

2020 Regional Water Supply Plan

Comments and Responses

November 2020



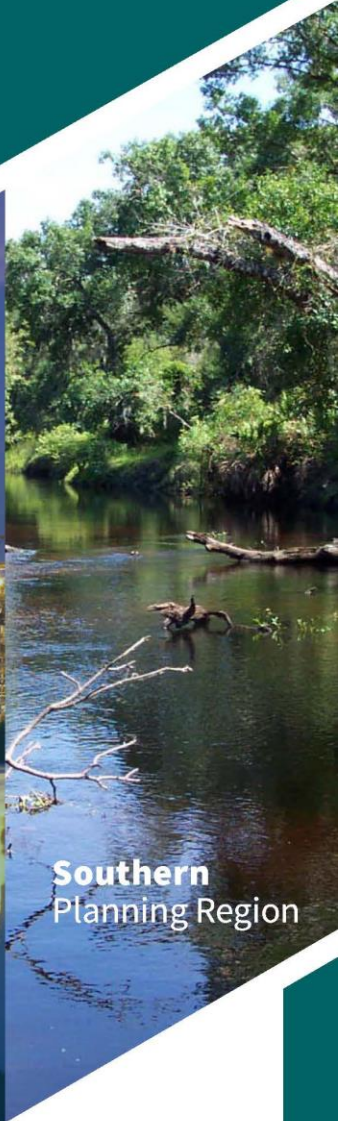
Northern
Planning Region



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Heartland
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Southern
Planning Region

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2020 Regional Water Supply Plan Comments and Responses

Final Draft
November 2020

For further information regarding this plan, please
contact the Water Supply Section at:

2379 Broad Street
Brooksville, FL 34604-6899
(352) 796-7211 or
(800) 423-1476 (Florida Only)

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Final Draft

Comments and Responses

Dan Hilliard, online comments received June 17, 2020

Comment:

Many bases covered in the draft and I readily admit it was mildly mind numbing. We have, in the course of my life, effectively destroyed water resources in the state and it is my considered opinion that this has occurred due over time to ignorance, misplaced priorities and to some degree a lack of effective collaboration by state agencies tasked with water resource regulation. Substantial evidence of this is found in the state's Integrated Water Quality Assessment (303d list). The District's 2020 Water Supply Plan draft illustrates the very narrow focus of attention upon supply while ignoring impacts of water use, primarily in context of resultant pollution from use, and to some degree on system(s) flow for our springs and rivers. Emphasis is on "systems" due to the complex relationships found in rainfall, hydrology, pollution paths etc. The public perception is such that no confidence is given to effective state agency function in this endeavor due lack of productive collaboration. Put another way, FDACS cares not about agriculture impacts on ground water pollution, FDEP rubber stamps whatever comes their way and the water districts use arbitrary standards in development of MFL Rules. Who is in charge of our future? Two suggestions: 1) Take a more aggressive position in promoting infrastructure for capture of reclaimed water and further, the promotion of re-use supply for both commercial and residential consumers. A single example would be the requirement for permit applications for residential supply to rely on reclaimed water for residential irrigation. This approach might also be utilized during permit renewal processes. If it works for the International Space Station I suggest it might work here in Florida also. 2) Promote effective integrated regulation between state agencies. The 303d List clearly illustrates this is not happening at present. WE NEED SOLUTIONS!!!

Response: *The Southwest Florida Water Management District's 2020 Regional Water Supply Plan (RWSP) was prepared to meet the requirements of Section 373.709, Florida Statutes (F.S.). The RWSP is not self-implementing, but instead serves as a regional, planning-level assessment of projected water demands, potential sources to meet those demands, water-related natural resource constraints, proposed and potential water supply and water resource development projects, and funding opportunities. Any projects identified in the RWSP and proposed for development would be required to undergo comprehensive feasibility assessments to ensure compatibility with established intra- and inter-agency programs and regulations related to the protection of water-related natural resources. With respect to your suggestion on reclaimed water use, the District continues to be a leader in the promotion of and funding for development of this resource as an alternative to traditional water supplies. Since 1987, the District has cooperatively funded over \$412 million for 385 reclaimed water projects, resulting in the development of over 189 mgd of reclaimed water supply.*

Gary Stilwell, online comment received June 19, 2020

Comment: Southern Planning Region Volume – Manatee county industrial (specifically Power Generation) use. Primarily FPL's Manatee power generation Facility data for projections are based on data that is not consistent with fact. This particular facility uses water (primarily for cooling) from a recycled source--it does not supplement from any ground water source for this purpose, and thus the "use" data is not germane. There are uses from ground water for potable uses, but not for generation

cooling. This cooling is an entirely closed system. Given the Company's continued efforts to reduce costs, the potable uses have declined over the last 15 yrs.---NOT increased. Comparing megawatt output with water use is mutually exclusive here. Plant output is essentially entirely dependent on ambient air temperature--NOT water use. Cooling Water flow is constant, regardless of plant output. This supposed relationship of water use to output is a fallacy on the District's part. The District should research and understand Power Plant physics before making such claims.

Response: Thank you for your comment. For the FPL Parrish facility, the projected demands delineated in the RWSP reflect surface water usage. There are no projected groundwater withdrawals for this facility in the Power Generation category. The District's methodology to project Power Generation relies on a combination of metered, historical data and site plans produced for each facility by the power utilities. These data sources, in turn, serve to produce projections that take historical use into account, while also incorporating future plans for each site.

Peace River Manasota Regional Water Supply Authority – Terri Holcomb, P.E., email and attached correspondence received June 25, 2020

Comment: Southern Planning Region, Chapter 1, Page 3 – Add the City of North Port as one of the Authority's wholesale water customers.

Response: The text was revised as requested.

Comment: Southern Planning Region, Chapter 1, Page 4 – Delete "W" from the Authority's acronym in the first paragraph.

Response: The text was revised as requested.

Comment: Southern Planning Region, Chapter 1, Page 4 – Revise the last sentence of paragraph two as follows: "...developing portions of Charlotte ~~County~~ and Sarasota counties."

Response: The text was revised as requested.

Comment: Southern Planning Region, Chapter 1, Page 4 – Add (PRF) after Peace River Facility in paragraph two.

Response: The text was revised as requested.

Comment: Southern Planning Region, Chapter 1, Page 4 – Revise the second sentence of paragraph two as follows: "The facility has a 6.5 billion-gallon off stream reservoir system and a 6.0 billion-gallon aquifer storage and recovery (ASR) wellfield storage system, which can hold approximately one year's worth of the facility's contracted demands for drought reliability."

Response: The text was revised as requested.

Comment: Southern Planning Region, Chapter 1, Page 4 – Are there no other AWS Projects in the Region? Manatee County, Sarasota County - City of North Port?

Response: The text was revised to reference other alternative water supply projects initiated or completed by local governments and as reflected in Chapter 6 of the Southern Planning Region volume.

Comment: Southern Planning Region, Chapter 1, Page 5 – No mention of the Draft MFLs for the Lower Peace River?

Response: Text on Page 5 of the draft Southern Planning Region volume of the draft 2020 RWSP indicates the District continues to reevaluate minimum flows and levels per the Priority List and Schedule for the Establishment of Minimum Flows, Minimum Water Levels, and Reservations. The text on page 5 and that on Page 32 notes the Priority List and Schedule is included in the Chapter 2 Appendix (specifically Appendix 2.1) to the draft RWSP.

Priority water resources in or partially within the planning region for which minimum flows or levels have not yet been established or are being reevaluated are also listed on Page 30 of the Southern Planning Region volume of the draft 2020 RWSP. These listings indicate the Lower Peace River minimum flows are being reevaluated by the District.

Comment: Southern Planning Region, Chapter 1, Page 8 – In the sixth sentence of the first paragraph, noted name change of Charlotte Harbor as part of National Estuary Program (NEP) to Coastal and Heartland NEP.

Response: In the context of the sentence, the use of Charlotte Harbor is directly referencing the actual waterbody, not its related NEP. Therefore, no changes were made to the sentence.

Comment: Southern Planning Region, Chapter 1, Figure 1-2, Page 9 – Consider adding an icon for NEP's.

Response: Figure 1-2 depicts major landward hydrologic features within the Southern Planning Region. While the Sarasota Bay Estuary Program and the Coastal and Heartland National Estuary Partnership afford additional water resource protection and restoration opportunities, the scale and intended content of the map does not lend itself to depict these and similar programs/designations (i.e., Outstanding Florida Waters, Wild and Scenic Rivers, etc.). Therefore, no changes were made to Figure 1-2.

Comment: Southern Planning Region, Chapter 1, Page 10 – Revise the second sentence of paragraph one as follows: "....a generalized north-south geologic cross section....".

Response: The text was revised as noted.

Comment: Southern Planning Region, Chapter 2, Figure 2-2, Page 28 – Same as figure 1-4. Not referenced in Section 2.

Response: Reference to Figure 2-2 is made on Page 26 of Chapter 2 relative to describing and depicting the Southern Water Use Caution Area (SWUCA).

Comment: Southern Planning Region, Chapter 2, Figure 2-3, Page 31 – Identify Lower Peace River on map.

Response: Figure 2-3 was revised to include identification of the Lower Peace River.

Comment: Southern Planning Region, Chapter 2, Page 33 – Recommend the following edits to the last sentence of the paragraph as follows: "The District, the PRMRWSA and the City are also ~~developing a~~ constructing the Phase 1 regional interconnect to the treatment facility for supply-reliability, to allow supplies from the Shell Creek facility to be utilized regionally and help maintain minimum flow levels in Shell Creek."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 3, Page 40 – The first sentence refers to calculation of the Public Supply base year using "...the average 2011 to 2015 unadjusted gross per capita rate...". Should it be "Unadjusted" or adjusted gross per capita?

