The Glades WWTF is currently disposing effluent into a deep injection well until demand and infrastructure is developed in this area. The Westport WWTF is currently using reuse as its primary means of wastewater management.

3. **Comment:** Chapter 4, page 111, Table 11-Table 20. Residential units in St. Lucie County and potential savings of indoor water use through conservation. A copy of the City of Port St. Lucie Number of Dwelling Units and Population by Section showing dwelling units through July 2010 was submitted.

   District Response: The data submitted was reviewed and compared to Shimberg housing data. The housing numbers were very close and the shares seemed to be consistent with the city's dwelling unit data. The District deems the current language is appropriate.

St. Lucie County Utilities Department, Laurie Waldie

1. **Comment:** Appendix B on Figure B-4, the service area for SLCU is not correct as we cover to the county lines.

   District Response: The following text was added: District staff worked with the utilities to map service boundaries for the utility service areas, as shown in **Figure B-1** through **Figure B-4**. In particular, the St. Lucie County utility service area boundary reflects a water supply planning boundary for this 2011 UEC Plan Update. However, it should be noted that the permit utility boundary for St. Lucie County (SFWMD Consumptive Use Permit for St. Lucie County 56-00406-W) encompasses the whole of St. Lucie County, which is not otherwise

served by another existing utility in the utility service areas of St. Lucie County as shown in **Figure B-3** and **Figure B-4**.

City of Stuart Utilities, Mary Kindel

1. **Comment:** Chapter 4, page 81. Please note the following text suggestions: Reclaimed water system interconnects are connections between two or more reclaimed water distribution systems. These systems may be owned or operated by different utilities, or may be shared between two or more domestic wastewater treatment facilities that provide reclaimed water for reuse activities. When two or more reclaimed water systems are interconnected, additional system flexibility is attained, which increases efficiency and reliability. ~~As of 2010~~, The City of Stuart is extending a reclaimed transmission main to provide Martin County ~~were in discussions regarding the City of Stuart providing~~ its excess reclaimed water ~~to Martin County~~ for distribution and use.

   District Response: The text will be revised as suggested.

2. **Comment:** Chapter 6, page 147, Please change the date from 2010 to 2011 for the Martin County Utilities Utility under Bulk Water that states: Martin county has an agreement with Stuart to sell alternative water from 0.15 MGD to 1.62 MGD starting in ~~2010~~ 2011.

   District Response: The text will be revised as suggested.

3. **Comment:** Chapter 6, page 152, Please change the date from 2010 to 2011 for the City of Stuart Utility Summary under Agreement with Martin County: The City of Stuart has entered into a long-term agreement with Martin County to purchase potable water from 0.15 MGD to 0.84 MGD starting in ~~2010~~ 2011 and continuing through 2028….

   District Response: The text will be revised as suggested.

4. **Comment:** Chapter 6, page 152, Please change the non-potable water reclaimed capacity from 2.33 for the year 2010 to 0.00 as this project was delayed and started in 2011 instead of 2010 in the City of Stuart Utility Summary.

   District Response: The text will be revised as suggested.

5. **Comment:** Chapter 6, page 152, Please change the per capita and potable water demands under population and demands from 200 PC to 163-181 and the demands from 3.49 – 4.73 to 3.15 to 3.85.

   District Response: A per capita use rate methodology was utilized in this determination as described in Appendix A, pages 21-24. The District considers these numbers to be correct based on the prescribed methodology.

Florida Department of Environmental Protection, Kathleen Greenwood

1. **Comment:** Chapter 3, page 70, Please state when construction is starting and where the funds are coming from for the CERP C-44 (St. Lucie Canal) Reservoir / Stormwater Treatment Area.

   District Response: Added text is underlined as follows: The reservoir test cells are complete and preliminary construction of this project has begun and is scheduled to continue through 2018. Federal and state funds are used for this project.

2. **Comment:** Chapter 5, page 119, Please list the funding and schedule for the East Coast Floridan Aquifer System Model in the text.

