

Comments received on the Draft 2023-2024 Lower East Coast Water Supply Plan Update

Part I: Draft 2023-2024 Lower East Coast
Water Supply Plan Update Full Draft Except for
Appendix C and the Executive Summary
Comments Received

Part II: Draft 2023-2024 Lower East Coast
Water Supply Plan Update Appendix C and the
Executive Summary Comments Received

Part I: Draft 2023-2024 Lower East Coast Water
Supply Plan Update Full Draft Except for
Appendix C and the Executive Summary
Comments Received

May 15, 2024

South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Dear Ms. Demonstrati:

Thank you for the opportunity to comment on the 2023-2024 Lower East Coast Water Supply Plan Update (Plan). Determining future water demands and how to meet them is critically important. In Southeast Florida, sea level rise and rapid population growth make this task especially complex. From 2021, water demands are projected to increase by 11% and we commend the South Florida Water Management District (District) for drafting a comprehensive analysis to determine methods to reach this additional water supply capacity. We realize that there is no magic bullet to solving these challenges. The foundation of a sustainable water supply must be conservation, with a diversified selection of alternative sources to help stretch traditional freshwater supplies. With this in mind, Audubon offers the following recommendations:

Alternative Water Supply

Freshwater sources will not meet the 2045 average (net) public water supply demand, a projected 17% increase. Meeting projected future water needs will require not just water conservation programs but also the development of alternative water sources. Some capacity created by water supply development projects will be used to meet the increased demand, and we encourage the District to consider similar projects in the agriculture, landscape, and commercial-use sectors. We realize that these types of projects are generally the responsibility of local utilities. However, the District has a role to play in advocating and proposing projects that rely on nontraditional sources, especially with increased demand on the horizon. With recent shortages like the one in Cape Coral last November, we recommend expanding supply sources and being conservative in Plan projections and strategies.

Water Quality

As we maximize the use of reclaimed water to meet demand, insufficiently treated wastewater can create pollution concerns. We ask the District to incorporate advanced wastewater treatment (AWT) for reclaimed water sources to reduce nutrient loading and set stricter standards for both phosphorus and nitrogen levels in reuse water. AWT standards are exceedingly high when compared with phosphorus goals for the Everglades (e.g., 10 parts per billion total phosphorus compared with AWT standard of 1000 ppb). Higher treatment levels are essential to safeguard our South Florida ecosystems and ensure water conservation is not exacerbating water quality problems. Furthermore, although the agricultural water supply demand is expected to decrease on the planning horizon, as the second largest use category in

the planning area, stricter adherence to Best Management Practices and monitoring their effectiveness will improve both water conservation and water quality.

Water Storage

Given that over half the annual rainfall in the planning area occurs during the wet season, it is crucial that we develop adequate storage capacity for the dry season. The importance of completing Everglades restoration and sending more water south cannot be overemphasized. As more reservoirs and associated Stormwater Treatment Areas come online from various projects and restoration efforts, they offer additional opportunities to recharge the Biscayne Aquifer. We also urge the District to comprehensively evaluate the land it currently owns, such as those in reservations, as well as consider unique opportunities through public-private partnerships to build out additional storage. The need for storage is especially prudent in the northern part of the planning area, in the Lake Okeechobee region. We urge the District to complete a comprehensive storage assessment analysis to determine what is needed to meet both the MFL and TMDL goals for Lake Okeechobee set by state agencies.

In addition, we encourage the District to consider the drought/dry aspects of its water management operations, instead of solely focused on flood control. A strategy based on the latter can result in overdrainage of ground and surface water sources, making droughts worse and increasing other associated risks, like the wildfires on the west coast.

Water Conservation

The Plan states that demand is projected to increase by 208.81 million gallons per day by 2045, largely due to increases in the Public Supply and Landscape/Recreational sectors. For the latter, there are no water supply development projects outlined to meet this demand. Therefore, conservation must be a priority. The least expensive method to reduce demand is through reduction in turfgrass irrigation, which is a water-intensive activity. Alternatives create dual benefits. For instance, the District can incorporate Low Intensity Development (LID) principles, such as planting native plants on land it owns like canal banks, using pervious pavements, incorporating rain gardens and green roofs, and other LID concepts which can also help with stormwater. Promotional campaigns can encourage residents to plant native plants instead of turfgrass as a water conservation measure that will also provide pollinator habitat. Audubon recommends the District consider conservation as an alternative water supply strategy to convey the real capacity opportunities in reducing demand. Recognizing that the largest component of public supply demand is for irrigating turfgrass, such a District campaign to promote reduction of irrigation demand promises to substantially benefit water supply planning.

Audubon encourages the District to continue collaboration with stakeholders, local municipalities, and the resiliency team as you continue to refine the Plan going forward. Thank you for your work on this Plan.


Sincerely,



Kelly Cox, Esq. | Director of Everglades Policy | Audubon Florida

Summary of Comments on 2023-2024_LEC_Plan_Appendices_Draft-City of Boca Comments.pdf

Page: 15

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:15:33 PM -05'00'

Is this correct?

Table A-2. Continued.

PS Utility or DSS	2017-2021 Average PCUR
Palm Beach County	
Boca Raton	290
Boynton Beach	119
Delray Beach	204
Golf	145
Highland Beach	301
Jupiter (Palm Beach and Martin)	211
Lake Worth Beach	106
Lantana	184
Manalapan	¹ 1,157
Mangonia Park	189
Maralago Cay	205
PBCWUD	102
PBCWUD Western Region	176
Palm Springs	75
Riviera Beach	192
Seacoast	188
Tequesta (Palm Beach and Martin)	253
Wellington	104
West Palm Beach	230
Palm Beach County Average	154
LEC Planning Area Average	131

BCWWS = Broward County Water and Wastewater Services; CSID = Coral Springs Improvement District; DSS = Domestic Self-Supply; FKA = Florida Keys Aqueduct Authority; LEC = Lower East Coast; MDWASD = Miami-Dade Water and Sewer Department; NSID = North Springs Improvement District; PBCWUD = Palm Beach County Water Utilities Department; PCUR = per capita use rate; PS = Public Supply; STOF = Seminole Tribe of Florida.

- ^a The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- ^b DSS and average PCUR are from the *2022 Lower West Coast Water Supply Plan Update* (SFWMD 2022).
- ^c Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
- ^d Manalapan discontinued providing water to Hypoluxo in November of 2020. The per capita is based on an average of 2021 and 2022 for Manalapan only.

Finished-to-Raw Water Conversion

Net (finished) demands (**Table A-3**) were calculated by multiplying the PS service area or DSS area population and the 5-year average PCUR. Gross (raw) water withdrawals are the volumes needed from the water source(s) to produce the required net (finished) water volumes considering water treatment process losses. Water use permit allocations are based on the gross (raw) water volume to meet service area demands. To determine gross (raw) water demand for each PS utility, net (finished) water projections were multiplied by finished-to-raw ratios (**Table A-4**), which are based on the treatment efficiency of each PS treatment plant. For example, if a typical reverse osmosis treatment facility withdraws a gross (raw) volume of 10.00 mgd and produces 8.00 mgd of net (finished) water, its treatment losses are 20%. Therefore, its finished-to-raw ratio would be 1.25 (10 mgd divided by 8 mgd).


BOCA RATON


Service Area: City of Boca Raton and unincorporated areas of Palm Beach County.


Description: Potable water supplies are obtained from six SAS wellfields (Boca Northern, Northeast, Northwest, Central, Southeast, and Southwest) and water is treated at the Glades Road WTP using lime softening and membrane softening.

Population and Finished Water Demand						
		Existing	Projected			
		2021	2025	2035	2045	
Population		119,994	122,126	126,437	131,533	
Average 2017-2021 Per Capita (gallons per day finished water)		290				
Potable Water Demands (daily average annual finished water in mgd)		34.80	35.42	36.67	38.14	
SFWMD Water Use Permitted Allocation (mgd)						
Potable Water Source		Permit Number 50-00367-W (expires 2028)				
SAS		51.54				
FAS		0.00				
Total Allocation		51.54				
FDEP Potable Water Treatment Capacity (PWS ID # 4500130)						
Permitted Capacity by Source		Cumulative Facility & Project Capacity (mgd)				
		Existing	Projected			
		2021	2025	2035	2045	
SAS		70.00	70.00	70.00	70.00	
FAS		0.00	0.00	0.00	0.00	
Total Potable Capacity		70.00	70.00	70.00	70.00	
Nonpotable Alternative Water Source Capacity (mgd)						
Reclaimed Water ^a		17.50	17.50	17.50	17.50	
Total Nonpotable Capacity		17.50	17.50	17.50	17.50	
Project Summary						
Water Supply Projects	Source	Completion Date	Total Capital Cost (\$ million)	Projected Cumulative Design Capacity (mgd)		
				2025	2035	2045
Potable Water						
No Projects						
Total Potable Water			\$0.00	0.00	0.00	0.00
Nonpotable Water						
No Projects						
Total Nonpotable Water			\$0.00	0.00	0.00	0.00
Total New Water			\$0.00	0.00	0.00	0.00

^a In 2016, the city achieved designation as a 100% Reuse Facility from the Florida Department of Environmental Protection.

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:22:59 PM -05'00'
They also serve a very small portion of Boca Raton

 Author: KMills Subject: Sticky Note Date: 3/14/2024 2:06:41 PM
Yes, Boca Raton should be listed here in the service area paragraph but not in the bulk water section. We dont have a bulk water agreement with PBC.

 Number: 2 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:22:38 PM -05'00'
We have an interlocal agreement with the County for emergencies and in the past 20 years have never had to use PBC water, however, they have used ours.

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT


1 Service Area: Cities of Atlantis and West Lake (via Seminole Improvement District), towns of Cloud Lake and Glen Ridge, and portions of the cities of Greenacres, West Lake, and West Palm Beach; towns of Haverhill, Lake Clarke Shores, and Loxahatchee Groves; villages of Palm Springs, Royal Palm Beach, and Wellington; and unincorporated areas of Palm Beach County.

Description: Potable water supplies are obtained from four SAS wellfields (Palm Beach County 2W, 3W, 8W, and 9W), and water is treated at four WTPs using lime softening with ion exchange (WTPs 2 and 8) and membrane softening (WTPs 3 and 9).


Bulk Water: PBCWUD provides small quantities of bulk water intermittently on an as-needed basis to the cities of Boca Raton, Boynton Beach, and West Palm Beach as well as the NSID. Additionally, up to 5.00 mgd of bulk water is provided to Seacoast Utility Authority.