Response: *The reference to use of the unadjusted gross per capita rate is correct.*

Comment: Southern Planning Region, Chapter 4, Pages 61-62 – For Figure 4-1 on Page 62, the graph does not match the numbers in the text (115 gaped in 2005 to 97 gaped in 2015) on Page 61.

Response: *The text on Pages 61-62 refers to the overall unadjusted gross per capita use rate reductions achieved Districtwide for the 2005 to 2015 timeframe, whereas Figure 4-1 reflects the per capita reductions achieved specifically within the Southern Planning Region.*

Comment: Southern Planning Region, Chapter 4, Page 76 – Revise sentences 6-8 on page 76 as follows: "The PRMRWSA is permitted to Horse Creek near Arcadia, major withdraw 80 mud annual average and 258 mud tributary of the Peace River max daily from the river, subject to minimum flows availability as follows; ~~the PRMRWSA is permitted to withdraw 10 percent of the total flow of the river up to a maximum of 90 mud when the flow, as measured the previous day at the Arcadia stream gauge, is above 84 mud (130 cfs). Average annual withdrawals by the PRMRWSA during the period 2007 to 2011 were 20.3 mud. In addition to the permitted PRMRWSA withdrawals, three additional permittees withdraw an annual average of 0.2 mud of surface water.~~"

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 4, Page 78 – Table 4-6 on page 78 (Peace River @ Treatment Plant) does not make sense with respect to Peace River current (or future) withdrawals?

Response: *The quantity listed was incorrect for the noted period of record and was updated to reflect the correct value.*

Comment: Southern Planning Region, Chapter 5, Pages 106-107 – Revise the last sentence on page 106 as follows: For conveyance, approximately 20 miles of 24-inch transmission main could tie into the Authority's ~~Phase III C-transmission main system.~~

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 107 – Revise Table 5-4 (Flat ford Swamp) to include the following: Capital Cost of \$113,400,000; Cost/mud of \$22,680,000; Cost/1,000 Gallons of \$5.04; and, Annual O&M/1,000 Gallons of \$1.00.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 107 – Revise Table 5-5 (Cow Pen Slough) to include the following: Capital Cost of \$82,800,000; Cost/mud of \$16,560,000; Cost/1,000 Gallons of \$5.00; and, Annual O&M/1,000 Gallons of \$2.05.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 108 – Revise the Peace River Facility discussion as follows: "With this option, reliability modeling conducted by the Authority has reflected a 15 mud additional yield in finished water capacity by constructing 138 mud of additional Peace River diversion pumping for a total of 258 mud, conveyance to a new 6 billion gallon (big) Reservoir for additional raw water storage for a total of 12.5 big in the reservoir system, and a Peace River Facility (PRF) treatment capacity expansion of 2624 mud. ~~These expansion quantities rely on the implementation of the Phase 2 Capacity and ASR Wellfield Expansion Project and the partially treated water ASR Project.~~ This project provides maximum utilization of the additional harvesting opportunity of freshwater flows now allowed by the Authority's recently issued 50-year WUP. Thea conceptual siting study analyzed three potential sites for a new 6 big Reservoir on the R.V.RV Griffin Reserve and concluded that the primary constraint of siting the new reservoir is mitigation for impacts to existing wetland habitats and floodplain compensation. See Table 5-6 for a summary of this option's potential costs."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 108 – Revise Table 5-6 (Peace River Facility) to include the following: Capital Cost of \$322,200,000; Cost/mud of \$22,146,667; Cost/1,000 Gallons of \$4.94; and, Annual O&M/1,000 Gallons of \$1.00. General comment (tip) - might be easier to see the Annual O&M cost prior to the Cost/1,000 gallons - so that it is understood to be included in the cost/1,000 gallons.

Response: *The text was revised as requested. The suggestion regarding reordering of the data columns in the project tables was incorporated across all Planning Region volumes.*

Comment: Southern Planning Region, Chapter 5, Page 109 – Revise the last sentence of the first paragraph as follows: "These options will also increase rotational and reserve capacity and provide redundancy of water supplies during emergency conditions."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 109 – Revise the following sentences of the second paragraph as follows: "Five of the Loop System phases are complete or under construction as of 2020 (Phases 1, 1A, 2, 3A, and 3B). The PRMRWSA revisited their loop system in the Integrated Water Supply Master Plan Update (~~2019~~2020)."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 109 – Update Table 5-8 (Regional Integrated Loop System) with the provided Authority project data.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 110 – Revise Table 5-9 (Peace River Facility Brackish Wellfield) to include the following: Capital Cost of \$58,300,000; Cost/mud of \$10,600,000; Cost/1,000 Gallons of \$3.96; and, Annual O&M/1,000 Gallons of \$2.07.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 111 – Revise Table 5-11 (DeSoto Brackish Wellfield) to include the following: Capital Cost of \$78,500,000; Cost/mud of \$15,700,000; Cost/1,000 Gallons of \$5.04; and, Annual O&M/1,000 Gallons of \$2.24.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 112 – Revise Table 5-12 (Manatee County Buffalo Creek Brackish Wellfield) to include the following: Capital Cost of \$38,300,000; Cost/mud of \$12,766,667; Cost/1,000 Gallons of \$4.72; and, Annual O&M/1,000 Gallons of \$2.45.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 112 – Revise the Port Manatee desalination option discussion as follows: "The facility would be designed to withdraw up to 440 mud of seawater, of which 40 mud would be feed water for the desalination process. The facility would produce 20 mud of finished water and 20 mud of concentrate would be diluted with up to 400 mud of seawater (20 to 1 ratio) and discharged to the gulf. Because the concentrate would be discharged in Class III waters outside aquatic preserves or areas designated as OFWs, the potential for obtaining a permit for the discharge would be improved. The proximity of this site to the mouth of Tampa Bay may be advantageous with respect to concentrate disposal, because the large volumes of water entering and leaving the bay during a normal tidal cycle would provide the volume of water necessary for dispersion. See Table 5-13 for a summary of this option's potential costs."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 5, Page 113 – Revise the Venice desalination option discussion as follows: "The withdrawals would theoretically increase circulation in the waterway for a net environmental benefit. The concentrate would be sent through a pipeline with discharge into the Gulf of Mexico. To properly manage the disposal of concentrate from the desalination facility, the intake would be designed to withdraw up to 440 mud from the Intracoastal Waterway, of which 40 mud would be feed water for the desalination process. A treatment efficiency of 50 percent would result in 20 mud of concentrate that would be diluted with up to 400 mud of seawater (20 to 1 ratio) and discharged to the gulf. See Table 5-14 for a summary of this option's potential costs."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 6, Section 3, Surface Water/Stormwater, Page 121 – Revise the last sentence of the Regional Loop System Phase 1 discussion as follows: "Construction began in 2018 and the project is scheduled for completion by December 20212020."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 6, Page 122 – Revise the second to last sentence of the Regional Loop System Phase 3B discussion as follows: "The Phase 3B pipeline is 48-inches in diameter and will be capable of sending an additional 17 mud through the future connection."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 6, Page 122 – Revise Table 6-5 (Regional Loop System) to reflect the following for the Phase 3B project: District Share of \$8,100,000.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 6, Page 123 – Revise the PRMRWSA Partially Treated Surface Water Aquifer Storage and Recovery project discussion as follows: "~~The PRMRWSA partially treated surface water project consists of design, permitting and construction of full-scale surface appurtenances to supply existing ASR wells at the facility. The system originally utilizes fully treated surface water. By converting to partially treated surface water ASR systems, recovery efficiency is anticipated to increase by 3 mud on an annual average basis. The PRMRWSA partially treated surface water project consists of the design, permitting and construction of a 20 MGD pump station, new electrical building and ancillary piping. Uncoupling the ASR system's source water from the requirement of full treatment would eliminate the need to rely on excess treatment capacity for recharging the ASR system, thereby allowing the treatment capacity that is currently reserved for ASR storage to be reallocated toward meeting customer demands.~~ See Table 6-8 for a summary of this project's potential costs."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 6, Page 123 – Revise Table 6-8 (PRMRWSA Partially Treated Surface Water ASR) to include the following: Quantity Produced of 0 mud (there is no actual quantity produced by this project - it is an efficiency of treatment); Capital Cost of \$8,300,000; Cost/mud of \$4,150,000; Cost/1,000 Gallons of N/A; and, Annual O&M/1,000 Gallons of N/A.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 7, Page 132 – Revise Table 7-2, Item 1.3 (PRMRWSA Partially Treated Surface Water ASR) to include the following: Total Project Cost (District + Cooperator) of \$8,300,000; Water to Become Available of 0 mud.

Response: *The table was revised as requested.*

Comment: Southern Planning Region, Chapter 7, Table 7-2, Page 134-135 – Noted that many of the listed water resource development projects are not in the Southern Planning Region (for instance, projects 1.4, 1.6, 1.7, 1.8 and 1.10).

Response: *The intent of Table 7-2 is to reflect the variety of Districtwide water resource development projects throughout all four Planning Regions.*

Comment: Southern Planning Region, Chapter 8, Part C, Section 2, Evaluation of Project Costs to meet Projected Demand, Page 151 – Revise the third paragraph as follows: "The PRMRWSA draft 2020 Integrated Regional Water Supply Plan contains several AWS projects, many of which would

be eligible for co-funding by the District. The PRMRWSA's priority projects would provide for up to 25 mud in additional capacity with capital cost estimate of approximately ~~\$397~~423 million."