   District Response: The text will be revised as follows: In FY 2011, $105,000 has been budgeted for an independent peer review of the model. The kick-off peer-review meeting was held February 3, 2011. The final peer review report is scheduled for third quarter of 2011.

3. **Comment:** Chapter 5, page 122, Can you further demonstrate the usefulness of the Study of the Floridan Aquifer System at the C-23 Canal Site in Martin County?

   District Response: Added text is underlined as follows: A SFWMD hydrogeologic investigation of the FAS at the C-23 Canal site in north-central Martin County was completed in 2008 as recommended in the 2004 UEC Plan Update (SFWMD 2008). The objective of the study was to gather information needed to characterize the Floridan aquifer system in western Martin County where data was limited. The data gathered will further development of a regional groundwater flow model in support of future UEC planning and regulatory decisions. These data are being used to assess the aquifer, identify available water supply, and develop and update District models.

4. **Comment:** Chapter 3, page 87, Explain more in text what is happening with the St. Lucie and Indian River Counties Water Resources Study

   District Response: Added text is underlined as follows: Five selected alternative plans were analyzed, resulting in the selection of a preferred alternative, and funding alternatives are being explored by the stakeholders.

5. **Comment:** Chapter 5, page 1, Provide an action statement about activities and staff time in text of the Study of the Lower Floridan Aquifer in the Central Florida Coordination Area.

   District Response: Added text is underlined as follows: Toward that end, the SFWMD, in coordination with the SWFWMD and SJRWMD, has developed a four-year plan to investigate the Lower Floridan Aquifer and Boulder Zone in the CFCA. The SFWMD plan targets five areas within the Upper Kissimmee Basin for data collection. Hydrologic and isotope data will be gathered from various zones within the stratographic column. The SFWMD authorized $1,475,693 for the first year of the investigation through FY 2012. Four District staff members are assigned to this project.

6. **Comment:** Chapter 5, page 127, Add text to Water Desalination Concentrate Management and Pilot Study to show how the utilities are using the results of this study to benefit their systems.

   District Response: This section was re-written for clarity and the added text is underlined as follows: The *Water Desalination Concentrate Management and Pilot Study* (Carollo Engineers, Inc. 2009*)* was conducted to evaluate ways to increase treatment efficiency, decrease desalination concentrate by-products, and identify affordable and sustainable treatment technologies in south Florida. The overall goal of the study was to evaluate alternatives for concentrate minimization in south Florida and provide recommendations to utilities regarding treatment technology options and costs. The study provided a systematic evaluation of a concentrate minimization approach, which demonstrated its feasibility as a representative brackish water source. Existing treatment schemes for the four representative RO plants were evaluated and four promising approaches for concentrate minimization were broadly evaluated for the plants in terms of several economic and non-economic criteria. The evaluated concentrate minimization approaches included: 1) dual RO system with intermediate chemical precipitation; 2) brine concentrator and evaporation ponds; 3) brine concentrator and crystallizer; and 4) salt recovery and extraction. The dual RO process with intermediate chemical precipitation was selected as the preferred approach for inland desalination plants within the SFWMD. The total treatment cost with this approach was estimated to be about half that of product water generated with a brine concentrator approach. Due to the observed similarity of salts limiting RO recovery in south Florida brackish waters evaluated in this study, this concentrate treatment approach may be applicable at many brackish desalting plants within the District.

7. **Comment:** Chapter 5, page 127-128, Provide a statement in the text that all minimum flows and levels and water reservations have been completed for the UEC at this time.

   District Response: Added text is underlined as follows: No additional MFLs are scheduled to be adopted in the UEC Planning Area in the next five years. Minimum Flows and Levels being developed in other District planning areas are addressed in the respective regional water supply plan update.

   Water Reservation Activities

   No additional water reservations are scheduled to be adopted in the UEC Planning Area in the next five years. Water reservations being developed in other District planning areas are being addressed in the respective regional water supply plan update.