PALM BEACH

Population and Finished Water Demand						
	Existing	Projected				
	2021	2025	2035	2045		
Population	545,848	577,044	635,840	678,344		
Average 2017-2021 Per Capita (gallons per day finished water)	103					
Potable Water Demands (daily average annual finished water in mgd)	56.22	59.44	65.49	69.87		
SFWMD Water Use Permitted Allocation (mgd)						
Potable Water Source	Permit Number 50-00135-W (expires 2053)					
SAS	97.40 ^a					
FAS (for blending with SAS)	7.00					
Bulk Finished Water (to Seacoast)	(5.00)					
Total Allocation	104.4^b					
FDEP Potable Water Treatment Capacity (PWS ID # 4504393)						
Permitted Capacity by Source	Cumulative Facility & Project Capacity (mgd)					
	Existing	Projected				
	2021	2025	2035	2045		
SAS	103.28	103.28	115.78	115.78		
FAS	0.00	0.00	0.00	0.00		
Total Potable Capacity	103.28	103.28	115.78	115.78		
Nonpotable Alternative Water Source Capacity (mgd)						
Reclaimed Water	25.89 ^c	27.89 ^c	27.89 ^c	27.89 ^c		
Total Nonpotable Capacity	25.89	27.89	27.89	27.89		
Project Summary						
Water Supply Projects	Source	Completion Date	Total Capital Cost (\$ million)	Projected Cumulative Design Capacity (mgd)		
				2025	2035	2045
Potable Water						
Expansion of WTP 2 to add 12.50 mgd Membrane Softening	SAS	2028	\$65.00	0.00	12.50	12.50
Total Potable Water			\$65.00	0.00	12.50	12.50

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:47:38 PM -05'00'


Again, this is an emergency use interlocal agreement but they do serve on small area in Boca that is not bulk

 Author: KMills Subject: Sticky Note Date: 3/14/2024 2:07:40 PM

The superscript "a" should be removed. We just serve portion of PBC but its not a bulk water agreement

Table B-2. Continued.

Local/Tribal Government	Utility/Entity Serving Local/Tribal Government
Monroe County	
Monroe County (unincorporated)	FCAA
Islamorada, Village of Islands	FCAA
Key Colony Beach, City of	FCAA
Key West, City of	FCAA
Layton, City of	FCAA
Marathon, City of	FCAA
Palm Beach County	
Palm Beach County (unincorporated)	Boca Raton, Boynton Beach, Delray, Golf, Jupiter, Lake Worth Beach, Maralago Cay, PBCWUD, PBCWUD Western Region, Palm Springs, Seacoast, Tequesta, and Wellington
Atlantis, City of	PBCWUD
Belle Glade, City of	PBCWUD Western Region
Boca Raton, City of	Boca Raton and PBCWUD ^a
Boynton Beach, City of	Boynton Beach and PBCWUD ^a
Briny Breezes, Town of	Boynton Beach
Cloud Lake, Town of	PBCWUD
Delray Beach, City of	Delray Beach
Golf, Village of	Golf
Glenn Ridge, Town of	PBCWUD
Green Acres, City of	PBCWUD
Gulfstream, Town of	Delray Beach
Haverhill, Town of	PBCWUD
Highland Beach, Town of	Highland Beach
Hypoluxo, Town of	Boynton Beach
Juno Beach, Town of	Jupiter and Seacoast
Jupiter, Town of	Jupiter
Jupiter Inlet Colony, Town of	Tequesta
Jupiter Island, Town of	Tequesta
Lake Clarke Shores, Town of	Lake Worth Beach, ^b Palm Springs, and PBCWUD
Lantana, Town of	Lantana
Loxahatchee Groves, Town of	PBCWUD
Lake Park, Town of	Seacoast
Lake Worth Beach, Town of	Lake Worth
Manalapan, Town of	Manalapan
Mangonia Park, Town of	Mangonia Park
North Palm Beach, Village of	Seacoast
Ocean Ridge, Town of	Boynton Beach
Pahokee, City of	BCWUD Western Region
Palm Beach, Town of	West Palm Beach
Palm Beach Gardens, City of	Seacoast
Palm Beach Shores, Town of	Riviera Beach
Palm Springs, Village of	Palm Springs and PBCWUD
Riviera Beach, City of	Riviera Beach
Royal Palm Beach, Village of	PBCWUD and Wellington

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:48:29 PM -05'00'

We do not have a bulk agreement - they service a small portion of our City.

Table B-3. Continued.

Utility/Entity Name	Utility Type	Local/Tribal Governments Served (Raw or Finished)
Monroe County		
FKAA	Special District	Village of Islands - Islamorada, City of Key Colony Beach, City of Key West, City of Layton, City of Marathon, and unincorporated Monroe County
Palm Beach County		
Boca Raton	Local Government	City of Boca Raton and unincorporated Palm Beach County
Boynton Beach	Local Government	City of Boynton Beach, Town of Briny Breezes, Town of Hypoluxo, Town of Ocean Ridge, and unincorporated Palm Beach County
Delray Beach	Local Government	City of Delray Beach, Town of Gulf Stream, and unincorporated Palm Beach County
Golf	Local Government	Village of Golf and unincorporated Palm Beach County
Highland Beach	Local Government	Town of Highland Beach
Jupiter	Local Government	Town of Jupiter, Town of Juno Beach, and unincorporated Martin ^a and Palm Beach counties
Lake Worth Beach	Local Government	City of Lake Worth Beach, Town of Lake Clarke Shores, ^b and unincorporated Palm Beach County
Lantana	Local Government	Town of Lantana
Manalapan	Local Government	Town of Manalapan
Mangonia Park	Local Government	Town of Mangonia Park
Maralago Cay	Privately Owned	Unincorporated Palm Beach County
PBCWUD	Local Government	City of Atlantis, City of Boca Raton, ^b City of Boynton Beach, ^b Town of Cloud Lake, Town of Glen Ridge, City of Greenacres, Town of Haverhill, Town of Lake Clarke Shores, Town of Loxahatchee Groves, Village of Palm Springs, Village of Royal Palm Beach, Village of Wellington, City of Westlake (via Seminole Improvement District), City of West Palm Beach, ^b and unincorporated Palm Beach County
PBCWUD Western Region	Local Government	City of Belle Glade, City of Pahokee, City of South Bay, and unincorporated Palm Beach County
Palm Springs	Local Government	Village of Palm Springs, Town of Lake Clarke Shores, and unincorporated Palm Beach County
Riviera Beach	Local Government	City of Riviera Beach and Town of Palm Beach Shores
Seacoast	Special District	Town of Juno Beach, Town of Lake Park, Village of North Palm Beach, City of Palm Beach Gardens, and unincorporated Palm Beach County
Seminole Improvement District	Special District	Unincorporated Palm Beach County and City of Westlake
Tequesta	Local Government	Village of Tequesta, Town of Jupiter Inlet Colony, Town of Jupiter Island, and unincorporated Palm Beach and Martin ^a counties
Tropical Breeze Estates	Privately Owned	Unincorporated Palm Beach County
Wellington	Local Government	Village of Royal Palm Beach, Village of Wellington, and unincorporated Palm Beach County
West Palm Beach	Local Government	City of West Palm Beach, Town of Palm Beach, and Town of South Palm Beach

^a Unincorporated Martin County is outside of the LEC Planning Area.

^b Local government served through bulk water agreement.


Leah Schad Memorial Ocean Outfall Program

The Florida Legislature enacted an Ocean Outfall Law (OOL) in 2008 as defined in Chapter 2008-232, Laws of Florida. Section 403.086(10), Florida Statutes (F.S.), requires the elimination of the use of six ocean outfalls in southeastern Florida as a primary means for disposal of treated domestic wastewater and the reuse of at least 60% of the outfall flows by December 31, 2025. Beginning in 2026, ocean outfalls should be used only for backup disposal.


The OOL provides utilities an option to satisfy their reuse requirements by entering into a contract with another utility under provisions of Section 163.01, F.S., (i.e., Florida Interlocal Cooperation Act of 1969). Contractual or “virtual” reuse agreements are an innovative mechanism some LEC utilities are employing to expand the use of reclaimed water and meet OOL conditions. Under these agreements, a city/utility can contribute financially to the development of another city/utility’s reuse system and receive credit for the subsequent reuse flows. Such agreements are currently in place between the cities of Cooper City, Hollywood, and Miramar. These agreements are described further in this appendix and in the profiles of the affected facilities.

The status of each of the seven wastewater treatment permit holders affected by the OOL on meeting their 60% reuse flow requirement includes the following:

- ◆ **Boca Raton** – In 2016, the Boca Raton WWTF was designated a 100% reuse facility by the FDEP since the city has installed a fully operational reuse system including 100% of the facility’s baseline flow. As a result, Boca Raton was also deemed to have met the reuse requirements of the OOL.
- ◆ **Broward County** – The Broward County – North Regional WWTF will be operationally capable of meeting its OOL mandated flows by the end of December 2025. Actual reuse flows will depend on the receiving and distribution capabilities of partnering utilities including Palm Beach County Water Utilities Department (PBCWUD) – Southern Region, the North Springs Improvement District, and the cities of Coconut Creek, Deerfield Beach, and Pompano Beach. Additional deep injection wells have been installed for backup disposal to cease ocean outfall discharges.
- ◆ **Cooper City** – Cooper City expects to meet its OOL requirements by providing reclaimed water via contractual (virtual) flows within the City of Miramar whereby Cooper City has provided financial assistance to the City of Miramar for the expansion of its reuse system.
- ◆ **Davie** – The Davie WRF has a current capacity to provide up to 3.50 mgd of reclaimed water for irrigation and industrial uses, which is sufficient to meet its OOL requirement. In addition, its deep well disposal program can fully eliminate its current ocean outfall disposals. However, Davie is limited in wastewater flows due to its 1.70 mgd commitment with Hollywood for that city’s reuse program. Davie is seeking new reuse users as well as funding to construct new reuse lines and connections to ensure the 1.10 mgd beneficial reuse flow requirement is met by 2026.

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:50:04 PM -05'00'

We need to verify this


 Author: KMills Subject: Sticky Note Date: 3/14/2024 2:13:43 PM


This should be HI. As per our permit our WRF disinfection level is HI.

Table E-2. Continued.

County	Facility	Disinfection Level	FDEP Rated Capacity (mgd)	2021			2045		
				Annual Average Daily Wastewater Flow (mgd)	Annual Average Daily Reuse Flow (mgd)	Reuse Percentage	Annual Average Daily Wastewater Flow (mgd)	Annual Average Daily Reuse Flow (mgd)	Reuse Percentage
Monroe (Continued)	Key Largo	-	3.45	1.98	0.00	0.0%	2.81	2.81	100.0%
	Key West	-	10.00	4.03	0.00	0.0%	4.52	0.00	0.0%
	Key West Resort	HI	0.85	0.58	0.11	18.8%	0.79	0.13	16.5%
	Marathon – Area 3	HI	0.25	0.18	0.00	0.0%	0.18	0.18	0.0%
	Marathon – Area 4	HI	0.40	0.29	0.00	0.0%	0.29	0.29	0.0%
	Marathon – Area 5	HB	0.45	0.35	0.00	0.0%	0.35	0.35	0.0%
	Marathon – Area 6	BA	0.20	0.08	0.00	0.0%	0.08	0.08	0.0%
	Marathon – Area 7	HI	0.20	0.04	0.00	0.0%	0.04	0.04	0.0%
	North Key Largo	HI	0.50	0.26	0.06	22.9%	0.26	0.06	22.9%
Monroe County Total			18.16	9.06	0.32	3.3%	10.94	4.10	34.6%
Palm Beach	Boca Raton	HB	17.50	15.43	11.10	71.4%	16.12	11.49	70.8%
	East Central Regional (WPB)	HB	70.00	45.21	15.02	33.6%	67.97	20.12	29.8%
	Loxahatchee River District	HI	11.00	7.18	7.40	78.5%	10.52	8.27	78.6%
	PBCWUD – Central Region	HI	3.00	0.54	0.47	100.0%	0.54	0.47	100.0%
	PBCWUD – Southern Region	HI	35.00	19.58	11.43	58.4%	27.05	28.48	75.8%
	PBCWUD – Western Region (Belle Glade)	BA	6.50	3.24	0.08	2.6%	3.63	0.08	2.2%
	PBCWUD – Western Region North (Pahokee)	BA	1.20	1.07	0.00	0.0%	1.26	0.00	0.0%
	Seacoast	HI	12.00	7.54	8.70	92.7%	8.74	9.24	86.1%
	South Central Regional	HB	24.00	17.98	5.94	33.0%	20.65	7.06	34.2%
	Wellington	HB	6.50	3.83	0.35	8.9%	6.54	0.55	8.4%
Palm Beach County Total			186.70	121.59	60.49	48.1%	163.02	85.76	48.8%
LEC Planning Area Total			902.57	675.66	97.47	14.3%	849.62	266.60^a	31.3%

^a Contractual (virtual) reuse water flows between the cities of Cooper City, Hollywood, and Miramar were accounted for in the Broward County and LEC Planning Area totals to avoid double counting. See individual utility profiles for more explanation.