Response: *The text was revised as requested.*

Comment: Southern Planning Region, Chapter 8, Part C, Section 2, Evaluation of Project Costs to meet Projected Demand, Page 152 – Revise Table 8-2 (Proposed Large-Scale Water Supply and Water Resources Development Projects by 2040) as follows: 1) Peace River Facility Surface Water System Expansion and Regional Reservoir, Capital Cost of \$332M; 2) replace Regional Loop System and ASR Projects with Phase II Capacity Expansion and New RO Water Treatment Plant, Capital Cost of \$90.6M (round to \$91M).

Response: *Table 8-2 was updated to reflect the requested changes; related updates to subtotals, totals and text references were updated as well for all Planning Region and Executive Summary volumes. Subsequent correspondence from the Authority requested the Regional Loop System to be readded to line item 2, with the Capital Cost for all three items updated to \$365 million. Related changes were made to the table and text to reflect inclusion of the Regional Loop System.*

Manasota-88, Inc. – Glenn Compton, Chairman, email and attached correspondence received June 29, 2020

Comment: Executive Summary, Chapter 1. Introduction (p. 1) – SWFWMD's water supply plan is deficient in many areas. The plan makes unrealistic water availability projections based on unproven alternative water sources, fails to consider the environmental cost and adverse impacts associated with the continued over permitting of the District's consumptive use water permits, does little to improve the water quality of those waterways currently identified as non-compliant with state water quality standards, and considers future surface and ground water withdrawals that may severely impact Wild and Scenic Waters and Outstanding Florida Waters within the region.

By adopting a long-range water supply plan that does not effectively implement the regulatory powers given SWFWMD, protection of water resources cannot possibly occur in the future. It is regrettable that in the rush to obtain water for future residential development, SWFWMD is considering a Water Resource Plan that will ultimately result in irreversible and needless damage to the water resources of the region.

Response: *Development of the 2020 RWSP followed requirements for regional water supply planning pursuant to Chapter 373, F.S. The District addresses water quality through other programs and initiatives.*

Comment: Executive Summary, Chapter 2. Water Use Caution Areas (p. 8) – The SWUCA rule states the District will "significantly halt saltwater intrusion into the confined Upper Floridian aquifer" as one of three main objectives. The Water Management District continues to warn against saltwater intrusion but also continues to issue consumptive use permits to the detriment of existing ground water resources. SWFWMD admits excessive pumping is causing saltwater to seep inland, contaminating freshwater wells, but offer little hope in terms of corrective measures.

Response: *The District issues water use permits (WUPs) pursuant to our established rules and in accordance with the requirements of Chapter 373, F.S. The SWUCA Recovery Strategy was developed in part to address saltwater intrusion and outlines a variety of strategies and initiatives, including regulatory measures, to achieve recovery in this area. See the SWUCA Recovery Strategy plan on the District's webpage at: <https://www.swfwmd.state.fl.us/projects/swuca>.*

Comment: Executive Summary, Chapter 4. Evaluation of Water Sources (p. 13) – ManaSota-88 is opposed to the construction of Aquifer Storage and Recovery (ASR) injection wells. ManaSota-88 states the following issues concerning ASR:

1. There is no ground water or drinking water standards for Giardiasis, Cryptosporidiosis, or other pathogens except for fecal coliform, all of which can be serious health threats. Monitoring for viruses in ground water drinking water sources is virtually nonexistent. The unique hydrogeology, the probable existence of abandoned, short cased agricultural wells, and the possibility of underground fissures have the potential to impact to public drinking water supplies during the injection phase of ASR operations.
2. Although ARS projects are viewed as a storage option, in reality they are a blending operation which have unique water quality concerns. Little is known about the long-term chemistry and biology of ARS injected water. Changing aquifer conditions can allow for seepage of injected water in ground water supplies with possible human health risks.
3. Monitoring systems are not foolproof. Monitoring wells can easily fail to detect major leaks from ASR areas.

Response: *The Florida Department of Environmental Protection (DEP) is the state agency with the prime authority to permit underground injection control (UIC) Class V wells which include aquifer storage and recovery (ASR) wells. DEP has the discretion to make site specific determinations as to whether or not to issue a UIC permit and what water conditions should be included in the permit, provided the determinations are consistent with the Safe Drinking Water Act (SDWA), applicable Environmental Protection Agency (EPA) UIC regulations and approved state programs. All ASR projects are subject to a case by case evaluation as part of the DEP UIC permitting program which includes evaluation of potential impacts to drinking water resources.*

Comment: Executive Summary, Chapter 5. Overview of Water Supply Development Options (p.17) – Discussion of the environmental impacts or water quality components related to water storage, supply, treatment and distribution is missing, or is not being considered, for each option.

Each proposed water supply option alternative carries environmental risks, yet there is no risk comparison between the water supply options discussed.

Once a water body is identified as a potential water supply source, the probability of development of that water body as a future water source is greatly increased.

The apparent lack of understanding of the key issues associated with the listed surface water body in the region makes it difficult, even for conceptual planning purposes, to evaluate the effectiveness of the RWSP.

ManaSota-88 recommends that those water bodies classified as Outstanding Florida Waters and/or are designated as Wild and Scenic, not be considered for development for a future water supply.

Response: *The RWSP identifies a variety of potential options and associated costs for developing alternative sources, in addition to the use of fresh groundwater. They are provided as reasonable concepts that water users in the planning region can pursue to meet their water supply needs. Options in the RWSP are presented to demonstrate estimated costs to develop the supply. If pursued in the future, any option will require a feasibility assessment to investigate suitable locations, effects on the environment, projected quantities, cost effectiveness, permutability, and other factors related to determining project viability.*

Comment: Executive Summary, Chapter 5. Overview of Water Supply Development Options (p.17) – Agriculture represents the largest category of water use in the region, yet, future agricultural water conservation is based on growers voluntarily converting to water conservation practices without the

regulatory requirement to do so. The projected water demands for commercial, industrial, public supply and recreational uses are being estimated without requiring effective water conservation options. Agricultural water conservation is mainly based on growers converting to additional water conservation practices and best management practices. The RWSP relies on a voluntary, not a regulatory approach to water conservation.

Non-agricultural water conservation is also based on voluntary, and few mandatory measures. Projected water savings cannot be achieved unless stricter regulatory requirements are adopted.

Response: *There are a number of ways the District encourages conservation in agricultural water use permits for supplemental irrigation. These are calculated using an assumed 75% efficiency, which is typical of efficient microjet irrigation. Additionally, the District has wide reaching agricultural meter and acreage reporting requirements. The SWUCA portion of the District uses a credit account system for non-plastic mulched crops (those receiving effective rainfall). As those credits get close to being exhausted, the grower is highly encouraged to utilize the services of the Mobile Irrigation Labs to evaluate their system efficiency and implement any recommendations for system modifications. Failure to bring the property back into water use compliance can result in legal action. If a grower would like to voluntarily place existing groundwater quantities on standby through the use of alternative water supply sources or improved system efficiencies beyond those efficiencies already required in the SWUCA, then this water conservation initiative is often encouraged through our Facilitating Agricultural Resource Management Systems (FARMS) cost share assistance program to make the improvements economically feasible. WUPs for public supply use for quantities of 100,000 [gallons per day] gpd or greater include a special condition requiring the submittal of Public Supply Annual Reports from which per capita quantities are determined. These per capita quantities are used to track overall demand and conservation measures being implemented by the local governments.*

Comment: Executive Summary, Chapter 5. Overview of Water Supply Development Options (p.17) – A) Many rivers in the region do not yet have established minimum flows.

B) The RWSP assumes a river does not need 100% of its water flow at high periods to remain healthy, although it has not been adequately established that a reduction in water flow is not going to harm a body of water.

C) As with the history of ground water permitting, faulty criteria are being used in making assumptions on the availability of surface water without adequate baseline data.

D) The District's minimum flow level criteria does not protect the water supply needs of natural systems.

E) The RWSP assumes rivers and water bodies are static and not dynamic systems. Rivers flood, meander and change their locations. Land use, development patterns and property rights force a waterbed to maintain its present location, discounting the natural processes of river flooding and meandering.

Response:

A) Flowing water bodies in or partially within the Southern Planning Region that have established minimum flows are listed on Page 30 of the Southern Planning Region volume of the draft 2020 RWSP. These water bodies include the Braden River (upper segment, Dona Bay/Sharett Creek System), Myakka River (lower segment), Myakka River (upper segment), Peace River (lower segment), and Peace River (middle segment).

The text on Page 30 of the Southern Planning Region volume of the draft 2020 RWSP also identifies flowing water bodies in or partially within the planning region that are prioritized for minimum flows

establishment or reevaluation, including: the Braden River (lower segment), Horse Creek, Little Manatee River (upper segment), Manatee River (lower segment), Peace River (lower segment), Prairie Creek, Shell Creek (lower segment), and Shell Creek (upper segment).

B) In accordance with the Florida Water Resources Act, the District establishes minimum flows as the limits beyond which further [water] withdrawals would be significantly harmful to the water resources or ecology of the area. These limits are identified through assessment of incremental flow reduction effects on environmental values identified in the State Water Resource Implementation Rule for consideration when establishing minimum flows or levels.

As described in Appendix 2.2 to the draft 2020 RWSP, development of minimum flows typically involves identification of seasonal high, medium, and low flow periods or blocks and development of significant harm standards associated with these flow periods.