8. **Comment:** Chapter 6, page 140, Add a statement that the utilities supply reclaimed water to other non-utility users such as recreation/landscaping and power generation users when reclaimed water is available.

   District Response: Added text is underlined as follows: In addition, many utilities have responsibility for wastewater management and most have implemented reuse of reclaimed water. Uses of reclaimed water include the irrigation of parks, golf courses, landscapes, common areas, residential lots, and median strips, as well as power generation. Many of these uses were self-supplied prior to connection with reclaimed water.

9. **Comment:** Chapter 3, Table 7 shows that reclaimed water use was slightly higher in 2004 and 2006 than it was in 2009 and 2010. Is there any explanation for this decline?

   District Response: Added text is underlined that gives an explanation for the decline in Table 7 as follows: The volume of reclaimed water used varies from year to year based on several factors including rainfall and volume of wastewater treated. In addition, there has been some regionalization in the UEC Planning Area. Some flows from smaller facilities have been diverted to larger regional water treatment facilities. As a result, water reuse flows at these regional facilities may decrease until new reclaimed water distribution systems are established.

10. **Comment:** Chapter 4, page 116 and Chapter 5, 130, The document noted that St. Lucie and Martin County had urban mobile irrigation labs (MILs) up until 2008. Are there any future plans to bring those back? Also the Water Conservation discussion noted that a number of Agricultural MILs were still being funded throughout the District – are any of those in UEC?

    District Response: Added text is underlined as follows: The St. Lucie Agricultural MIL services the UEC Planning Area. This MIL is managed and administered by the St. Lucie Soil & Water Conservation District with funds traditionally provided by the FDACS and the SFWMD. In 2011, funds for the MIL were provided by FDACS only.

    Comprehensive Water Conservation Program

    In 2010, five MILs were operating throughout the District—four agricultural MILs and one urban MIL in Big Cypress Basin. In FY 2011, the District continues to fund only the Big Cypress Basin MIL. Anticipated water savings from the MIL Program Districtwide for FY 2010–FY 2014 is approximately 438 MGY.

    The FDACS continues to fund the four agricultural MILs Districtwide (one is the St. Lucie Agricultural MIL that serves the UEC Planning Area). The urban MILs were funded by FDACS and the SFWMD through 2008. However, the Soil & Water Conservation Districts seek other funding sources for the remaining urban MILs.

11. **Comment:** Chapter 3, page 41 Consumptive Use Permitting description needs a slight correction to be consistent with the statute - the reference should be "reasonable-beneficial" not reasonable, beneficial.

    District Response: Changed text is underlined as follows: The right to use water is granted by permit. Consumptive use permitting protects the supply and quality of groundwater and surface water resources by ensuring that water use is reasonable-beneficial, and consistent with the public interest, and that it does not interfere with existing legal uses.

12. **Comment:** Chapter 3, page 44, Table 5, Water Reservations. You might consider modifying the sentence that describes WRDA requirements. WRDA requires the District to "identify the amount of water to be reserved or allocated for the natural system

    District Response: Added text is underlined as follows: Water provided by federally funded restoration projects under the Water Resources Development Act (2000, as reauthorized 2007) also requires the District to identify the amount of water to be reserved or allocated for the natural system and will not be permitted for consumptive use.

13. **Comment:** Chapter 3, page 61, There is a statement that the MFL for the St. Lucie River and Estuary that indicates that the MFL is projected to be violated in the future. My understanding of the original technical work done to establish this was that a violation of this MFL was very unlikely to occur in the future and the prevention strategy was adopted to ensure that operations of future structures didn't change this outcome. Has other work been done to indicate that a violation of this MFL in the future is likely?

    District Response: Added text is underlined as follows: A violation of this MFL is unlikely to occur in the future and the prevention strategy was adopted to ensure that operations of future structures do not change this outcome.

14. **Comment**: Chapter 3, page 72, Stormwater Management and Water Quality Efforts - The Dispersed Water Management Program; Please address in text the funds, schedule, and water benefits

    District Response: Added text is underlined as follows along with highlighted text: The Dispersed Water Management Program is a collective and collaborative entity effort designed to encourage property owners to retain water on their land rather than drain it, accept regional excess runoff for storage, or both.