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:51:12 PM -05'00'
2015

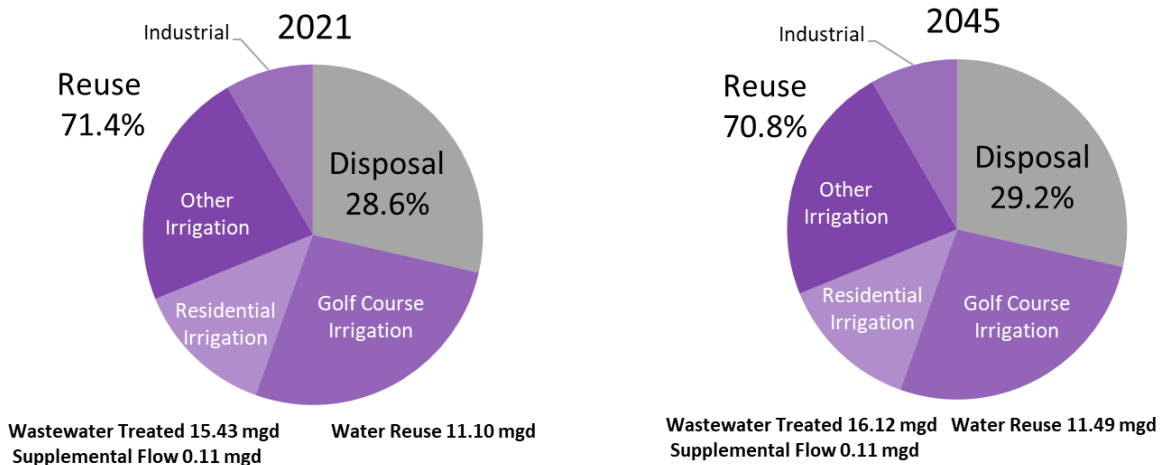
 Number: 2 Author: KMills Subject: Highlight Date: 3/14/2024 2:15:17 PM
Should be High Level only

BOCA RATON

Description: This facility serves the City of Boca Raton and portions of unincorporated Palm Beach County. Reclaimed water is used for irrigation of golf courses and green spaces. The city’s reclaimed water facility is currently permitted at 17.5 mgd and has the ability to deliver all of it to end users. Concentrate from the city’s drinking water membrane treatment facility supplements reclaimed water flows. The city’s WWTF was designated a 100% reuse capacity facility by the FDEP and was deemed to have met its OOL reuse requirement in 2016. The City of Boca Raton has an MRZ (Figure E-1).

Wastewater Treatment Facility Information		
FDEP Wastewater Facilities Regulation Identification	FL0026344	
Wastewater Treatment Capacity (mgd)	17.50	
Disinfection	Basic and High Level	
Public Access Users Served Reclaimed Water 2021:		
Residences – 1,726	Golf Courses – 6	Parks and Schools – 10
Annual Average Daily Flows (mgd)		
	2021	2045
Total Wastewater Treated	15.43	16.12
Total Wastewater Disposed	4.44	4.59
Ocean Outfall	4.44	4.59
Total Water Reused^a	11.10	11.49
Golf Course Irrigation	4.18	4.32
Residential Irrigation	2.08	2.16
Other Irrigation	3.54	3.67
Industrial (Irrigation and use at treatment plant)	1.30	1.34
Supplemental to Reclaimed Water	0.11 – DemConc.	0.11 – DemConc.
Reuse Percentage	71.4%	70.8%
Reclaimed Water Project Summary		
No Projects		

^a Includes supplemental water blended with treated wastewater.



Summary of Comments on 2023-2024_LEC_Plan_Chapters_Draft_1-City of Boca Raton Comments.pdf

Page: 103

Number: 1 Author: lwilsondavis Subject: Oval Date: 2/20/2024 5:22:48 PM -05'00'
How can the total disposal be more than the wastewater treated?

The City of Boca Raton is the only utility that has currently met the OOL reuse requirements. The remaining utilities are working toward meeting the requirements and the 2025 deadline. **Appendix E** provides further details on the status of each ocean outfall utility.

Reuse (including contractual flows) at the utilities and cities affected by the OOL is projected to increase by greater than 145 mgd, and decrease approximately 20 mgd in total disposals, and approximately 160 mgd in ocean outfall disposals from 2021 to 2045. During the same time period, those utilities and cities could see an estimated increase in treated wastewater of 100 mgd (**Figure 5-17**).

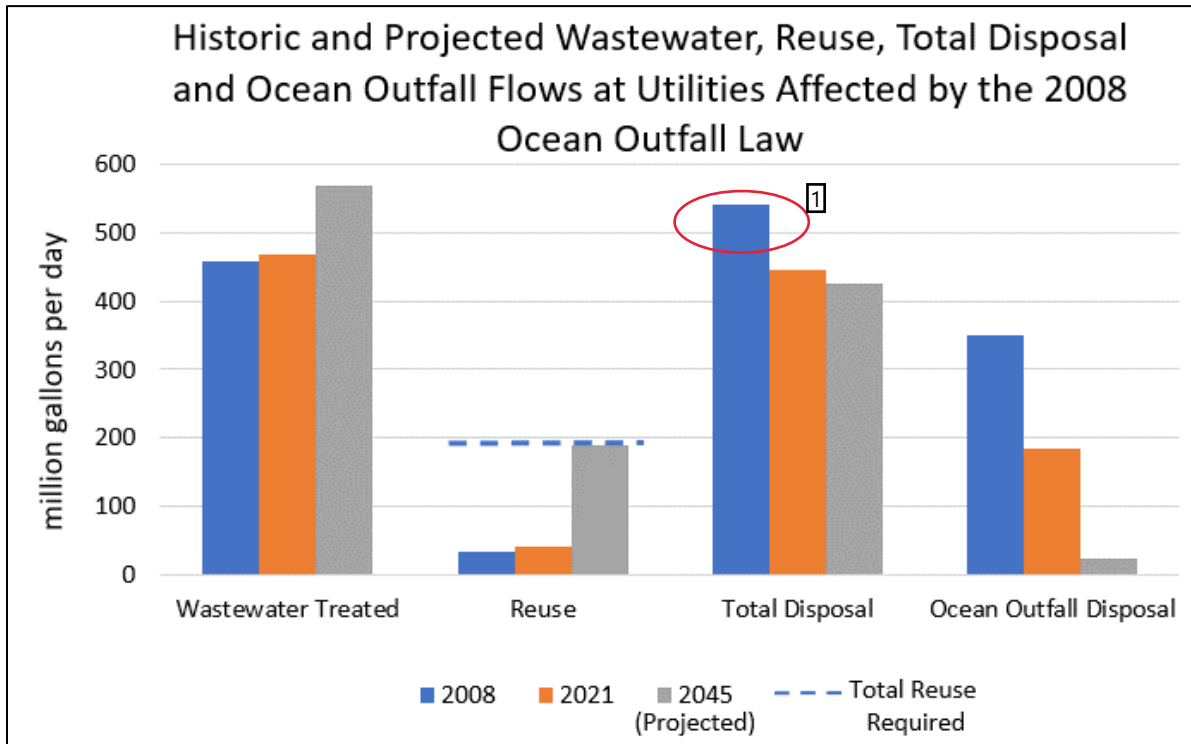




Figure 5-17. Historic and projected wastewater, reuse, total disposal and ocean outfall flows at utilities affected by the 2008 Ocean Outfall Law.


Future Reuse in the LEC Planning Area

Projections for 2045 annual average daily wastewater, reuse, discharges, and supplemental flows were obtained directly from the utilities for all 45 treatment facilities analyzed in this section (**Appendix E**).

While using reclaimed water for irrigation will continue to be an important part of reuse in the LEC Planning Area, industrial reuse (primarily in wastewater facility treatment processes and industrial cooling) is projected to become the largest reuse category by 2045. However, some cooling processes only increase the temperature of the reclaimed water, allowing it to be reused again. Innovative uses of reclaimed water may also increase to help meet water demands or offset potential impacts associated with future withdrawals. For example, Palm Beach County Water Utilities Department will be expanding the Green Cay wetland to include a 63-acre public access park, which will receive reclaimed water treated to potable standards, surrounded by up to four production wells to create an indirect potable reuse system.

 Number: 1 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 5:33:10 PM -05'00'
With the recent legislation pushing this type of use for reclaimed water to meet AWT, this type of reuse will become more scarce.

 Number: 2 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 5:34:42 PM -05'00'
This works for a 20-yrs. CUP, but to get the incentive of a 30-year, the projects will need to meet AWT which is counterintuitive

 Number: 3 Author: lwilsondavis Subject: Highlight Date: 2/20/2024 6:12:59 PM -05'00'
This depends on the maturity of the system -

- Local governments should consider establishing mandatory reuse zones, where reclaimed water use is required by ordinance. The SFWMD will provide technical assistance to local governments who wish to establish mandatory reuse zones.

- Local governments and PS utilities should support development of additional reclaimed water lines for green space irrigation (e.g., residential lots, medians, common areas, golf courses) to decrease reliance on traditional freshwater sources.



Water Reuse

- PS utilities should consider using substitution credits and impact offsets (Section 373.250, Florida Statutes) to promote increased availability and distribution of reclaimed water and decreased use of traditional water sources.
- PS utilities should extend their reclaimed water supply by implementing feasible options, such as increased storage, residential customer metering, tiered rate structures, limiting landscape irrigation frequency, and interconnects with other reclaimed water utilities.