All minimum flows established by the District have been subjected to independent, scientific peer review to ensure the best available information was used for their development.

C) As described in Appendix 2.2 to the draft 2020 RWSP, the District uses the best available information for development of minimum flows. This information typically includes or involves characterization of existing and historical withdrawal impacts, structural alterations, and identification of benchmark flow records that account for these factors. Benchmark flow records, water-use information and other hydrologic data are used along with groundwater flow and other hydrologic modeling for characterization of withdrawal impacts.

Part D (Pages 13 through 21) of the Southern Planning Region volume of the draft 2020 RWSP includes examples of the types of data and models used for minimum flows development.

D) In accordance with the Florida Water Resource Implementation Rule, environmental values considered when establishing minimum flows include those associated with natural systems and human uses. Minimum flows established by the District are protective of all relevant natural system and human-use values identified in the Florida Water Resource Implementation Rule for consideration when establishing minimum flows or levels.

E) District staff acknowledge that all water bodies and water resources are dynamic and takes the position that the draft 2020 RWSP does not imply these systems are static. For example, the summaries of hydrologic data monitoring and investigations included in Section D (Pages 13 through 21) of the Southern Planning Region volume of the draft 2020 RWSP highlight the dynamic nature of the water resources within the District's boundaries.

In addition, minimum flows and levels development processes highlighted in Appendix 2.2 to the draft 2020 RWSP illustrate an understanding of the dynamic nature of water resources. For these processes, acknowledgement and investigation of long-term hydrologic conditions and variability is emphasized. Specific to rivers systems, the District typically establishes minimum flows based on criteria associated with the full hydrologic regime, including periods of high, medium, and low flow conditions.

Comment: Executive Summary, Chapter 8. Overview of Funding Mechanisms (p.25) – The environmental costs of determining safe yield is not discussed as one of the components of funding, rather overview of funding appears to be based on the economic analysis of the impacts to agriculture and business.

The general public is paying the cost for development of new water sources. Land developers and growth interests are receiving a direct subsidy through publicly financed infrastructure expansion. The public pays the cost not only in monetary terms but in adverse impacts to the natural resources.

Response: Chapter 8 of the RWSP provides an overview of various utility, District, state and federal funding mechanisms available to implement the water supply and water resource development projects proposed by the District and its cooperators to meet water supply demands and to protect natural systems. Selected project options are required to meet environmental permitting criteria before implementation. Water supply development funding is primarily the responsibility of utilities.

Comment: Executive Summary. Evaluation of Project Costs to Meet Projected Demand (p.26) – The RWSP fails to consider the environmental cost and impact of agriculture, including pesticide and herbicide runoff into the watershed. There is no consideration of the increased cost associated with water treatment due to decreased water quality, resulting from agricultural activities.

Response: The District's Agriculture Ground and Surface Water Management (AGSWM) surface water exemption verification process is an effective collaborative alternative to the other two options agricultural growers face outside the District's boundaries. These other two options are (a) claim one of the numerous, vague, widely interpreted, and managed Florida Department of Agriculture and Consumer Services (FDACS) statutory exemptions found in Chapter 373.406(1-14), F.S.; or, (b) acquiesce and obtain an Environmental Resource Permit (ERP).

Instead, the District's voluntary AGSWM exemption program includes a site visit with the grower, the landowner's consultants, or the United States Department of Agriculture Natural Resources Conservation Services (USDA-NRCS), and the District's agricultural team. The District's agricultural team typically consists of an Environmental Scientist, a Professional Engineer, a Water Use staff member, and a FARMS cost-share staff member. During this collaborative onsite planning process, wetlands and associated upland buffers are identified, downstream receiving waters are evaluated, points and methods of discharge are determined, and the potential use of multi-functional upland ponds (ponds used as sediment sumps, discharge attenuation features, alternative water supply for supplemental irrigation and crop protection storage, etc.) are discussed.

Ultimately, the final field layout and a prescription of compiled site-specific best management practices from the USDA-NRCS or from statewide adopted FDACS Best Management Practices (BMP) manuals are developed. It should be noted that officially enrolling and following these prescribed FDACS BMP measures provides the grower with a presumption of compliance with water quality discharge standards.

In the end, the grower receives a letter of exemption, topographic survey, a Conservation Plan, and engineering assistance. The water resources are afforded better protection, increased buffers, wetland protection, and fewer statutory exemption legal dispute cases. Note that failure to follow the agreed upon final field layout and best management practices can result in the formal disqualification of the previously issued AGSWM exemption.

Also, agriculture is not exempt from the water use permitting regulations. During the water use permit application evaluation, District staff is required to determine whether the proposed water use will adversely affect the environment (Chapter 40D-2, Florida Administrative Code). The water use permitted withdrawal impact to surface waters and wetlands are evaluated whenever the water use permit is modified or renewed, regardless of whether the agricultural operation is exempt or receives an AGSWM exemption. The AGSWM process facilitates a better understanding of the interaction of the water use and the surface water and wetlands that may be impacted by the permitted withdrawals.

Comment: Executive Summary. An emphasis on water conservation (p.29) – The RWSP relies heavily on voluntary, not mandatory, reductions of existing users. There is no discussion regarding

improvement to existing codes and ordinances requiring additional water conservation measures. Additional mandatory measures to conserve water are not proposed.

Non-Agricultural Water Conservation

Unless SWFWMD uses its statutory powers to implement adequate water conservation measures, the projected future water saving estimates from water conservation are based on faulty assumptions. The District should not assume any savings based on voluntary conservation measures.

Mandatory water conservation measures of non-agricultural water uses are expected to be implemented by local governments within the region, such as the monitoring and enforcement of lawn irrigation ordinances. The District assumes a high degree of compliance yet fails to identify how this high level of compliance with local governments within the region will be achieved.

Agricultural Water Conservation

There is no discussion on the cost of providing conservation incentives to growers or how the District could achieve a grower participation in any SWFWMD program.

Response: *The passive conservation savings that were quantified as a result of this RWSP includes efficiency improvements from natural replacement of fixtures and appliances. The current national standards for plumbing fixtures and appliances provide for significant improvements in efficiency compared to older fixtures/appliances that exist in the current housing stock. The active conservation potential that was quantified represents just one possible scenario of regional water savings. Given additional conservation activities or higher participation rates, additional conservation could be achieved. Significantly more savings could be possible with the inclusion of mandatory ordinances adopting higher indoor efficiency standards and modifications to land development regulations that promote conservation. However, these regulatory mechanisms, while extremely effective, are politically unpalatable in many places and for that reason were left out of this estimate. Some readily applicable conservation activities are not addressed due to the wide variance in implementation costs and the site-specific nature of their implementation. Two such measures are water-conserving rate structures and local codes/ordinances, which have savings potential, but are not addressed as part of the 2020 RWSP. The District strongly encourages these measures and, when properly designed, they can be effective at conserving water. In addition, permittees are required to address these measures in their water conservation plan, which is part of the package provided by permittees during the WUP application or renewal process.*

Regarding agricultural water conservation, each of the regional documents contain lists of funded projects where the costs of conservation projects can be seen. Refer to Table 7-3 for FARMS projects within the Southern Planning Region. Also, there is a projection of water savings and costs that the FARMS program might achieve/incur during the 2020-2040 planning horizon. This projection is based on the FARMS program historical performance trend. Refer to Table 5-2 on Page 117 of the Southern Planning Region. All FARMS projects have to meet a cost benefit ratio that takes into account the cost of the project versus the water savings benefit in a cost per 1000 gallons saved metric. The District employs various outreach/promotion methods to generate participation in the FARMS program, including: working closely with IFAS extension agents, attending and giving presentations at grower commodity conferences, having representatives at soil and water conservation District meetings, working with the Florida Farms Bureau, FDACS, USDA, and county agricultural development committees to promote and encourage grower participation in our programs.

Comment: Executive Summary. Focus on alternative sources (p. 29) – The RWSP estimates future water from desalination at 107 mud for planning purposes. However, desalination leaves behind highly concentrated brine waste and other potentially hazardous materials such as heavy metals. A

comprehensive study of a large desalination plants environmental threat to the gulf and associated water bodies has never been done. The 107 mud projection from desalination is questionable.

SWFWMD should not attempt to weaken rules in order to stimulate desalination alternatives that govern the disposal of reject water. Desalination is not feasible unless the process is associated with a major industrial operation that uses vast quantities of water. Permitting the disposal of brine in the southern region of the District would be difficult due to the environmental sensitivity of those water bodies.

Response: *Surface water discharges and disposal well injections from desalination facilities are regulated by DEP to prevent environmental harm and contamination of drinking water sources. The RWSP identifies a variety of potential project options and associated costs for developing alternative sources, including desalination. They are provided as reasonable concepts that water users in the planning region can pursue to meet their water supply needs. Options in the RWSP are presented to demonstrate estimated costs to develop the supply. If pursued in the future, any option will require a feasibility assessment to investigate suitable locations, effects on the environment, projected quantities, cost effectiveness, permissibility, and other factors related to determining project viability.*

Elizabeth Gundlach, online comments received June 28, 2020

Comment: I am very concerned about the over-development going on in my area as it relates to the water supply. I believe more development is a fool's errand especially when every new development is on cleared-cut land and new plantings and grasses are planted requiring constant irrigation. The industry of phosphate mining and sugar farms have severely lowered the quality of Florida's water supply and I worry for future generations. I worry that water will be too expensive for everyone when it has to be moved and borrowed from region to region.