    Payment for the Environmental Services Program

    In January 2011, the District released a NE-PES solicitation to request proposals from eligible ranchers. Funding for this program will be identified in the Lake Okeechobee Protection Plan Update.

    Water Farming

    To compliment FRESP efforts, a pilot project is in the planning phase for intensively managed agricultural lands, including fallow citrus. The SFWMD is collaboratively working with the Indian River Citrus League to determine the cost-effectiveness of "water-farming," which is storing and treating water on fallow citrus lands. Because this project is in the preliminary planning phase, no timelines or funding has been established.

Florida Department of Agriculture and Consumer Services, Rebecca Elliott

1. **Comment:** Chapter 7, page 166 and Executive Summary, In order to provide more clearly and defined source guidance I suggest adding another "bullet" under Floridan Aquifer System stating that agriculture's use of the Floridan Aquifer should be protected by maintaining the potentiometric integrity of the historic free flowing wells during withdrawals at a 1:10 drought condition by using extremely conservative evaluations for impact assessments in permitting future public water supply withdrawals.

    District Response: The District appreciates the comment. The District considers the current language appropriate. All water users and impact assessments are governed by the Basis of Review for Consumptive Use Permitting.

2. **Comment:** Appendix A, pages 52 & 53, it is not apparent to me, based on the methodology described in vegetable section acreage decreases are projected for this category. Antidotal evidence I have heard recently actually indicates the acreage in this category is more likely to increase than decrease. It seems that the acreage should at least remain the same during this planning horizon.

District Response: For further clarity, the underlined text has been added in Appendix A for vegetable production and agricultural self-supply projection methodology: Vegetable acreage projections were requested from agricultural stakeholders and agencies including UF/IFAS, FDACS, and the Florida Farm Bureau, etc. Input received indicated that vegetable acreage could be negatively impacted due to potential volatility and competition from imports.

Currently, crop projections are generally more challenging to estimate due to economic conditions, citrus diseases, and international competition. While the current conditions indicate little growth in the near future, improvements in the economic climate, development of citrus rootstock, and changes in the international market each have the potential to boost agricultural production in the UEC Planning Area. Agricultural projections are based on best available data and input from industry stakeholders at the time of calculation.

Additionally, the District would like to work with the agricultural community and agencies to develop methodologies and data sources for use in future water supply plans. This goal has been included in Chapter 7, Coordination. Please note that the District will re-evaluate this category during the next update within five years.

3. **Comment:** Appendix A, pages 54 & 55**,** Sod production is currently projected to either stay the same or decrease. This appears to be at odds with the population and landscape projections contained in the plan and your own text regarding sod projections that states "Because the population in the UEC region is expected to grow, there is a potential for increased sod demand." It seems the sod projection range should be based on the low range remaining at the same acreage and the top range of the projection showing an increase in proportion to the increasing population and landscape water use projections.

   District Response: For further clarity, the underlined text has been added in Appendix A for sod production: For this 2011 UEC Plan Update, 2005 and 2010 sod acreage was estimated based on data contained in the SFWMD water use permit database.

   Information about sod acreage projections was requested from agricultural stakeholders and agencies including UF/IFAS, FDACS, and the Florida Farm Bureau. Input received provided little data regarding specific acres for sod. Because of this and the potential for future population growth, an acreage range was used that kept the high projections for 2010 acreage.

   Please note that the District will re-evaluate this category during the next update within five years.

4. **Comment:** Appendix A, pages 56 & 57**,** Greenhouse/Nursery production is currently projected to either stay the same or decrease. This appears to be at odds with the population and landscape projections contained in the plan. It seems the greenhouse/nursery projection range should be based on the low range remaining at the same acreage and the top range of the projection showing an increase in proportion to the increasing population and landscape water use projections.