New Storage Capacity for Surface Water or Groundwater

In the LEC Planning Area, water storage options include reservoirs, ASR wells, and surface water impoundments that capture excess groundwater or surface water for later use. In addition, ASR can be used to store excess potable water and reclaimed water for seasonal or longer-term drought resilience. Proposed projects that develop new storage and create additional water supply may be considered AWS sources. Opportunities for new storage capacity include the following:



West Palm Beach ASR System at Clear Lake

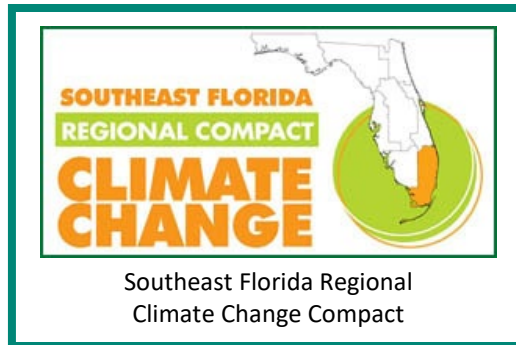
- Surface water storage systems (e.g., reservoirs) can help meet urban, agricultural, and environmental water supply needs.
- New or retrofitted surface water storage systems for agricultural operations could provide additional water supply for irrigation but may have limited availability during a 1-in-10-year drought.
- ASR systems can store water during periods of low demand and high-water levels (i.e., during the wet season) for subsequent recovery during dry periods, which could reduce withdrawals from the SAS wells.

Seawater

The ocean is an important source of water, but desalination is required before seawater can be used for water supply purposes. Where appropriate, utilities should consider the feasibility of desalinated seawater from the Atlantic Ocean as an additional water source option for the LEC Planning Area.

utilities is used more commonly throughout.

- ◆ The SFWMD will continue to provide technical assistance to local governments as they develop climate change adaptation strategies.
- ◆ Local governments and water providers are encouraged to participate in the Southeast Florida Regional Climate Change Compact to support regional planning efforts and initiatives focused on adapting to rising sea levels in the LEC Planning Area.
- ◆ Water users should periodically review irrigation schedules and consider installing weather-based controllers.
- ◆ PS utilities should plan for climate change and sea level rise by reducing withdrawals from the SAS and by using the FAS, employing water conservation measures to reduce overall water demands, and expanding reuse programs to reduce potable and self-supplied SAS withdrawals for irrigation.
- ◆ Local governments, utilities, and private entities should coordinate on resiliency efforts and development of adaptive strategies to address climate change and sea level rise (e.g., constructing defensive barriers, improving infrastructure, rezoning property threatened by inundation or transferring it to public ownership).



CONCLUSIONS

This 2023–2024 LEC Plan Update concludes that future water needs of the region can be met through 2045 with appropriate management, conservation, and implementation of projects identified herein. Meeting future water needs through 2045 depends on the following:

- ◆ Construction of potable water supply development projects by 11 PS utilities (**Chapter 8**).
- ◆ Implementation of CERP and other projects identified in MFL prevention and recovery strategies.
- ◆ Completion of capital projects that provide additional storage to return Lake Okeechobee MFL to a prevention strategy.

Successful implementation of this 2023–2024 LEC Plan Update requires close coordination and collaboration with local governments, utilities, agricultural interests, and other stakeholders. This partnering should ensure water resources in the LEC Planning Area are prudently managed and available to meet future demands while also protecting the environment.

Significant harm As defined in Chapter 40E-8, F.A.C., the temporary loss of water resource functions that results from a change in surface water or groundwater hydrology and takes more than 2 years to recover, but which is considered less severe than serious harm.

Stormwater Water that does not infiltrate but accumulates on land as a result of storm runoff, snowmelt, irrigation, or drainage from impervious surfaces.

Stormwater discharge Precipitation runoff from roadways, parking lots, and roof drains that is collected in gutters and drains. A major source of nonpoint source pollution to water bodies and sewage treatment facilities in municipalities where stormwater is combined with the flow of domestic wastewater (sewage) before entering the wastewater treatment facility.

Stormwater treatment area (STA) A system of constructed water quality treatment wetlands that use natural biological processes to reduce levels of nutrients and pollutants from surface water runoff.

Surface water Water above the soil or substrate surface, whether contained in bounds, created naturally or artificially, or diffused. Water from natural springs is classified as surface water when it exits from the spring onto the earth's surface.

Surficial aquifer system (SAS) Often the principal source of water for urban uses. This aquifer is unconfined, consisting of varying amounts of limestone and sediments that extend from the land surface to the top of an intermediate confining unit.

Treatment facility Any facility or other works used for the purpose of treating, stabilizing, or holding water or wastewater.

Tributary A stream that flows into a larger stream or other body of water.

United States Army Corps of Engineers (USACE) As part of the Department of the Army, the USACE has responsibilities in civil and military areas. In civil works, the USACE has authority for approval of dredge and fill permits in navigable waters and tributaries thereof; the USACE enforces wetlands regulations, and constructs and operates a variety of water resource projects, mostly notably reservoirs, levee, dams, and locks.

United States Geological Survey (USGS) The federal agency chartered in 1879 by Congress to classify public lands, and to examine the geologic structure, mineral resources, and products of the national domain. As part of its mission, the USGS provides information and data on the nation's rivers and streams that are useful for mitigation of hazards associated with floods and droughts, including streamflow, groundwater, water quality, and water use and availability.

Utility Any legal entity responsible for supplying potable water for a defined service area.

Violation (MFL) As defined in Rule 40E-8.021(18), F.A.C., to fall below an adopted minimum flow or level criterion for a duration and frequency greater than specified for the MFL water body. Unless otherwise specified herein, in determining the frequency with which water flows and levels fall below an established MFL for purposes of determining an MFL violation, a "year" means 365 days from the last day of the previous MFL exceedance.

From: [Lauren Wells](#)
To: [Demonstranti, Nancy](#)
Cc: [Colios, Thomas](#)
Subject: RE: Inquiry Regarding AWS Grant Application - Water Supply Facilities Work Plan
Date: Friday, February 23, 2024 1:41:27 PM
Attachments: [Florida Keys Aqueduct Authority Profile.docx](#)
[Letter to SFWMD.pdf](#)

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[Please remember, this is an external email]

Dear Ms. Demonstranti,

The formal written request from our Executive Director, Gregory Veliz, regarding the inclusion of the Crawl Key Reverse Osmosis Project in the 2023-2024 Water Supply Plan, is attached to this email.

Additionally, I have included the edited profile as per your instructions. Please feel free to review and let us know if any further adjustments are needed.

Thank you for your assistance.

Best regards,

Lauren Wells

Accounts Receivable Coordinator
1100 Kennedy Drive
Key West, FL 33040
lwells@fkaa.com
305-295-2165

From: Demonstranti, Nancy <ndemonst@sfwmd.gov>
Sent: Friday, February 23, 2024 8:53 AM
To: Lauren Wells <lwells@fkaa.com>
Cc: Colios, Thomas <tcolios@sfwmd.gov>
Subject: RE: Inquiry Regarding AWS Grant Application - Water Supply Facilities Work Plan

This Message originated outside your organization.

Good morning Lauren,

Regarding the Water Supply Facilities Work Plan, FCAA is not required to do a water facilities workplan since they are not a local government. Monroe

County's Work Plan would capture FKA's projects. So, you would put N/A on the form for that item.

As far as the Water Supply Plan, please send a formal written request to me to include your new project in our draft 2023-2024 plan. The plan is open right now for comments so we can add this to the plan. I am attaching your profile for you to edit and send back to me as well. You would need to add the project under non potable projects and provide, the source, completion date (you can estimate this), Total Capital Cost and the design capacity for 2025, 2035 and 2045. On the grant form or in your project description summary, you can also reference that you have formally requested to add this to the LEC 2023-2024 Water Supply Plan.

If you have any further questions or need additional assistance, please let me know.

Thanks,
Nancy

Nancy Demonstranti, P.G.
Lead Scientist
Water Supply Bureau
South Florida Water Management
District

(561)682-2563

From: Lauren Wells <lwells@fka.com>

Sent: Thursday, February 22, 2024 3:39 PM

To: Demonstranti, Nancy <ndemonst@sfwmd.gov>; tmanning@sfwmd.gov

Subject: Inquiry Regarding AWS Grant Application - Water Supply Facilities Work Plan

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[Please remember, this is an external email]

Good afternoon,

My name is Lauren Wells, representing the Florida Keys Aqueduct Authority, and I am currently finalizing our application for the Alternative Water Source (AWS) grant.

While reviewing Page two of the application, I came across the question regarding the presence of an approved Water Supply Facilities Work Plan as per Section 163.3177(6) (c), Florida Statutes (F.S.). I noticed on your website that there is a Lower East Coast Water Supply Plan and Appendices that covers Monroe County. Could you kindly confirm if this is the plan we should reference in response to the aforementioned question?

Additionally, the application requests the name of the project listed on the Water Supply Plan (WSP) if applicable. We intend to include our Crawl Key RO Facility project in this plan. Could you please guide us on the procedure to add our project to the Water Supply Plan?

Your prompt assistance on these matters is greatly appreciated.

Thank you for your time and consideration.

Best regards,

Lauren Wells

Accounts Receivable Coordinator

1100 Kennedy Drive

Key West, FL 33040

Lwells@fkaa.com

305-295-2165

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Florida Keys Aqueduct Authority

1100 Kennedy Drive
Key West, Florida 33040
Telephone (305) 296-2454
www.fkaa.com



J. Robert Dean
Chairman
District 3

Richard J. Toppino
Vice-Chairman
District 2

Antoinette M. Appell
Secretary/Treasurer
District 4

Nicholas W. Mulick
District 5

Cara Higgins
District 1

Gregory W. Veliz
Executive Director

Dear Ms. Demonstranti,

I trust this letter finds you well. I am writing on behalf of the Florida Keys Aqueduct Authority to formally request the inclusion of our Crawl Key Reverse Osmosis Project in the South Florida Water Management District's (SFWMD) draft 2023-2024 Water Supply Plan.

Project Details:

Project Name: Crawl Key Reverse Osmosis Project
Project Type: Potable Water
Source: Reverse Osmosis
Estimated Completion Date: December 2027
Total Capital Cost: \$70,000,000
Design Capacity: 4 MGD

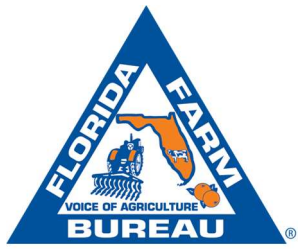
We kindly ask you to add the Crawl Key project under potable water projects and provide the necessary details mentioned above.

Furthermore, we wish to inform SFWMD of two additional water supply projects in our pipeline. We anticipate completing the 4 MGD Stock Island Reverse Osmosis Project and the rehabilitation of the existing 2 MGD Reverse Osmosis Plant on Stock Island by the end of 2029. While these projects won't be included in the grant application, we want to ensure they are acknowledged for future water supply planning as we will be including them in our projected cumulative design capacity.

Your cooperation and assistance in this matter are highly appreciated. If you have any questions or require additional information, please feel free to contact me.

Best regards,

Gregory W. Veliz
Executive Director
Florida Keys Aqueduct Authority



FLORIDA FARM BUREAU FEDERATION

THE VOICE OF AGRICULTURE

May 15th, 2024

Nancy Demonstranti
Lowe East Coast Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Delivered via email to ndemonst@sfwmd.gov

Re: Comments on the Draft 2023-2024 Lower East Coast Water Supply Plan Update

Dear Ms. Demonstranti:

On behalf of the Florida Farm Bureau Federation and our 132,000 member families, many of which live and farm within the boundaries of the Lower East Coast Water Supply Plan (LEC WSP) area, I appreciate the opportunity to comment on the Lower East Coast Water Supply Plan Update.