Response: *The RWSP identifies a variety of potential project options and associated costs for developing alternative water supply sources, in addition to the use of fresh groundwater, to meet projected future water demands across all water use categories. These projects are provided as reasonable concepts that water users in the planning region can pursue to meet their water supply needs. Options in the RWSP are presented to demonstrate estimated costs to develop the supply. If pursued in the future, any option will require a feasibility assessment to investigate suitable locations, effects on the environment, projected quantities, cost effectiveness, permissibility, and other factors related to determining project viability.*

Seminole Electric Cooperative, Inc. – Lewis Snyder, Regulatory Compliance Director, email and attached correspondence received June 29, 2020

Comment: Southern Planning Region Volume – Please accept these comments on behalf of Seminole Electric Cooperative, Inc. (SECI).

Electric Power Generation Water Use in Hardee County, Florida

SECI owns and operates the Richard J. Medulla Generating Station (MGS) as authorized under Site Certification (SC) PA 89-25F. In addition, via legal agreements including, but not limited to, a Facilities Sharing Arrangement and Real Property Lease, Hardee Power Partners owns and operates the Hardee Power Station (HPS) on SECI property under Site Certification PA 89-251. SECI contracts for the output and capacity of HPS. Both MGS and HPS are located in Hardee County, FL

and are within the boundaries of the Hartland Regional Water Supply Plan. Via their associated Site Certifications, MGS and HPS are collectively permitted to withdraw 3.8 MGD of groundwater.¹

2020 Hartland Region Water Supply Plan Shows Zero Electric Power Water Use in Hardee County

The Southwest Florida Water Management District's (District) draft 2020 Hartland Planning Region Water Supply Plan shows zero existing and projected water use for electric power production in Hardee County. (See table 3-4 on page 53.) Similarly, Appendix 3-2: Demand Projections for Industrial/Commercial, Mining/Dewatering, and Power Generation shows zero existing and projected water use for Hardee County (see tables 2 and 3).

2020 Hartland Regional Water Supply Plan in Error for Existing and Future Electric Power Water Use in Hardee County

Based on the information outlined above, SECI believes the District's draft 2020 Hartland Regional Water Supply Plan and Appendix 3-2 of the District's overall draft 2020 Regional Water Supply Plan does not correctly state existing and future water supply demands associated with electric power production in Hardee County. As such, SECI respectfully requests the District revise these plans to correctly reflect existing and projected electric power generation water use in Hardee County based upon the information provided above and using the power generation water use projection methodology described in Appendix 3-2.

1 More specifically, PA 89-251 Condition IV.C. states "the use of groundwater from the proposed wellfield shall not exceed 3.8 mgd on an average daily basis (averaged over a 12 month period) or a maximum 8.64 mgd on any day. PA 89-25F Condition IV.D. states "the combined use of groundwater for all power generating facilities at the MGS site from the wellfield shall not exceed 3.8 mgd annual average daily and 8.64 mgd peak month daily.

Response: *Water demand projections for the noted Seminole Electric Cooperative, Inc., facilities were developed using methodologies based on the water use type of the two WUPs being classified as Industrial. The resulting projected Industrial demand quantities were included in the 2020 RWSP groundwater modeling which assessed the potential effects of increasing water demands through 2040. Per the Cooperative's request, draft water demand projections were also developed using methodologies based on the WUPs being classified as Power Generation. We are unable to directly include these alternative projections in the 2020 RWSP tables, as they were not incorporated in the original groundwater modeling; however, we have footnoted the alternative quantities in Table 3-4 of the Hartland Planning Region volume and Table 3 of Appendix 3-2. The District will work with the Cooperative to reflect the noted WUPs as Power Generation for water demand projection and groundwater modeling purposes in development of the 2025 RWSP.*

Angel Martin, online comments received June 30, 2020

Comment: As per the conversation on June 30, 2020, concerning the subject plan, the questions that I had were answered satisfactorily by Ron Basso. Some general comments that I have concerning the discussion are given below.

It is critical that the groundwater models used for estimating possible future groundwater supplies be updated and revised on a regular, systematic basis. Suggest that for the Northern District, Central Florida Water Initiative, and possibly other models used for estimating groundwater resources be calibrated with the use of automated parameter estimation techniques. Also, uncertainty analyses should be performed to determine the viability of these models for estimating possible groundwater sources from both the Upper and Lower Floridan aquifers. For the future updated version of the Northern District Model, the District may want to consider simulating possible saltwater movement

resulting from estimated sea-level rise. Also, consideration should be given to specifically simulating the possible movement of lower quality groundwater from the Lower to the Upper Floridan aquifer.

For the integrated models, District-Wide Regulatory Model, and the two models mentioned above, suggest closely examining areas where additional hydrologic and water-quality data may be collected to improve these models. As Ron mentioned, there are contracts with HydroGeoLogic, Inc. to update some of these models. I would caution that some of the modeling software used by HydroGeoLogic, Inc. is proprietary and may not be readily available for public use when compared to publicly available models from, for example, the U.S. Geological Survey. Peer reviewers of District models have made this comment previously.

Appreciate the opportunity to comment on the draft water-supply plan. As I mentioned, please let me know if you have any questions concerning these comments or if I can help out with any technical/editorial reviews of any modeling/hydrologic document.

Response: Thank you for your comments.

Bill Maturro, online comments received July 1, 2020

Comment: First, the plan should be delayed so as to coordinate with the required 2021 update of county comprehensive plans so the water resources and uses will align with any growth management plans by individual counties. Second, since the plan so heavily relies on voluntary compliance and reporting by water users, the agency needs to plan for a more vigorous monitoring, and especially, a more proactive enforcement staff to be certain "voluntary" compliance is real, and punishments for non-compliance have a serious penalty attached.

Response: Preparation of the 2020 RWSP included use of the Bureau of Economic and Business Research population projection data, which is used by local governments in their planning efforts. In accordance with Sections 373.709 and 163.3177(6)(c)3, F. S., local governments are required to prepare Water Supply Facilities Work Plans (Work Plans) as updates to their Comprehensive Plans within 18 months of the approval of a Regional Water Supply Plan covering their jurisdiction. The Work Plans identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government's jurisdiction and consider the findings of the RWSP, as applicable.

Barbara Angelucci, online comments received July 7, 2020

Comment:

I agree with the Mana-Soto 88 summation of your 2020 Water Plan...."water supply plan is deficient in many areas. The plan makes unrealistic water availability projections based on unproven alternative water sources, fails to consider the environmental cost and adverse impacts associated with the continued over permitting of the District's consumptive use water permits, does little to improve the water quality of those waterways currently identified as non-compliant with state water quality standards, and considers future surface and ground water withdrawals that may severely impact Wild and Scenic Waters and Outstanding Florida Waters within the region....."

There is one very large omission from your 'plan', and this is the copious amount of water that phosphate mining is permitted to withdraw from our aquifer, which is up to 70 million gallons a day.

Agriculture draws large amounts as well which are used to grow crops for consumption; however, phosphate mining abuses withdrawals from the aquifer for profit.

The USGS Florida Water Science Center had submitted technical comments for the Area Wide Environmental Impact Study on phosphate mining on issues still to be addresses, such as the effects of clay settling areas (CSA) on the surface and groundwater hydrology of reclaimed mined areas. Also there has still not been field-performance data on the level of hydrologic function that can be expected of reclaimed streams and wetlands in mitigated areas. Large amounts of wetlands are lost to phosphate mining and with it go water filtration and the relationship to rivers and streams. This is also a drain on our water supply that is solely for profit and not for the citizens of this State.

About 40% of a mine range is clay settling areas which are impervious and prevent rainfall to enter the ground to recharge the aquifer. Another facet of phosphate mining are gypsum stacks which can stand up to 100 feet collect rainfall which evaporates and does not go back into the aquifer.

Phosphate mining abuses the use of our aquifer by the closure of inactive processing plants which require the use of fresh water for dilution and discharge into creeks and smaller water bodies. This is wasteful.

Your 'plan' devoted one sentence to phosphate mining without mention of the copious use of water for their operations which is mostly wasteful and damaging to recharging our aquifer. You neglected to mention that mine pits and settling ponds interrupt natural surface and ground water flow and result in the ultimate destruction of surrounding wetlands. According to Dr. Sydney Bacchus (Hydro Ecologist for EPA) that, in turn causes degradation of the aquifer and eliminates inexpensive ground water as a continuing source of potable water.

The 'plan' also mentioned use of aquifer storage and recovery, (ASR) wells "that have been refuted repeatedly in various scientific publications by various authors" according to Dr. Bacchus.

As to the desalination plants, an editorial in The Bradenton Times on 9/8/11 on The Hidden Tax on Phosphate Mining explained that ground water is the most cost-effective and available manner of securing potable drinking water and the massive use of this freshwater source by mining has an impact on water prices. Why should citizens bear the economic burden because of clandestine water subsidies for phosphate mining from SWFWMD? Injection Wells/ASR wells and desalination plants will increase water costs significantly and the water will not be as safe and beneficial as flowing from our aquifer.

Another threat to our waters is the recent weakening of the Clean Water Act by our President, EPA and ACOE, lessening pollution controls on our rivers, lakes, streams and wetlands which are critical to supplying downstream water quality.

With all of the dangers threatening inexpensive potable water for citizens, you must look at phosphate mining's use and abuse of our water for profit and destruction of our wetlands, streams and rivers and realize their operations are detrimental to the live-giving water for citizens.