   District Response: For further clarity, information regarding greenhouse/nursery production has been added in Appendix A as follows: For this 2011 UEC Plan Update,

information from the SFWMD water use permit database and the USDA (2007) was used to estimate 2005 and 2010 greenhouse/nursery acreage. Based on the data received the 2010 acres were assumed to remain in production through the planning period.

Please note that the District will re-evaluate this category during the next update within five years.

5. **Comment:** Appendix A, pages 58**,** Improved pasture with facilities in place to deliver water is eligible for water use permits. Agricultural interest with water use permits for improved pasture acreage also use water to raise or enhance the cow/calf "crop" based on economic considerations – not just exclusively for drought relief. The permits issued to this category establish them as existing legal users of the water supply but the current Draft UEC WSP omits them in the planning process. This is inconsistent with every other permitted category of use – including cattle watering. A change in the "no planning" policy regarding improved pastures so they can be included as part of the water supply planning process, for both existing and future uses, would result in a more comprehensive plan.

   District Response: For further clarity, information regarding improved pasture has been revised in Appendix A as follows: In past water supply plans, improved pasture has not been included in the total water demands because of the uncertainty associated with irrigation practices and the number of acres of improved pasture. A review of the actual pumpage data provided by permit holders is insufficient to make projections at this time. The District did not include projections for improved pasture water use in this UEC Plan Update, but intends to work with the other water management districts and the FDEP on a cohesive state-wide methodology. Water demand projections for improved pasture will be addressed in future water supply plans.

Treasure Coast Regional Planning Council, Michael Busha

1. **Comment:** Council appreciates the work of the water management districts in evaluating future water demands, developing water supply alternatives, and planning for the future water supply for the region.

   District Response: The District thanks the council for this comment.

2. **Comment:** Council supports the water management districts in setting goal-based objective and measureable standards for water conservation. However, Council requests that the water management districts allow local governments to decide on the best way to meet the conservation goals, and not implement regulatory procedures to coerce local governments to adopt ordinances and enforce their regulations. Each local government should take action to achieve water conservation goals in a way that is most appropriate for their community.

   District Response: The District Conservation Program encourages a goal-based water conservation approach for utilities on a voluntary basis and is delineated in Chapter 4, pages 92 – 95.

3. **Comment:** Council recognizes the great challenge for the water management districts to decrease the amount of water lost to tide and increase the amount of water stored for use at a later time. Council encourages the water management districts to more aggressively

pursue water storage in all available capacities, including reservoirs, water farming, and aquifer/storage and recovery if feasible.

District Response: The District appreciates the comment and the District continually looks for ways to more aggressively develop water storage. This is described in Chapters 3 and 4.

4. **Comment:** Council encourages the water management districts to be more aggressive when issuing consumptive use permits to ensure that new developments are prepared for water reuse. New developments should be installing the infrastructure necessary to utilize reclaimed water at the initial time of development if there is a reasonable likelihood that this type of water will become available in the future.

   District Response: The District encourages the use of reclaimed water where feasible. Applications for water use permitting are required to use reclaimed water unless not feasible. The District encourages local governments to adopt ordinances that facilitate the use of reclaimed water. This is described in Chapter 7.

Florida Fruit and Vegetable Association, Kerry Kates

1. **Comment:** Regarding citrus acreage within the UEC Planning Area, it is understandable, given the current state of the industry as a result of both canker and greening, why the District has projected overall agricultural water demand to decline from 159 MGD to ~137 MGD by 2030. My concern is that the resilience and adaptability of the citrus industry might not fully be recognized; growers are already replanting denser groves, anticipating shorter life spans for the trees, while others are transitioning to different commodities (i.e. low chill peach stock), and the continued research in the realm of disease control and eradication brings us closer to a viable, long-term solution every day. According to the current draft, improved pasture acreage within the UEC area is expected to increase from 19,000 to 45,000 acres, carried by the assumption that the majority of this land will be provided via citrus conversion. As previously stated, it is my belief that the industry will persevere to overcome its current obstacles; improved pasture irrigation is not included as a water demand projection, meaning that should this acreage that the District has allocated toward future pasture land stay within the citrus industry, its water allocation, for planning purposes, will have been lost.