We have remaining concerns regarding how the upcoming Lake Okeechobee System Operating Manual (LOSOM) will be handled in the Water Supply Plan Update. Uncertainty remains on how to create and implement this plan without knowing what the lake schedule will be. The way that the schedule is described in the current LOSOM Water Control Plan does not provide the certainty and predictability needed for uniform and reliable operations. When we go back and review prior water supply plans, heavy reliance is placed on the lake regulation schedule, and with current LOSOM operations, and its inability to meet the lake's MFL, we have no way of knowing how this will affect water supply.

Due to these concerns, we would like to request a delay in the plan process.

Florida Farm Bureau Federation greatly appreciates the District's openness and willingness to listen to the concerns of our industry. We are thankful for the opportunity to provide these comments and look forward to continued collaboration.

Sincerely,

Jacob J. Fojtik

Jake J. Fojtik

Assistant Director of Government & Community Affairs
Florida Farm Bureau Federation

FLORIDA SUGAR CANE LEAGUE, INC

1455 PENNSYLVANIA AVENUE, N.W. SUITE 320
WASHINGTON, D.C. 20004-1039
(202) 785-4070
FAX (202) 659-8581

May 15, 2024

Nancy Demonstranti
Lower East Coast Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

VIA Email to: ndemonst@sfwmd.gov

Re: Draft LEC Regional Water Supply Plan - 2024 Update

Dear Nancy,

The Florida Sugar Cane League (“FSCL”) and its members are interested stakeholders in the South Florida Water Management District’s (“SFWMD” or “District”) Lower East Coast Regional Water Supply Plan Update of 2024 (“LEC Plan Update” or “Plan”) and holders of consumptive use permits. Lake Okeechobee (“Lake”) is the key water supply source for the FSCL members’ farming operations. On October 19, 2023, FSCL submitted comments on the draft Introductory and Demand Chapters. We are providing these additional comments in response to the portions of the LEC Plan Update published on February 7, 2024. However, we look forward to providing more detailed comments once critical portions of the LEC Plan, such as the Lake Minimum Flow and Levels (“MFL”) Recovery Strategy, have been published. Until the District completes its MFL review and summarizes its findings regarding water supply impacts for the LEC Plan Update horizon, water users, including the FSCL, are not able to provide meaningful analysis and comments on the District’s Plan. As such, we will supplement these comments once the additional MFL documents are released for public comment.

As we mentioned previously, this LEC Plan Update occurs at a time when there are several projects and planning processes ongoing and key projects, such as restoration of the Herbert Hoover Dike, that have recently been completed. Together these actions will have a significant impact on the management of water in South Florida and yield significant

opportunities for water supply. The 2018 LEC Plan Update recognized this impending opportunity, finding:

This 2018 LEC Plan Update concludes that future water needs of the region during 1-in-10 drought conditions can be met through the 2040 planning horizon with appropriate management, conservation, and implementation of projects identified herein. Construction of potable water supply development projects by PWS utilities; Implementation of CERP and other projects identified in MFL prevention and recovery strategies; and Completion of repairs to the Herbert Hoover Dike by the USACE and subsequent implementation of a new Lake Okeechobee Regulation Schedule.

The 2018 LEC Plan Update went on to state:

Additional water from Lake Okeechobee resulting from operational changes or a revised regulation schedule is expected to return the lake to an MFL prevention strategy, enhance the level of certainty for existing permitted users now receiving less than a 1-in-10 year level of certainty, and support environmental objectives.

Over the next several months, LOSOM is expected to be finalized by the United States Army Corps of Engineers (“Corps”). Based on the LOSOM documents disclosed to date, LOSOM will not recover the Lake’s MFL, as was expected in the 2018 LEC Plan. In light of this development, this LEC Plan Update must address how the MFL will be recovered and how impacts to water users will be avoided. It is important that the District publicly comment, per section 373.1501(7), F.S., on any impacts LOSOM may have in its ability to meet its water supply duties. As the LOSOM development process is ongoing, and as the District continues its analysis of the Lake MFL, there has yet to be clarity on LOSOM’s impact on water supply. The combination of the two planning processes (LOSOM and the LEC Plan Update) makes it imperative for the District to make clear comments on its analyses of future water supplies for all water users in the District.

There should be a clear path to recover water resource performance, as expected in the 2018 LEC Plan. We have now reached that time where we can move forward with capitalizing on the State’s significant investment in the Herbert Hoover Dike and other projects. Decisions made in the LEC Plan Update, Lake Okeechobee System Operating Manual, and other planning efforts can synergistically achieve the District’s water supply obligations. As local sponsor of the Central and South Florida Project, and the agency with the responsibility to protect water users, the District must provide operational recommendations to the Corps that are consistent with the District’s water supply program, including their legal obligation to protect existing water users.

In closing, the FSCL looks forward to commenting on the Plan in more detail once further information is available. We remain concerned that the SFWMD ensures that its LEC Plan Update, and any support for LOSOM, comes only after meeting its water supply duties pursuant to Chapter 373 of the Florida Statutes. As the District continues its work on the

remainder of this water supply planning process, the FSCL looks forward to a continued partnership in protecting permitted water users and the environment.

Respectfully,

A handwritten signature in blue ink, consisting of a series of fluid, overlapping loops and curves.

Noah Valenstein

Draft 2023-2024 LEC Water Supply Plan Update
FPL Proposed Comments & Changes

Chapter 2 – Demand Estimates and Projections

Demands under the PG category include use of groundwater, fresh surface water, or reclaimed water by thermoelectric power generation facilities. PG demands do not include the use of surface water returned to its withdrawal source, harvested rainfall, city water, or seawater. Demands under average rainfall and 1-in-10-year drought conditions are assumed to be equal in the PG category; no distinction is made between gross and net water demands.

There are 12 power generation facilities operating in the LEC Planning Area (Figure 2-2). However, only seven of these facilities have demands that are addressed in this plan update: Florida Power & Light (FPL) Riviera Beach Next Generation Clean Energy Center, FPL Turkey Point Clean Energy Center, FPL West County Energy Center, Homestead G.W. Ivey Power Plant, Miami-Dade County Resources Recovery Facility, Okeelanta Cogeneration Facility, and Palm Beach County Solid Waste Authority Renewable Energy Park.

No new power generation facilities requiring water supply are planned for construction or operation through 2045. New solar power facilities are in development, but these do not have PG water demands. However, PG demands are projected to could increase by up to 20.13 mgd from 2021 to 2045 (Table 2-10) mainly due to the potential future use of cooling canal system needs at the FPL Turkey Point Clean Energy Center, which are heavily dependent on environmental conditions (Appendix A provides further information). The other six facilities with water supply demands are projected to remain relatively stable over the planning period. All PG demand estimates and projections are presumed to be the same for average rainfall and 1 in 10 year drought conditions.

Commented [KN1]: FPL would like it to be very clear that the future demand increase shown in the tables & text is the permitted allocation and is provided as a conservative estimate for water supply planning purposes because we cannot predict what the future environmental conditions will be and therefore what the cooling canal system freshening needs will be. FPL is not planning on doubling its water use at Turkey Point between 2021 and 2025.

Commented [KN2]: Already said this in the first paragraph

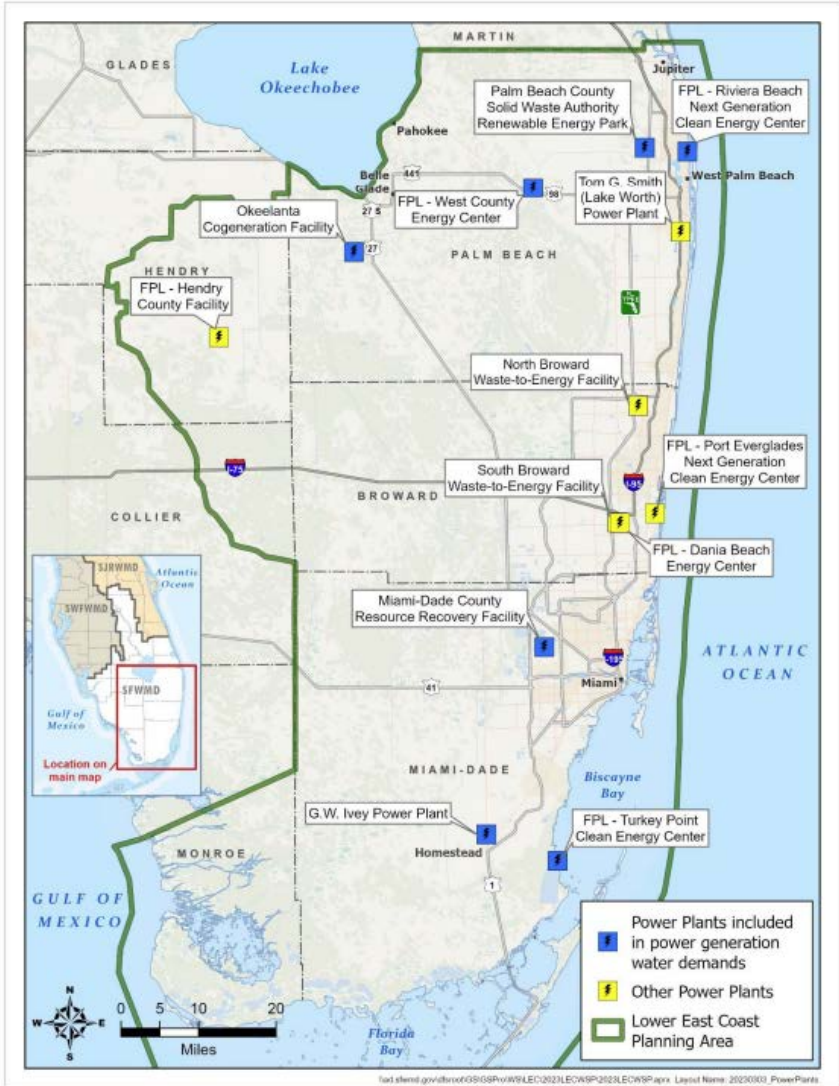


Figure 2-2. Power Generation facilities in the LEC Planning Area.

Table 2-10. PG water demands in the LEC Planning Area.

Facilities	Gross Demand (mgd) ^a						
	2020	2021	2025	2030	2035	2040	2045
FPL – Riviera Beach Clean Energy Center	0.09	0.02	0.10	0.10	0.10	0.10	0.10
FPL – Turkey Point Clean Energy Center ^{b,c}	17.49	21.86	42.60	42.60	42.60	42.60	42.60
FPL – West County Energy Center ^d	13.02	14.22	13.53	13.53	13.53	13.53	13.53
Homestead G.W. Ivey Power Plant	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Miami-Dade County Resources Recovery Facility	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Okeelanta Cogeneration Facility	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Palm Beach County SWA Renewable Energy Park	1.08	1.77	1.77	1.77	1.77	1.77	1.77
LEC Planning Area Total	36.01	42.20	62.33	62.33	62.33	62.33	62.33

FPL = Florida Power & Light; LEC = Lower East Coast; mgd = million gallons per day; PG = Power Generation; SWA = Solid Waste Authority.