The time has come for the State of Florida to guarantee its citizens clean, potable water at reasonable costs and not force them to pay massive amounts for their water due to over pumping by phosphate mining which abuses and pollutes our waters. Your 'plan' is not acceptable and needs to be rewritten.

Response: Development of the 2020 RWSP followed requirements for regional water supply planning pursuant to Chapter 373, F.S., and provides a planning-level assessment of water supply demands and potentially available sources. With respect to mining, all WUPs are reviewed to meet District and statutory rules, including meeting the Conditions for Issuance pursuant to Rule 40D-2.301, Florida Administrative Code (F.A.C.). The Conditions for Issuance are consistent with Florida

Statutes. Reduced to their basic components, the Conditions for Issuance require an applicant to provide reasonable assurances of an actual need for the quantities requested, and that the withdrawals will not harm the environment or affect any existing legal water users. WUPs with annual average quantities greater than 100,000 gallons per day include special conditions requiring the metering of all withdrawals and the verification of the accuracy of the meters every five years. A full permit review is completed at the time of renewal. The District does not review Phosphate mining permit applications.

Pinellas County Utilities – Joseph Graham, J.D., M.B.A, P.E., Interagency Water Manager, online comments received July 10, 2020

Comment: The Tampa Bay Planning Region Document Chapter 1 Part B Section 1.0 Alternative Water Supply includes a discussion of the District funding of local aquifer recharge projects such as the SHARP, City of Clearwater, and City of Tampa (TAP) projects. We recommend inclusion of the Chestnut Park ASR/MAR projects be included in this section as well.

Response: *As the Chestnut Park ASR/AR project is newly proposed, reference to it was included in Chapter 6, Section 4 of the Tampa Bay Planning Region volume.*

Manatee County Utilities – Mark Simpson, Water Division Manager

Comment: Southern Planning Region, Page 49, Table 3-4 – Projected demand goes from 3.60 mgd in 2015 to 4.64 mgd in 2040 based on per capita use and projected populations served. Is the effect of FPL Parrish solar initiatives - solar to replace/retire two gas fired plants - included?

Response: *The District utilized site plans published in April 2018 to formulate the Power Generation projections. While the FPL Parrish site had some solar initiatives planned at that time, major solar projects have been announced more recently for the Parrish site. The additional solar initiatives will be reflected in the District's 2025 RWSP.*

Comment: Southern Planning Region, Page 57, Part A, 1st sentence – Is fresh groundwater from the UFA the primary source of public supply in the southern region? Lake Manatee (25.9 mgd), Evers Reservoir (5.5 mgd), Peace River (28 mgd), Shell Creek (3.75 mgd), Myakkahatchee Creek (1.3 mgd) (total = 64.45 mgd) vs. fresh groundwater (48 mgd).

Response: *Continued expansion in the use of surface water sources has resulted in approximately 60 percent of this source now being used to meet public supply demands in the Southern Planning Region. As such, the noted text was revised to reflect this fact.*

Comment: Southern Planning Region, Page 74 – States that "total average diversions from 2011 to 2018 were 29 mgd." Where does this number come from? Total raw water withdrawals to WTP average 24.1 mgd for that time period.

Response: *The text was revised to reflect the correct quantity and period of record. Table 4-6 was also updated to reflect the revised text and period of record quantity.*

Comment: Southern Planning Region, Page 78, Table 4-6 – Lists 'Current Withdrawal' of Manatee River @ Dam as 26.3 mgd for 2007-2018. Average raw water withdrawal to WTP was 25.2 for this time period.

Response: The table was revised to reflect the correct quantity for the period of record.

Comment: Southern Planning Region, Page 78, Table 4-6 – The ‘Current Withdrawal’ for PRMRWSA is incorrect. Average withdrawals from 2007-2018 had to be approximately twice the shown 11.0 mgd. Last 5 years approximate demand was 24 mgd. (Withdrawals were actually greater than needed to meet average demand due to filling of the reservoir and ASR during this period.)

Response: The quantity listed was incorrect for the noted period of record and was updated to reflect the correct value.

Comment: Southern Planning Region, Page 84, Table 4-7 – Change Concentrate Discharge Type for Buffalo Creek Wellfield to ‘Deep Well.’

Response: The table was revised to reflect the correct Planning Region for the noted project.

Comment: Southern Planning Region, Page 88 – We think mention of the Manatee ASR operating permit would be appropriate here (received 1/9/2017).

Response: The text was revised to reflect those potable ASR systems that are currently operational within the District.

Comment: Southern Planning Region, Page 106 – Second to last sentence on page: Including only aeration and disinfection for treatment, and not softening is very optimistic. Manatee’s East County Wellfield, withdrawing from same aquifer targeted for this facility, requires softening.

Response: The potential need for softening related to water supply development of the Flatford Swamp Net Benefit Groundwater Recovery project will be assessed as part of the project feasibility.

Comment: Southern Planning Region, Page 107, Table 5-4 – The ‘Capital Cost’ of \$21.4M is incorrect for 21 mi of 24” main, 10 1MGD wells, and a 10 MGD plant. (PRMRWSA Regional Transmission System Phase 1 pipeline cost \$12M for just 6 mi of 24” main).

Response: The table was revised to reflect updated project cost estimates as provided by the PRMRWSA and included earlier in this Comments and Responses document.

Comment: Southern Planning Region, Page 110 – Peace River Facility Brackish Wellfield costs listed in Table 5-9, from where do these come? I would assume from the PRMRWSA IRWSMP because the ones for their expansion match, but these do not match what is listed in the final draft from March 2020. Same with the costs for the DCI brackish wellfield listed in Table 5-11 on page 111.

Response: The projected costs for both noted project options were updated for the 2020 RWSP final draft pursuant to comments received from the PRMRWSA and reflected earlier in this Comments and Responses document.

Comment: Southern Planning Region, Page 112, Brackish Groundwater Option #4. Manatee County Buffalo Creek Brackish Wellfield – Replace 3rd, 4th and 5th sentences with “The facility will dispose of RO concentrate in Class 1 deep well at the adjacent North Regional Water Reclamation Facility.”

Response: The text was revised as requested.

Comment: Southern Planning Region, Page 116, Table 6-1 – Check City of Palmetto 41,827 gpd saving, 325 devices = 127 gpd/toilet?

Response: *The apparent high savings rate for this project is due to the fixtures being installed in commercial properties. It also reflects the inclusion of 300 showerheads and faucet aerators.*

Comment: Southern Planning Region, Page 132, Table 7-2 – Check ‘Region of Benefit’ for 1.2 Bradenton, listed as TBPR, should be SPR?

Response: *The table was revised to reflect the correct Planning Region for the noted project.*

Comment: Southern Planning Region, Page 133, Table 7-2 – Check ‘Total Cost’ for 3.3, \$700k is less than District ‘share’

Response: *The table was revised to reflect updated costs for the noted project.*

Comment: Southern Planning Region, Page 152, Table 8-2 – Flatford Swamp projects listed at 10 mgd, descriptions in Table 5-4 lists it as 5.0 mgd, Table 7-2 as 6.0 mgd.

Response: *The Flatford Swamp project is included in the 2020 RWSP as both a water resource development project and potential water supply project. For Table 7-2 and Table 8-2, the water resource development aspects of the project to provide up to 10 mgd of groundwater recharge are reflected. Table 7-2 has been revised to reflect the correct quantity and Table 8-2 has been revised to reflect updated project costs. Table 5-4 reflects aspects of the proposed water supply project that would develop up to 5 mgd of additional supply based on the additional groundwater recharge provided by the water resource development project.*

Jennifer Desrosiers – City of North Port Utilities

Comment: Executive Summary, Page 29 – Here they say the District promotes regional approaches to water supply planning and development, however on page 17, they say, “water supply options developed through regional planning efforts...are incorporated into the RWSP for each planning region. These options are not necessarily the District’s preferred options, but are provided as reasonable concepts that water users in the region may pursue in their water planning efforts.” These two statements seem to contradict each other.

Response: *The 2020 RWSP reflects both the District’s promotion of regional approaches in addressing water supply needs, as well as support of local alternative water supply and conservation projects. This is best emphasized by the number of projects completed or underway since the 2015 RWSP that are listed in Chapter 6 of the respective Planning Region volumes. Many of these projects were undertaken by local utilities with funding assistance by the District.*

Comment: Southern Planning Region, Page 4 – Talks about reclaimed water for reuse, but might be a good place to address direct potable reuse, i.e. growing interest in investigating the feasibility, instead of inferring it.

Response: *The referenced text is a synopsis of existing and funded (up to FY2020) reclaimed water projects. Potable reuse (both direct and indirect) is referred to several times throughout the 2020 RWSP, including the Executive Summary. For instance, direct potable reuse is specifically identified as a “viable future water supply option” on Page 103 of the Southern Planning Region volume.*

Comment: Southern Planning Region, Page 8 – For section 3.0 and caption, Warm Mineral Springs is located in and owned by the City of North Port.

Response: *The text and caption were revised to reflect the location of Warm Mineral Springs within the City of North Port and its ownership by the City.*

Comment: Southern Planning Region, Page 9, Figure 1-2 – The map does not show City of North Port.

Response: *The figure was revised to include the City of North Port.*

Comment: Southern Planning Region, Page 9, Figure 1-2 – The map doesn't show Longboat Key either, but that town is mentioned in the body of the report.

Response: *The figure was revised to include the City of Longboat Key.*

Comment: Southern Planning Region, Page 69 – This might be a good place to bring up direct potable reuse.