   District Response: For this 2011 UEC Plan Update, improved pasture acreage was developed based on data contained in the SFWMD water use permit database. The current acreage permitted as improved pasture is approximately 43,000 acres and the projected growth was based on input from agricultural stakeholders including IFAS and the Florida Farm Bureau.

   For further clarity, information regarding improved pasture has been revised in Appendix A as follows. In past water supply plans, improved pasture has not been included in the total water demands because of the uncertainty associated with irrigation practices and the number of acres of improved pasture. A review of the actual pumpage data provided by permit holders is insufficient to make projections at this time. The District did not include projections for improved pasture water use in this UEC Plan Update, but intends to work with the other water management districts and the FDEP on a cohesive state-wide methodology. Water demand projections for improved pasture will be addressed in future water supply plans.

The citrus acreage projections were developed based on significant input from the same agricultural stakeholders mentioned above and the Indian River Citrus League. Because of the many factors adversely affecting citrus production it was agreed to estimate gross water demand. It was deemed appropriate to use ranges for future acreage and water demand projections for this crop category to reflect the potential for a citrus recovery and increase in acreage production.

2. **Comment:** The demand for Recreational/Landscape Self-Supply is expected to almost triple from the 2005 baseline of 17 MGD to 45 MGD, an overall increase of 165%. As defined by the draft, this category includes golf courses, parks, large green spaces and large irrigated common areas within residential areas. Additionally, the population within the planning area is expected to increase from the 2005 baseline estimate of 382,324 to a staggering 791,861 by 2030. To accommodate these projections and the expected growth, intuitively, it would make sense to assume a correlation between additional green space/population increase and an upswing in both sod and greenhouse/nursery acreage. During this projected period of growth from 2010 to 2030, the draft planning document does not account for or include expansion within these two categories, assuming that growth within the sod and greenhouse/nursery industries will be stagnant and maintain their current acreages of 5,211 and 1,943, respectively. To keep up with this estimated growth and assuming that local resources would be utilized, it would seem appropriate that both these industries would see expansion over the course of the next 20 years to provide the materials for not only the initial improvements, but also for the ongoing maintenance and occasional upkeep of the lawns, parks and other miscellaneous recreational/green spaces.

   District Response: For further clarity, the underlined text has been added in Appendix A for vegetable production and greenhouse/nursery production: For this 2011 UEC Plan Update, 2005 and 2010 sod acreage was estimated based on data contained in the SFWMD water use permit database.

   Information about sod acreage projections was requested from agricultural stakeholders and agencies including UF/IFAS, FDACS, and the Florida Farm Bureau. Input received provided little data regarding specific acres for sod. Because of this and the potential for future population growth, an acreage range was used that kept the high projections for 2010 acreage.

   For this 2011 UEC Plan Update, information from the SFWMD water use permit database and the USDA (2007) was used to estimate 2005 and 2010 greenhouse/nursery acreage. Based on the data received the 2010 acres were assumed to remain in production through the planning period.

   Currently, crop projections are generally more challenging to estimate due to economic conditions, citrus diseases, and international competition. While the current conditions indicate little growth in the near future, improvements in the economic climate, development of citrus rootstock, and changes in the international market each have the potential to boost agricultural production in the UEC Planning Area. Agricultural projections are based on best available data and input from industry stakeholders at the time of calculation.

Additionally, the District would like to work with the agricultural community and agencies to develop methodologies and data sources for use in future water supply plans. This goal has been included in Chapter 7, Coordination. Please note that the District will re-evaluate this category during the next update within five years.