^a Includes groundwater from the surficial and Floridan aquifer systems, reclaimed water, and surface water. Does not include harvested rainwater, seawater, city water, or surface water returned to the source.

^b The FPL Turkey Point Clean Energy Center has an allocation of 12.6 mgd from the Upper Floridan aquifer and reclaimed water combined. Additionally, there is an allocation of 30 mgd from the UFA for cooling canal freshening; actual demand will depend on environmental conditions.

^c FPL and Miami-Dade Water and Sewer Department are coordinating future use of reclaimed water at the Turkey Point Clean Energy Center.

^d The West County Energy Center has a backup allocation from the Upper Floridan aquifer and the L-10/L-12 canals when reclaimed water is unavailable.

Chapter 5 – Water Source Options

In some limited cases, brackish groundwater from the FAS is used by L/R (2%), AG (1%), and CII (less than 1%) as an AWS source (**Figure 5-2**) and provides the majority of the demands for PG (98%). L/R FAS users include eight golf courses (Seminole, Lost Tree, Everglades Club, Breakers, Palm Beach Country Club, and Palm Beach Par 3 in Palm Beach County; North Key Largo [Ocean Reef Club] in Monroe County; and Gulfstream Park in Broward County), ~~and~~ ~~three~~ ~~power~~ ~~generation~~ ~~facilities~~ are also FAS users: (Florida Power & Light ~~{FPL}~~ Turkey Point Clean Energy Center in Miami-Dade County; and FPL West County Energy Center ~~{backup wells}~~, and Okeelanta Cogeneration Facility in Palm Beach County). L/R demands from the FAS are expected to increase slightly, and PG demands from the FAS are expected to decrease with the increased use of reclaimed water. Permitted withdrawal locations from the FAS for AG, ~~CH~~, L/R, ~~PG~~, and PS are shown in **Figure 5-14**.

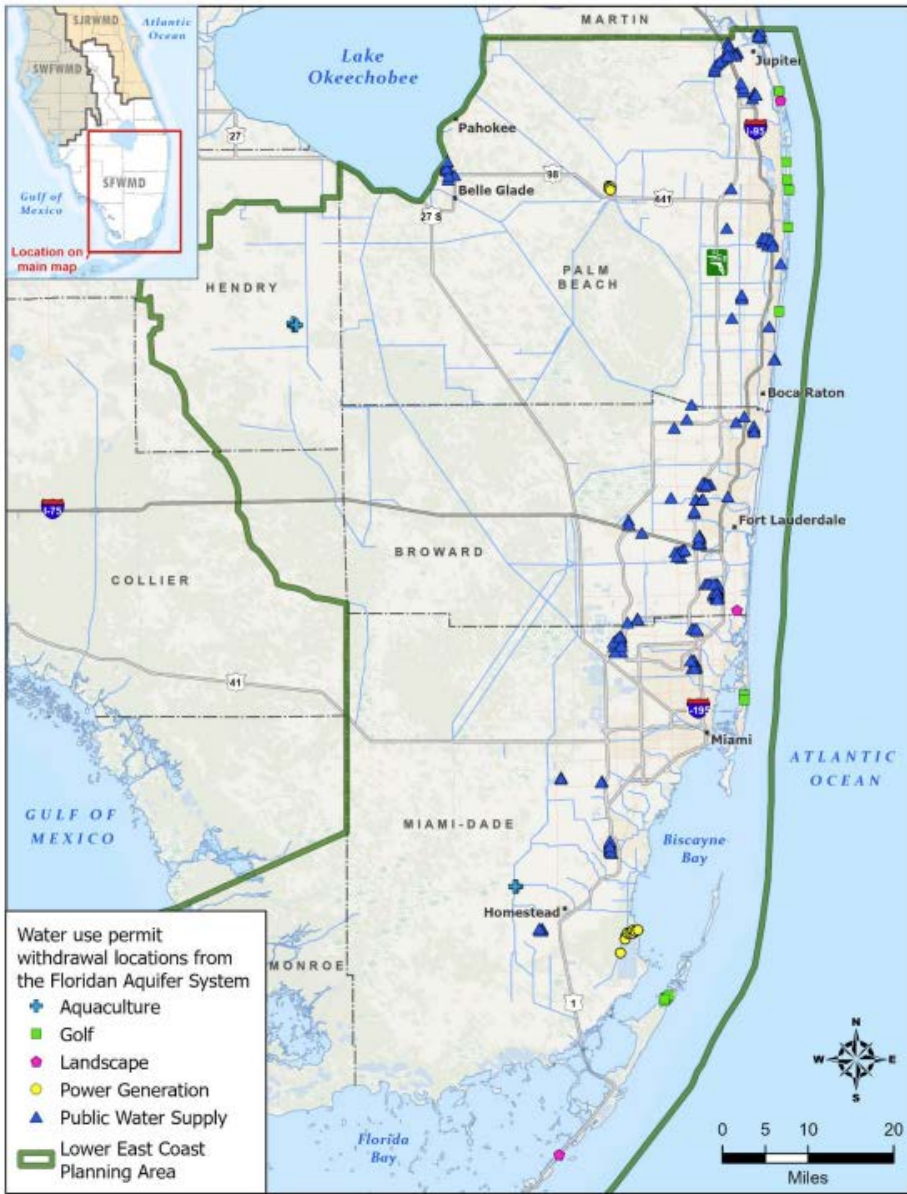
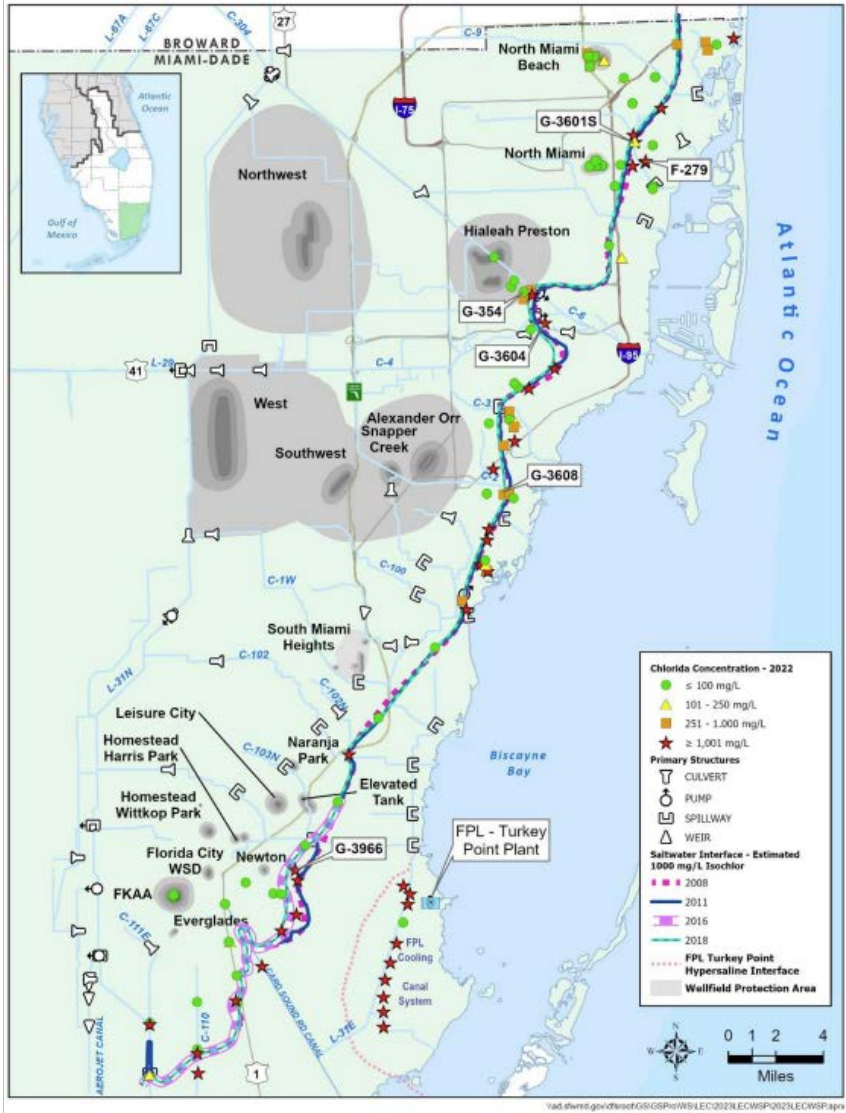


Figure 5-14. Water use permit withdrawal locations from the Floridan aquifer system within the LEC Planning Area.

The use of desalinated seawater from the Atlantic Ocean is an AWS source option for the LEC Planning Area. The SFWMD does not require water use permits for use of seawater. Three power ~~plants-generation facilities in the LEC Planning Area~~ use seawater ~~from tidally influenced water bodies~~ for cooling purposes: FPL Riviera Beach Next Generation Clean Energy Center, FPL Port Everglades Next Generation Clean Energy Center, and FPL Dania Beach Clean Energy Center (**Figure 2-2**). The ocean is an abundant source of water; however, desalination is required before seawater can be used for most water supply purposes. Desalination treatment technologies include distillation, RO, and electrodialysis reversal. RO is the most common desalination technology, and there are two RO seawater desalination facilities in the LEC Planning Area. Both plants are in Monroe County (Stock Island and Marathon) and operated by the Florida Keys Aqueduct Authority for emergencies. They have a combined supply capacity of 3.00 mgd to the lower Florida Keys.

Chapter 6 – Water Resource Analyses



Commented [KN3]: Please remove the line for the Turkey Point hypersaline interface as it is not a water supply planning concern. It is not negatively impacting the regional saltwater interface or any other users.

Figure 6-17. Surficial aquifer system chloride monitoring locations; chloride concentrations; and 2008, 2011, 2016, and 2018 saltwater interface positions in Miami-Dade County.

The Florida Power & Light (FPL) Turkey Point ~~Plant~~Clean Energy Center, approximately 8 miles east of Florida City, operates a cooling canal system (CCS) that encompasses 5,900 acres and 160 miles of shallow canals in hydrologic contact with the Biscayne aquifer (Figure 6-17). Since the system began operating in the early 1970s, a hypersaline (salinity greater than ocean water) plume has formed beneath it that has migrated westward away from the CCS within the lower of two high-flow zones, not in the deepest (less permeable) part of the Biscayne aquifer. The approximate extent of the hypersaline plume was estimated by a controlled-source electromagnetic survey (Enercon 2016) and chloride concentration data from monitor wells. Additionally, a local groundwater flow and solute transport model was developed to evaluate historical conditions that contributed to the present configuration of the hypersaline plume. The model was used to simulate different aquifer remediation system designs (Tetra Tech 2016).

FPL, the Florida Department of Environmental Protection (FDEP), SFWMD, and Miami-Dade County monitor the hypersaline plume through an extensive network of monitor wells at varying depths. Approximately 5 miles west of the CCS is a cluster of three monitor wells (Figure 6-17): TPGW-7S (26 feet bls), TPGW-7M (52 feet bls), and TPGW-7D (114 feet bls). Historical water level and water quality data are from monitor well TPGW-7D. Chloride concentrations in monitor wells TPGW-7S and TPGW-7M are less than 50 mg/L and not shown due to scale. However, salinity in the lower high-flow zone began increasing in 2014 and was most recently at more than 5,000 mg/L (Figure 6-20). Remedial measures being implemented by FPL through regulatory agreements with the FDEP and Miami-Dade County include 1) Biscayne aquifer recovery wells along the western edge of the CCS, 2) a deep injection well system to dispose of the recovered hypersaline groundwater, and 3) brackish Upper Floridan aquifer (UFA) well water conveyed into the CCS to reduce salinity. These measures are meant to abate the hypersaline migration and retract the hypersaline conditions back to the FPL property boundary.