Response: *The text on Page 69 is a general overview of reclaimed water flows and benefits to achieve the 75 percent utilization rate goal. Direct potable reuse is specifically mentioned as a “viable future water supply option” on Page 103 of the Southern Planning Region volume.*

Comment: Southern Planning Region, Pages 75-76 – This section (2.5 Myakkahatchee Creek) does not capture the permit for the Myakkahatchee Creek of the Cocoplum Canal appropriately and it talks about Charlotte Golf Partners, L.P.'s permit for Cocoplum Canal that I don't believe is current, either.

Response: *The text was revised to note that the City of North Port may withdraw 2.08 to 6.0 mgd from Myakkahatchee Creek based on flow conditions.*

Comment: Southern Planning Region, Page 78 – I think we just need to look at this table (Table 4-6) to make sure we protect our permitted quantities.

Response: *Table 4.6 presents a planning level assessment of existing and potential surface water sources within the Southern Planning Region. Any increases in use or development of these sources would be subject to review as part of the District's WUP rules for permit issuance to determine if the water use is reasonable and beneficial, does not interfere with any presently existing legal use of water, and is consistent with the public interest.*

Comment: Southern Planning Region, Page 84 – This chart of existing or under development desalination facilities does not specifically include WVID plant, but it is on Page 83 (page 99 of PDF) on the map and the footnote (should be number 6) does mention a “future planned brackish wellfield”. It could just be misleading as it currently sits.

Response: *Table 4-7 was revised to reflect the correct footnote number for the City of North Port and specifically reference the West Villages Improvement District brackish wellfield.*

Comment: Southern Planning Region, Page 85 – For ASR projects, this should somewhere say that only injected water meeting primary standards is allowed for ASR projects.

Response: *The text was revised to reflect the requested reference.*

Comment: Southern Planning Region, Page 105 – I am not sure why our DPR (direct potable reuse) project isn't mentioned here (Table 5-3) since they currently intend to fund it. Maybe it doesn't need to be here, but I just wanted to bring it up.

Response: *The North Port Direct Potable Reuse (DPR) study is not mentioned in the list of reclaimed water options in Table 5-3, as the list represents a few conceptual large options for development and is not intended as a comprehensive list. The District is co-funding the City's DPR study and it is very much supported; however, the District wants to highlight options that could occur, but for which there are no current utility supported projects.*

Comment: Southern Planning Region, Page 106 – More talk about using the Myakka River as a water supply. We need to be diligent to protect our permit.

Response: *The discussion in the RWSP refers to potential restoration activities within the broader Myakka River watershed that could provide for increased flows, potentially yielding additional quantities available for water supply. Any proposed development as a source would be subject to review as part of the District's WUP rules to determine if the use is reasonable and beneficial, does not interfere with any presently existing legal use of water, and is consistent with the public interest.*

Comment: Southern Planning Region, Pages 106-113 – Talk about all the options available to the PR and how much this would cost to construct and deliver, but not both together. I think it is important to include both construction and delivery costs to make a fair comparison between the regional option and a more local option.

Response: *The noted water supply projects and integrated loop system options are complimentary, and while regional in nature, serve to address and/or support the projected water demands of both PRMRWSA member and non-member utility systems. These projects are not, however, intended to be in lieu of viable, cost-effective alternative water supply projects that may be considered by a local utility. In addition to these regional projects, the District recognizes and financially supports viable local alternative water supply and conservation projects.*

Comment: Southern Planning Region, Page 123 – Not sure why North Port's ASR project is not included here. Since we are not operational, it should be included somewhere.

Response: *The City of North Port ASR project was previously included in the 2015 RWSP, as it was funded and initially under development during that timeframe. We recognize the operational permit for the project has been the subject of an extended review by DEP, but felt that carrying the project forward to the 2020 RWSP was not warranted given that project construction has been completed.*

Comment: Southern Planning Region, Page 124 – Agree with Jen's comment on NP's ASR and why it isn't brought up (status- operational permit under review), or maybe include FDEP/EPA stance on this.

Response: *Please refer to the response to the previous comment above.*

Comment: Appendix 4-1 – Includes a column for both 2015-2025 Septic Served Population Increase and 2015-2040 Septic Served Population Increase. It appears these numbers are on a county-wide basis. If that is a correct assumption, the 1,457 and 2,838 population increase respectively for the entire Sarasota County would seem to me to be underrepresented.

Response: The noted countywide septic population increases are based upon projected growth areas and utility service area maps. The low septic tank projections are due to the fact that the vast majority of population growth in Sarasota County is anticipated to occur within utility service areas.

Withlacoochee Regional Water Supply Authority – Suzannah Folsom, P.E., Executive Director, email and attached correspondence received July 15, 2020

Comment: Northern Planning Region – I am not sure to what extent you are relying on the demand projections from our plan that was completed in November 2019, but I have seen some discrepancies between the projections and actual flows. Please see the attached summary. The column on the far right is a comparison of the 2020 projected demand in our report and the 12-month running average from the WMIS system. The values are significantly different for the following WUPs:

- Citrus County - CAB
- City of Brooksville
- Bay Laurel
- Association of Marion Landing Owners
- Sunshine Utilities Inc.
- Rolling Greens
- FGUA Ocala Oaks
- Sunshine Utilities SunRay
- Bushnell
- Webster
- Wildwood
- Center hill
- Wildwood Continental Country Club

Our consultant noted that the population and demand projections came directly from SWFWMD, and that I should bring any concerns to your attention, and to Joy Kokjohn at SJRWMD.

Response: The RWSP is intended as a planning-level assessment of water supply demands and potentially available sources. The development of Public Supply water demand projections for the RWSP are based on a variety of factors including a specific utility's service population, average growth rate, and average unadjusted gross per capita water use rate. The methodology used, which is addressed in detail in Appendix 3-3 of the 2020 RWSP materials, provides for projections in 5-year increments over a 20-year planning horizon. The purpose of this methodology is to average out drought and excessive rainfall years to better reflect predicted actual use for the 5-year increments. Given the methodology used to derive the water use demands, comparison of a single year of actual water use (2020 in this case) may or may not correspond to the 2020 projections in the RWSP. Factors that can account for discrepancies between the projections and actual use include changes in growth rates and per capita water use rates. It appears that these are factors in several of the noted utilities for which actual growth and water usage has increased since development of the projections.

Tampa Bay Water – Ivana Kajtezovic, Planning Program Manager, online comments received July 15, 2020

Comment: Tampa Bay Planning Region – Page 35 of the 2020 RWSP Tampa Bay states that Tampa Bay Water will need to supply additional 10 mgd to the region by 2025. The correct date is 2028 (10 mgd by 2028 and additional 10 mgd by 2040).

Response: *The text was revised as requested.*

Jack Merriam, online comments and email with attached correspondence received July 15, 2020

Comment: 1. Recommendation: Require local governments & developers to require Florida Friendly Landscaping, pervious paving, cisterns, or greenroofs to reduce irrigation demand as a condition of Water Use Permitting. This will accomplish "conservation."

Response: *Some readily applicable conservation activities are not addressed due to the wide variance in implementation costs and the site-specific nature of their implementation. Two such measures are water-conserving rate structures and local codes/ordinances, which have savings potential, but are not addressed as part of the 2020 RWSP. The District strongly encourages these measures and, when properly designed, they can be effective at conserving water. In addition, permittees are required to address these measures in their water conservation plan, which is part of the package provided by permittees during the WUP application or renewal process.*

Comment: 2. Include the use of cisterns as an Alternative Water Supply (AWS), it's decentralized, very low energy requirements, plus it helps reduce and treat stormwater.

Response: *Tailwater recovery ponds that the Districts funds through the FARMS program act as large inground cisterns in an agricultural setting. From a public supply perspective, cisterns are normally not considered reliable given seasonal droughts and therefore must be paired with other sources. It also may be difficult to maintain public health and safety with decentralized cisterns.*

Comment: 3. Include the use of pervious paving as an AWS to infiltrate/recharge more stormwater, and this can reduce the need for irrigation of nearby trees, while helping to protect our bays and surface water bodies by reducing stormwater runoff and therefore pollutant loads.

Response: *The use of pervious paving can be effective in the protection of water resources. The District has funded projects that have included these features as part of an overall low impact development design.*

Comment: 4. Buy conservation easements on large tracts of land in major recharge areas or buy land in fee simple, deed restrict it to protect recharge, and sell it back into private ownership for compatible uses.

Response: *To date, the District and its partners have acquired more than 452,000 acres of conservation land to protect the region's water resources. Over 344,000 acres are directly managed by the District and its partners, with the remaining lands held in private ownership but protected for water resource management purposes through conservation easements.*

Comment: 5. Recommendation: non structural approaches such as land preservation, low impact development, and agriculture/landscaping emphasis on increasing soil carbon should be the preferred approach to AWS.

Response: *The District places a priority on water conservation measures, including those for landscape and agriculture, as a sustainable means to ensure water availability for future generations. As noted in the previous response, the District has also acquired over 452,000 acres that support the protection of water resources.*

Comment: 6. The FARMS program should focus on working with agricultural interests to increase their soil organic matter levels in order to reduce water needs, reduce nutrient loss and hence pollution, and help to reduce rather than increase atmospheric CO2 levels. Putting carbon back in the soil represents one of the best methods of carbon capture, thereby reducing the impacts of Climate Change/Global Warming on water supply.