3. **Comment:** My final comment pertains to the reliance of reclaimed/reuse water to supplement and offset the use of surface and groundwater withdrawals. While the Association fully supports the use of reclaimed water and views it as an essential component of both current and future water resource planning for the entire state, the concern is the effect the EPA's numeric nutrient criteria for Florida's inland waters might have on the proposed UEC Water Supply Plan. Should this criteria go into effect in its present form approximately 12 months from now, as it is currently slated to do so, it would drastically impact how and where reclaimed water could be utilized. Seen as a point source for both phosphorus and nitrogen, reclaimed water would not be allowed for the irrigation of golf courses, public access areas and other green spaces if these areas have the potential to drain or sheet flow to adjacent lakes and streams. Should this come to pass, the current Water Supply Plan would be greatly impacted, requiring revisions and reassessments of water supply demands and sources.

   District Response: District staff continues to monitor developments in the numeric nutrient criteria. At this time, it is uncertain what the impacts of the proposed criteria will be related to the application of reclaimed water. The District has established a team that is providing input and is reviewing the process and impacts of the numeric nutrient criteria that will be addressed in the next update to this plan.

United States Army Corps of Engineers, Orlando Ramos-Gines

1. **Comment:** We are concerned that C-23, C-24, C-25, and C-44 reservoirs are mentioned as future additional sources for public water-supply purposes within the upper east coast water-supply basin. CERP was authorized for environmental water supply and other water water-supply needs of South Florida. Environmental water-supply, however, is the primary use for Indian River Lagoon South project components. For example, page 55 of the draft plan indicates "As stated earlier in this chapter, the CERP Indian River Lagoon – South Project C-44 Reservoir component may make surface water available for future consumptive use. The Governing Board may certify that water from the C-44 Reservoir is available for allocation prior to issuance of consumptive use permits as required by District rules (Section 3.2.1(G), Basis of Review)". Please see:
   (a). Pages 38 and 39, last paragraph and top of page;
   (b). Pages 41, 42 and 43, in the box. Note the definition of "Consumptive Use Permitting", and then the final sentence on page 43, i.e. "limits increased use...to existing users."
   (c). Page 47, first paragraph, note the last 2 sentences referencing C-23 and C-24 reservoirs;
   (d). Page 55, last paragraph;
   (e). Page 58, 1st paragraph, this seems to contradict item (c) above;
   (f). Page 64, number (1), last sentence;
   (g). Pages 66 and 67, last paragraph and top of page, even for the C-23/C-24 water reservation, the SFWMD will permit that water for consumptive use as long as the applicants "provide reasonable assurances that their proposed use of water will not withdraw water that is reserved for the protection of fish and wildlife". Also see the 4th

paragraph on this page (Restricted Allocation Area Rule) that seems to again contradict the consumptive use issue;
(h). Pages 85 and 86, last paragraph (The CERP Indian River ...) and top of page, 2nd to last sentence;
(i). Page 139, 2nd paragraph. "However, it is premature to identify potential volumes of water anticipated to be available until federal funding for these components is obtained."

District Response: In Chapter 3 under "resource protection overview" there is a list of the tools provided to the District to ensure the sustainability of Florida's water resources, Section 373.701, F.S. The resource protection programs include, but are not limited to, consumptive use permitting, minimum flows and levels, water reservations, and water shortage practices.

The intent of the CERP C-44 project is to capture water from the C-44 Canal to reduce extreme peaks of freshwater discharges to the St. Lucie Estuary. The Indian River Lagoon – South (IRLS) Project Implementation Report (PIR) Executive Summary states that "the primary purpose for the IRL-S project is to improve an estuary system that has been degraded by large and frequently occurring discharges of freshwater, and by an excessive accumulation of muck in estuary and lagoon bottoms. The plan includes features that provide a mechanism for re-directing these excess freshwater discharges, thus reducing harmful discharges into the estuaries, providing water quality treatment, (and) restoring native wetland and upland habitat in the watershed".

The District Basis of Review For Water Use 2010, 3.2.1 Restricted Allocation Areas states that "No additional surface water will be allocated from District canals C-23, C-24 and C-25, or any connected canal systems that derive water supply from these District canals, over and above existing allocations. No increase in surface water pump capacity will be recommended".