Commented [KN4]: Please remove this writeup on the hypersaline interface. This is not a water supply planning concern and is not negatively impacting the regional saline interface. The demand for water is explained in Appendix A, and the District receives annual updates on the hypersaline remediation efforts separately.

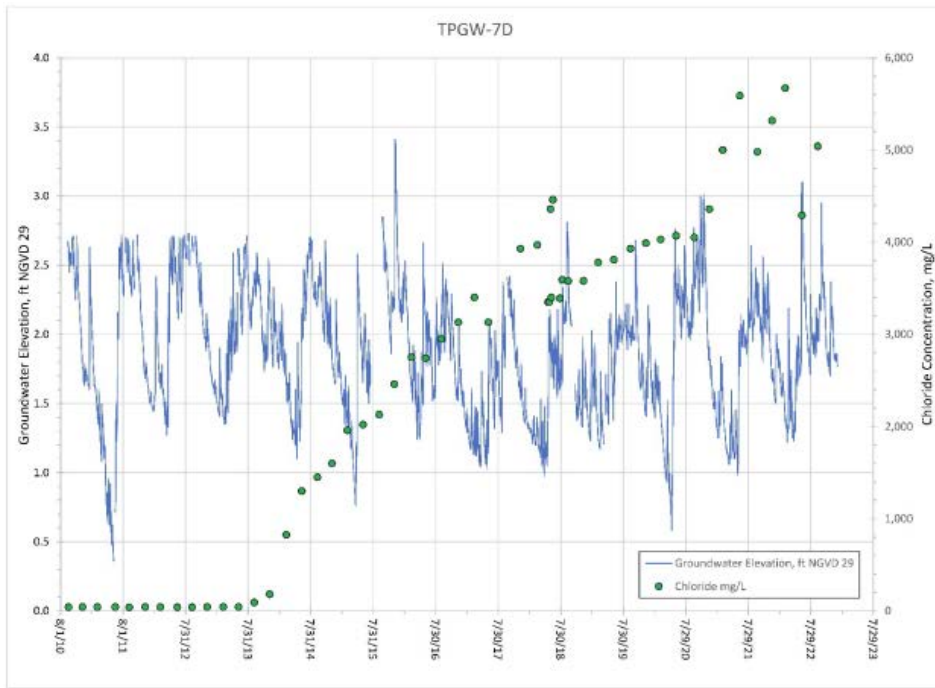


Figure 6-20. Chloride concentrations and groundwater elevations in monitor well TPGW-7D (114 feet ~~deep~~bls) in Homestead, southeastern Miami-Dade County.

Chapter 8 – Water Supply Development Projects

The Power Generation (PG) water demands, which includes water used for cooling, processing, and potable drinking water at power generation facilities, ~~is projected to~~ could increase from 42.20 mgd in 2021 to ~~up to~~ 62.33 mgd in 2045. There are seven PG sites located in the LEC Planning Area that utilize fresh and brackish groundwater and surface water to meet a portion of their demands. Of the seven sites, one, the Florida Power and Light's (FPL) West County Energy Center, utilizes close to 15 mgd of reclaimed water ~~to meet a majority of~~ for its industrial cooling ~~demands,~~ needs. ~~However, by~~ By 2045, that facility may receive up to 20 mgd of reclaimed water for ~~that purpose~~ cooling, and the FPL ~~facility at~~ Turkey Point Clean Energy Center may receive up to 15 mgd of reclaimed water to meet its demands for industrial cooling and processing water.

As stated above, PG water demands ~~are expected to~~ could increase ~~by~~ approximately 20 mgd from 2021 to 2045, ~~primarily depending on environmental conditions at Turkey Point for its cooling canal system~~ (Appendix A provides additional information). Because the availability of fresh water is limited in the LEC Planning Area, AWS sources may be the most feasible options to meet future PG ~~use~~ demands if a new use is proposed. No specific water supply development projects for this category were provided or identified for this 2023–2024 LEC Plan Update.

Appendix A – Water Demand Projections

Demands under the PG category include use of groundwater, fresh surface water, or reclaimed water by thermoelectric power generation facilities. There are 12 power generation facilities operating in the LEC Planning Area (Figure 2-2). However, only seven of these facilities have demands that are addressed in this plan update: Florida Power & Light (FPL) Riviera Beach Next Generation Clean Energy Center, FPL Turkey Point Clean Energy Center, FPL West County Energy Center, Homestead G.W. Ivey Power Plant, Miami-Dade County Resources Recovery Facility, Okeelanta Cogeneration Facility, and Palm Beach County Solid Waste Authority Renewable Energy Park.

The FPL Riviera Beach Next Generation Clean Energy Center mainly uses surface water from Lake Worth Lagoon for its once-through cooling before the water is returned to the lagoon. As a result, this is not considered as part of the demands, only the facility's groundwater use is considered. Groundwater from the surficial aquifer system (SAS) is used for steam generators, inlet spray coolers, and other industrial uses. Demands decreased from 0.09 mgd in 2020 to 0.02 mgd in 2021 due to the installation of new, more efficient pumps. The FPL Riviera Beach Next Generation Clean Energy Center has an estimated demand of 0.10 mgd from 2025 through 2045.

The FPL Turkey Point Clean Energy Center currently uses groundwater from the Upper Floridan aquifer (UFA) for cooling and process water demands. Reclaimed water is expected to be used as the primary cooling water source for Unit 5 by 2025. In 2021, Turkey Point used 9.64 mgd of UFA water for cooling at Unit 5 and process water for Units 1 through 5. In addition, 12.22 mgd of UFA water was used to freshen the cooling canal system for Units 3 and 4. From 2025 through 2045, a maximum combined annual average of 12.6 mgd of UFA and reclaimed water is allocated for cooling water for Unit 5 and process water for Units 1 through 5. Additionally, a maximum annual average of 30 mgd of UFA water is allocated to continue freshening the cooling canal system for Units 3 and 4. The actual UFA water demand for freshening will depend on environmental conditions (e.g., rainfall, temperature). ~~From 2025 through 2045, a maximum combined annual average of 12.6~~ Turkey Point's PG demand was 21.86 mgd in 2021, and the facility may use up to 42.60 mgd (the permitted allocation) between 2025 to 2045.

The FPL West County Energy Center primarily uses reclaimed water from Palm Beach County to meet its cooling water demands. Potable water from Palm Beach County is used for makeup water for other industrial uses, and groundwater from the UFA and surface water from the L-10/L-12 canals can be utilized as a backup supply when reclaimed water is unavailable. Only reclaimed water is considered as part of the demands. The FPL West County Energy Center used 14.22 mgd in 2021. The demand is expected to decrease to 13.53 mgd from 2025 through 2045.

The Homestead G.W. Ivey Power Plant and the Miami-Dade County Resources Recovery Facility utilize groundwater from the SAS. The Okeelanta Cogeneration Facility uses a combination of groundwater from the SAS and UFA as well as surface water to meet its cooling system demands. Overall, the combined PG demands of these three facilities remain constant at 4.33 mgd from 2021 to 2045.

The Palm Beach County Solid Waste Authority Renewable Energy Park mainly uses groundwater from the SAS to meet demands for industrial processes. Potable water from Palm Beach County, harvested rainwater, and reclaimed water are utilized for processing water and cooling tower blowdown. The expected PG demand for the Palm Beach County Solid Waste Authority Renewable Energy Park remains constant at 1.77 mgd from 2021 through 2045.

In the LEC Planning Area, PG demands ~~are projected to could~~ increase from approximately 42.20 mgd in 2021 to 62.33 mgd in 2045 (**Table A-30**). This increase is primarily due to the ~~increased allocation~~ potentially higher demand of UFA water for cooling canal freshening at the Turkey Point Clean

Energy Center, which is highly dependent on environmental conditions. All other facility demands remain relatively stable over the planning period.

Table A-30. PG water demands in the LEC Planning Area between 2020 and 2045.

Facilities	Gross Demand (mgd) ^a						
	2020	2021	2025	2030	2035	2040	2045
FPL – Riviera Beach Clean Energy Center	0.09	0.02	0.10	0.10	0.10	0.10	0.10
FPL – Turkey Point Clean Energy Center ^{b,c}	17.49	21.86	42.60	42.60	42.60	42.60	42.60
FPL – West County Energy Center ^d	13.02	14.22	13.53	13.53	13.53	13.53	13.53
Homestead G.W. Ivey Power Plant	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Miami-Dade County Resources Recovery Facility	1.76	1.76	1.76	1.76	1.76	1.76	1.76
Okeelanta Cogeneration Facility	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Palm Beach County SWA Renewable Energy Park	1.08	1.77	1.77	1.77	1.77	1.77	1.77
LEC Planning Area Total	36.01	42.20	62.33	62.33	62.33	62.33	62.33

FPL = Florida Power & Light; LEC = Lower East Coast; mgd = million gallons per day; PG = Power Generation; SWA = Solid Waste Authority.

^a Includes groundwater from the surficial and Floridan aquifer systems, reclaimed water, and surface water. Does not include harvested rainwater, seawater, city water, or surface water returned to the source.

^b The FPL Turkey Point Clean Energy Center has an allocation of 12.6 mgd from the Upper Floridan aquifer and reclaimed water, combined. Additionally, there is an allocation of 30 mgd from the UFA for cooling canal freshening. actual demand will depend on environmental conditions.

^c FPL and Miami-Dade Water and Sewer Department are coordinating future use of reclaimed water at the Turkey Point Clean Energy Center.

^d The West County Energy Center has a backup allocation from the Upper Floridan aquifer and the L-10/L-12 canals when reclaimed water is unavailable.

From: [Tommy Strowd](#)
To: [Elsner, Mark](#); [Kwiatkowski, Peter](#); [Colios, Thomas](#); [Demonstranti, Nancy](#)
Cc: [Paul Linton F.](#); [Reagan Walker](#)
Subject: LWDD / Palm Beach Country Issues Associated with the 2024 LECRWSP
Date: Tuesday, April 30, 2024 7:57:13 AM

Some people who received this message don't often get email from tstrowd@lwdd.net. [Learn why this is important](#)

[Please remember, this is an external email]

Mark, et. al:

I apologize for the delay in getting back to you after our March 2024 meeting discussing the 2024 LECRWSP and water resource concerns associated with southeastern Palm Beach County. Again, we truly appreciate the opportunity have the discussion and express our concerns-- and more importantly, offer possible solutions to address these issues.

The following is a summary of issues specifically related to the potential impacts associated with LOSOM. I have suggested the language below for consideration in the draft LECRWSP Plan as a means to incorporate these recommendations in the future water control operations associated with LOSOM during periods where excess water from Lake Okeechobee is available. This proposal would not only improve LOSOM water supply performance in LECSA 1 - similar to that seen in LECSAs 2 & 3, but also reduce water supply impacts on WCA-1 and damaging discharges to the Lake Worth Lagoon.