Response: *FARMS is an agricultural cost-share reimbursement program that reduces groundwater withdrawals from the Upper Floridan aquifer through conservation and alternative water supply BMPs. In conjunction with water conservation BMPs, nutrient reduction, water quality and natural systems improvement BMPs also may be cost-shared in priority areas. The FARMS program works with the University of Florida Institute of Food and Agricultural Sciences (UF IFAS) and FDACS to stay up to date on the most innovative and cost effective BMPs.*

Comment: 7. Putting carbon back in the soil represents one of the best methods of carbon capture, thereby reducing the impacts of Climate Change/Global Warming on water supply.

Response: *Climate change has the potential to affect water supply sources and is a factor in evaluating the adequacy of supplies to meet future demand. For these reasons, the District maintains a “monitor and adapt” approach toward the protection of natural resources from climate change. The District will actively monitor research projects, both locally and nationally, interpret the results, and initiate appropriate actions necessary to protect the water resources in our region as the effects of climate change become more evident.*

Comment: 8. Recommendation: Support experimenting with floating solar arrays on reservoirs. This could provide renewable energy for water supply systems, while also reducing evaporation from the reservoir and reducing the potential for algal blooms. Cooling solar panels with water can increase their performance effectiveness.

Response: *The development of floating solar arrays on reservoirs may be feasible options. Any such implementation should be fully evaluated and coordinated with the host facility to ensure it will not interfere with required operational and management activities of the reservoir.*

Comment: 9. Recommendation: Land preservation/restoration with emphasis on wetlands, swamps, and peatlands such as at the Celery Field in Sarasota County, will act as a buffer from storms, will store and treat floods and stormwater runoff. Larger rainfall events are harder to store and treat, so use of multipurpose facilities such as the Celery Fields will be the most cost effective in the long run by providing benefits that include: buffering, flood attenuation and storage, water quality treatment, and in many cases recreation. Wetlands like the Celery Fields which were originally sawgrass marshes, are “peatlands” like the Florida Everglades, which sequester carbon so long as they remain submerged.

Response: *To date, the District and its partners have acquired more than 452,000 acres of conservation land to protect the region’s water resources. Over 344,000 acres are directly managed by the District and its partners, with the remaining lands held in private ownership but protected for*

water resource management purposes through conservation easements. The acquisition of these lands was strategically justified as they represent landscapes with significant wetland features, floodplains of our major tributaries as well as areas with significant recharge. Resource benefits of these conservation lands include flood protection, water quality, aquifer recharge, and protection of our natural resources.

Comment: 10. Each Alternative Water Supply (AWS) should include a comparative energy demand analysis to allow consideration of how each alternative may impact Global Warming/Air Temperature Rise.

Response: *Energy demands and related costs are important considerations for alternative water supply projects. Such analysis would typically be completed as part of the feasibility assessment conducted for any project selected for potential development.*

Linda T. Jones, email comments received July 15, 2020

Comment:

I just recently learned about the draft and wanted to make comments before the deadline. I have several concerns about the water resources plan. The plan appears to make water availability projections based on alternative water resources without sufficient research regarding their safety or costs, does not consider environmental impacts associated with excessive consumptive water permits, and relies on voluntary conservation measures which are ignored and do not bring about conservation.

Agriculture (2018 est. withdrawal 355.0 mgd) is the largest category of water use other than public supply. However, while people support agriculture, they report seeing large amounts of runoff from farms. The runoff carries fertilizer and pesticides into streams and rivers. What actions is SWFWMD taking to insure they get only the water they actually need and it stays on their property? With conservation voluntary, some are likely to continue current excessive water permits because they don't want to reduce their permit quantities and have no incentives to do so.

Mining/Dewatering (2018 est. withdrawal 19.8 mgd; down from 22.6 but additional water used in mining categorized as industrial use) indicates quantities represent only the water consumptively used from natural resources. Phosphate mining accounted for 94 percent of the total. These withdrawals are so high they require a separate category in your report! 95 percent of the water was withdrawn from groundwater sources. The Mosaic mining permit is 69.6 mgd annual average with 44.6 allocated for mining, but another 25.0 for industrial/commercial use though their recent withdrawal (mgd) was below this amount.

The reasons this excessive level of water use by Mosaic is so appalling is that they are a polluting, environmentally destructive company that has destroyed tens of thousands of acres of natural land, forests and water resources in west central Florida for their own corporate profits. A very disturbing and little known fact about their mining is that they leave behind clay slime ponds (CSAs=about 40% of a mine site) that don't get reclaimed and impede rain water from soaking into the ground. In addition, water seepage through the CSA berms into the groundwater is believed to carry chemicals from the beneficiation process (source: AEIS). Phosphate is readily available in 39 countries in the world. Mosaic has imported phosphate themselves and owns interests in other countries. There is no need to mine phosphate in Florida.

It is interesting that hundreds of citizens and scientists know what they destroy and turn out at Mosaic hearings to express their concerns about the devastating effects of mining on natural and water resources, but sometimes the permits get approved anyway. Mosaic gives away a lot of money to silence people and organizations. Poor DeSoto county has stood up to them so far because they don't want their land and water resources ruined, but who knows how long they will be able to withstand Mosaic's pressure.

Citizens are very concerned about water quantity and quality of the Peace River and also Myakka and Horse Creek. The Peace River is on a SWFWMD priority list, with a notation of "low" flows in the northern section. Citizens also express fear that mining berm breaks, runoff from mining tracts and spills will pollute the rivers and streams and contaminate the water for downstream users.

The public knows Mosaic doesn't tell the truth and tries to cover up their problems, but if the journalists find out, they report them. (1) A sinkhole opened up beneath a phosphogypsum stack at the Mulberry plant in 2016, draining 215 million gallons of waste into the aquifer below. Neither the company nor the Florida Department of Environmental Protection notified the public until a television report revealed what happened. Filling the hole took two years and some doubt it is filled now. (2) Another report of a leak ("seepage") occurred in October 2019 at Bartow about 15 miles away, but again the public was not notified until about 3 weeks later (Tampa Bay Times). (3) Mosaic agreed to pay nearly 2 billion over handling of hazardous waste and to clean up operations at six Florida sites and two in Louisiana. The 60 billion tons of hazardous waste addressed in this case is the most ever covered in a federal or state lawsuit and will help insure that waste water is properly managed and does not pose a threat to groundwater resources, the EPA said. Their fertilizer production generates more toxic and hazardous waste than any other industrial sector according to the EPA.

SWFWMD just facilitates Mosaic operations with a WUP permit for vast quantities of groundwater withdrawals that they pay nothing for—free water from our aquifers for their dangerous and environmentally destructive operations. They have reduced their production according to recent reports, which should affect their water permit and withdrawals. Don't they self report from their hundreds of wells? If so, their meters should be checked given the other things they haven't been forthcoming about. And, are those all the wells they actually have or draw from? A lawsuit filed against Mosaic's permit several years ago asserted they were trying to hook into farmers wells, as I understood it.

The last topic I would like to address is drought. An examination of weather records in Florida since 1900 reveals that in every decade there has been at least one severe and widespread drought. SWFWMD cannot predict droughts, but does issue warnings. The last one was issued on April 28, 2020. Looking backward, there have also been a number of news stories about droughts: Southwest Florida Still in a Drought (Water Usage Report Card-2008-2009): Deepening Drought is on the Way—Forecast raises specter of strained supply and rising fire risks (Herald Tribune; March 2012); Little Rain, Low Rivers—with Dry Spell Seen Ahead; Fears of a Drought Return (Herald-Tribune, March 7, 2013). There may have been others recently, but these are ones I kept and can document.

With the possibility of unpredicted, possible droughts, SWFWMD should require conservation of water resources where possible instead of voluntary suggestions which are not implemented, particularly in Water Use Caution Areas.

A system should be implemented that requires visits to well sites using self-reporting. SWFWMD has the authority to ask more questions and make site visits to bring about more water conservation. Water use permits for mining should not be issued until the information is verified as accurate and

should be reduced or eliminated in times of drought or water shortages. Mosaic is a destructive and unnecessary business which does not benefit Florida citizens.

Thank you for your attention to these concerns.

Response: *At the time of the last permit renewal (Water Use Permit no. 20011400.025), Mosaic was authorized 69.6 mad. This is a decrease from their previously authorized quantities for their mining operations of 99.9 mud. Additionally, the permit required annual water conservation reports documenting conservation activities each year. All water use permits are reviewed to meet District and statutory rules, including meeting the Conditions for Issuance pursuant to Rule 40D-2.301, F.A.C. The Conditions for Issuance are consistent with Florida Statutes. Reduced to their basic components, the Conditions for Issuance require an applicant to provide reasonable assurances of an actual need for the quantities requested, and that the withdrawals will not harm the environment or affect any existing legal water users. WUPs with annual average quantities greater than 100,000 gallons per day include special conditions requiring the metering of all withdrawals and the verification of the accuracy of the meters every five years.*

With respect to agricultural water use and as mentioned previously, all WUPs are reviewed to meet District and statutory rules. This includes meeting the Conditions for Issuance for a permit application. The Conditions for Issuance are developed consistent with Florida Statutes and require an applicant to provide reasonable assurances of actual need for the quantities requested, and that withdrawals will not harm the environment or affect any existing legal users. The Conditions of Issuance and supporting Applicants Handbook provide for an analysis of all water use demands to determine if the quantities are reasonable and beneficial for the requested use. This includes the use of an agricultural model to determine if the requested agricultural quantities are reasonable and beneficial based on crop type rainfall soil type, and irrigation methods. The District works with applicants in the development of water conservation plans at the time of renewal that are appropriate and stringent and as mentioned reports are submitted to the District on an annual basis documenting the conserving measures.