For further clarity, the document (Chapter 3) was revised with added text underlined, The Governing Board may certify that <u>additional</u> water from the C-44 Reservoir is available for allocation for consumptive use as required by District rules [Section 3.2.1(G), Basis of Review; SFWMD 2010a].

The document was revised with the following text: <u>Although additional surface water may be available in the future from CERP reservoir construction projects, at this time, it is premature to identify potential volumes of water anticipated to be available until construction is complete, and the projects are operational</u>.

2. **Comment:** Regarding the C-23/C-24 component water reservation, how do SFWMD will ensure that water users are compliant and will "provide reasonable assurances that their proposed use of water will not withdraw water that is reserved for the protection of fish and wildlife"?

District Response: The District Basis of Review for Water Use 2010 delineates permitting procedures in Section 1.1 and restricted allocation areas in Section 3.2.1.

1.0 PERMITTING PROCEDURES. 1.1 Objectives Chapter 373, Florida Statutes (F.S.), enables purpose of the water use regulatory program is to ensure that those water uses permitted

by the District are reasonable-beneficial, will not interfere with any presently existing legal uses of water, and are consistent with the public interest pursuant to Section 373.223, F.S. The District has adopted rules for regulating the consumptive use of water, which are set forth in Chapters 40E-2 and 40E-20, Florida Administrative Code. The Basis of Review is incorporated by reference into Chapter 40E-2. The Basis of Review must be read in conjunction with Chapters 40E-2 and 40E-20, as applicable. The objective of the Basis of Review is to further specify the general procedures and information used by District staff for review of water use permit applications. All criteria in the Basis of Review applies to processing individual permit applications, and specified criteria applies to processing of general permit notices of intent. The criteria contained herein are flexible, with the primary goal being to meet District water resource objectives.

3.2.1 Restricted Allocation Areas. Due to concerns regarding water availability, the following geographic areas are restricted with regard to the utilization of specific water supply sources. These areas and sources include the following:

B. C-23, C-24 and C-25 Canal System - No additional surface water will be allocated from District canals C-23, C-24 and C-25, or any connected canal systems that derive water supply from these District canals, over and above existing allocations. No increase in surface water pump capacity will be recommended.

3. **Comment:** The current CERP Integrated Delivery Schedule for construction does not depict construction of the C-23, C-24, and C-25 reservoirs and storm-water treatment areas (STAs) by or before 2020. Designing these reservoirs and STAs would take several years before they are constructed.

   District Response: We appreciate this comment.

4. **Comment**: Additional water withdrawals from the surficial aquifer, depending on the locations where withdrawals are conducted, may have impacts on IRLS reservoirs, STAs, and natural water storage areas (seepage increases), affecting project components abilities to provide water for environmental purposes. It is not clear if a determination has been made if these resources for primary environmental water supply may or not be impacted by the proposed public water-supply plan.

   District Response: The primary purpose for the IRL-S project is to improve an estuary system that has been degraded by large and frequently occurring discharges of freshwater, and by an excessive accumulation of muck in estuary and lagoon bottoms. The plan includes features that provide a mechanism for re-directing these excess freshwater discharges, thus reducing harmful discharges into the estuaries, providing water quality treatment, (and) restoring native wetland and upland habitat in the watershed. (IRLS-Project Implementation Report (PIR) Executive Summary). There are multiple locations within the PIR that reference the potential for the project to augment agricultural water supplies. For example:

   This will be accomplished by providing additional water storage areas, creating an additional source for agricultural water supply. These new sources of agricultural water supply will result in a reduction of demand on the Floridan aquifer system (IRLS PIR, page S-xi).

The purpose of this component is to capture local runoff from the C-23 and C-24 Basins…… This water can then be routed to the C/23/24 STA or returned to C-23 or C-24 when there is a need to reclaim storage capacity or meet a water supply demand. The component is designed for stormwater attenuation to the estuary to control salinity and to provide an additional source of agricultural water supply (PIR Section 7, pages 10-11)