The basis for the operational suggestions described herein was taken from the following discussion presented in the LOSOM DEIS;

LOSOM DEIS – Appendix C Part 3; C.3.4.3.1 Slough/Open Water Marsh, (pgs. C.3-63 & 64)

“With respect to the increased risk in WCA-1, the westernmost portion of the Lake Worth Drainage District (LWDD) (with the highest maintenance level) is sustained through six inlet structures: G94A, G94C, CS2, CS9, CS12, and CS17W. The LWDD inlets CS2, CS9, CS12, and CS17W are pumps discharging from the C51 canal (CS2), the Hillsboro Canal (CS17W), and the eastern portion of the LWDD (for both CS9 and CS12). G94A and G94C are gravity structures discharging from (WCA-1) towards the LWDD. G94A is modeled as a pump with the combined capacities of the downstream CS1 and CS3 pumps that discharge directly into the westernmost portion of the LWDD (CS1 and CS3 canal are not explicitly modeled). In the real world, the LWDD permit identifies WCA-1 as the source of regional water, but when there is “excess” water in the C51 canal, recent operational practice has been to utilize this water prior to discharging via the G94 structures. To partially mimic this operational intent, in the LOSOM planning, the priority order as specified in RSMGL, is the following: CS2, CS12, CS9, CS17W, G94C, and G94A. In the early rounds of LOSOM modeling (including Iteration 2), “excess” in the C51 was defined as any volume above the water supply threshold of 7.8 ft, NGVD, but in the Iteration 3 modeling, this definition was refined to better mimic the operational intent by restricting the use of CS2 when C51 canal levels (as measured at S155 HW) fall below 8.05’

(full capacity is assumed above 8.05' and no capacity is assumed below 7.95', while interpolating in between).

When comparing LOSOM alternatives to LORS08 baseline conditions, a trend was observed that simulated use of the G94 structures increased under LOSOM, thereby reducing stages in WCA-1 under some conditions. This can be explained by acknowledging that the LORS08 schedule makes extensive use of the "L8 to tide" regulatory discharge route via C51 when compared to LOSOM. As such, there is more availability of "excess" water in LORS08 simulation compared to LOSOM. This reduction in C51 "excess" results in increased use of G94 as described above. The magnitude of the relative differences observed at different points in the LOSOM process varies depending on the evolving definition of "excess" as well as refinements over time to the LOSOM schedule discharges via the "L8 to tide" route."

Suggested Language for the LECRWSP 2024

"The modeling analyses presented in the July 2022 LOSOM Draft Environmental Impact Statement (DEIS) indicate an increased frequency and severity of local water supply impacts in LECSA-1 along with significant associated drying trends observed in WCA-1 when compared with LORS08 operations. These projected impacts appear to result from the reduction in Lake Okeechobee regulatory releases to tide via the C-51 and L-8 canals associated with LOSOM as compared to those same releases associated with LORS08. These releases of excess water from Lake Okeechobee have historically been utilized by the Lake Worth Drainage District (LWDD) as an alternative source of regional water that sometimes offsets the need to make surface water withdrawals directly from WCA-1, which can impact hydropatterns in the marsh ecosystem under certain conditions. Under LOSOM, excess water in Lake Okeechobee is released south to WCAs 2 & 3 via the North New River and Miami canals, which tends to reduce the frequency and duration of high stages in Lake Okeechobee and provides a source of water to enhance hydropatterns in the southern Everglades ecosystem. This operational route avoids discharges to WCA-1 along with the St. Lucie, Caloosahatchee, and Lake Worth Lagoon estuaries. Allowing the discharge of excess Lake Okeechobee water to the L-8 & C-51 canals but avoiding the subsequent discharge to the Lake Worth Lagoon via S-155, S-40 & S-41, provides an alternative source of regionally available excess water that will offset the need to make comparable water supply withdrawals from WCA-1 during those periods. This operational tactic can be accommodated within the operational flexibility of both the LOSOM and existing Central & Southern Florida Project water control manuals without modification."

Other LECSA-1 WS Issues

I would also like to reiterate the need to keep the Site 1 Project listed in the 2024 LECRWSP, similar to its inclusion in the 2018 LECRWSP. We understand that Site 1 will not be included in the 'funding table' in the draft document. While we agree that the project does not currently have federal or state funding at this point, that does not mean the project should be removed as CERP project at this point in time and should therefore remain as a potential water supply alternative in the 2024 LECRWSP until a final determination of the viability of the project has been made by the appropriate agencies.

Palm Beach County Environmental Issues

LWDD and Palm Beach County share overall concerns related to the 1-in-10-year water supply reliability, but also desire to insure that damaging releases to the Lake Worth Lagoon are minimized to the extent reasonably possible. To mitigate these concerns, we would recommend prescribing the following operation as a change in general water supply operating policy under the 'operational flexibility' provided through LOSOM. To balance sediment and nutrient concerns the following water supply priorities are recommended;

- Water Supply from WCA-1 when WCA-1 is in Zone A and there is need for water supply in LWDD (infrequent) maximize water supply from Lake Okeechobee.
- Water Supply from Lake Okeechobee when there are undesirable releases to any of the estuaries maximize water supply from Lake Okeechobee.. The water supply taken by LWDD from the C-51 Canal and the E-4 Canal shall count as part of PBC up to 300 cfs regulatory discharge. Simply put the releases from Lake Okeechobee should not result in release through G-541 above 300 cfs.
- When there are no estuary releases but either the A-2 Reservoir is being filled with water from Lake Okeechobee or the A-2 STA is discharging to the everglades or a combination of both LWDD maximize water supply from Lake Okeechobee. This is to compensate for the lack of completed CERP Component that would provide water supply.
- For all other conditions, balance water supply from Lake Okeechobee and WCA-1 based on the water availability in WCA-1 and Lake Okeechobee and hydraulic limits.

For all of these conditions water can be taken from WCA-1 if there is hydraulic or water availability limits from Lake Okeechobee and all of the water supply from the C-51 and E-4 Canals should be taken as far west as practicable (e.g. CS-2 just downstream of S-155A).

Again, I would like to thank you for the opportunity to comment. LWDD has been concerned regarding the potential water supply impacts presented in the modeling performance measures associated with LOSOM but feel that the operational flexibility afforded by LOSOM can be leveraged to mitigate these potential negative outcomes. I feel that consideration of these issues in the LECRWSP will highlight their consideration in future Lake Okeechobee water control operations to the benefit of all of those served by the C&SF Project.

Please let me know if you have any questions or need any additional information.

Sincerely,

-Tommy

Tommy B. Strowd, P.E.
Executive Director / District Engineer
LAKE WORTH DRAINAGE DISTRICT

2023–2024 Lower East Coast Water Supply Plan Update
Palm Beach County Water Utilities Department (PBCWUD) Comments
May 14, 2024

Chapters

- 1) Palm Beach County Water Utilities Department (PBCWUD) may have more comments on the entire document once Appendix C is released and we can understand the plan in its entirety.

- 2) Page 83 (PDF 101), Second paragraph: PBCWUD recommends that the Green Cay Phase II and the South County Reclaimed Water Transmission Pipeline projects be listed here.
 - a) The Green Cay Phase 2 Advanced Reclaimed Water Treatment Facility operations permit issued by the FDEP on May 6, 2024 and the groundbreaking ceremony performed on March 7, 2024.
 - b) The South County Reclaimed Water Transmission Pipeline that brings reclaimed water from Broward County to the PBCWUD reclaimed water system. PBCWUD has constructed 2.8 miles of 24-inch pipe and is in the process to design and construct the remaining reclaimed water pipeline.
 - c) Therefore please change:
...Palm Beach County Water Utilities Department (Wakodahatchee and Green Cay wetlands)...
To read:
...Palm Beach County Water Utilities Department (Wakodahatchee, Green Cay Phase I wetland, Green Cay Phase II wetland, and South County Reclaimed Water Transmission Pipeline)...

- 3) Page 85 (PDF 103), Fourth paragraph: PBCWUD would prefer that the Water Supply Plan not state the number of production wells that may be installed at the expansion of the Green Cay wetland (Green Cay Phase II). There is a possibility that more than four (4) wells could be installed in the future.
 - a) Therefore please change:
...surrounded by up to four production wells to...
To read:
...surrounded by production wells to...

Appendices

- 4) Appendix A (several locations).

PBCWUD understands the SFWMD’s use of University of Florida, Bureau of Economic and Business Research (BEBR) medium population projections in accordance with Section 373.709(2)(a)1, Florida Statutes (F.S.). However, the resultant population projections in this case do not align with our actual future water demands or our withdrawal allocation as approved in our 2022 consumptive use permit.

The first sentence of Section 373.709(2)(a)1., F.S. states, “Population projections used for determining public water supply needs must be based upon the best available data.” In Palm Beach County’s eastern and western service areas the best available data is the Integrated Utility Master Plan (IUMP). PBCWUD worked closely with the Palm Beach County Planning Department to develop consistent population projections for the water service area through 2050. The most recent population estimates and projections were included in the Palm Beach

County 10-Year Water Supply Facilities Work Plan in March 2020 (WSFWP). The WSFWP is updated every 5 years by PBCWUD as required by Section 163.3177(6)(c)3, F.S. The basis of the estimates is the County’s Planning Division Population Allocation Model and water customer connection data provided by PBCWUD. PBCWUD has correlated its population projections with the BEBR mid-range population projections for the entirety of Palm Beach County to ensure that they are in alignment.

The differentials in estimates between SFWMD’s and PBCWUD’s population are significant as shown in the table below:

Projection Year	Eastern Region		Western Region	
	SWFMD WSP	PBCWUD IUMP	SWFMD WSP	PBCWUD IUMP
2025	577,044	618,191	37,405	39,120
2035	635,840	680,611	38,916	45,909
2045	678,344	722,920	40,488	54,484

PBCWUD requests that population be adjusted in the WSP to align with PBCWUD projections and permitted values.

OFFICE OF THE MAYOR

Nick Sortal
Mayor

ADMINISTRATION

Jason Nunemaker
Chief Administrative Officer



CITY COUNCIL

Timothy J. Fadgen,
President
Louis Reinstein,
President Pro Tem
Erik Anderson
Jennifer Andreu
Denise Horland

April 22, 2024

Ms. Nancy Demonstranti
Lower East Coast Water Supply Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406
Transmitted via electronic mail

Re: Draft 2023-2024 Lower East Coast Water Supply Plan Update

Ms. Demonstranti:

The City of Plantation (City) has reviewed the Draft 2023-2024 Lower East Coast Water Supply Plan Update (the Plan). We appreciate the time and efforts of SFWMD staff however we wish to go on record, again, in expressing our concern over the population projections which serve as the basis of the Plan.

The City continues to be concerned that the population projections prepared by the University of Florida's Bureau of Economic and Business Research (BEBR) are unduly conservative. The City is in the process of updating its Comprehensive Plan which guides future development. Much of this future development, and redevelopment, will be concentrated in the area known as "Midtown" along with the 441 corridor, and is at a significantly higher density. Similarly, the City has prioritized affordable housing needs and the implementation of the Live Local Act.

For your convenience we are enclosing copies of prior correspondence further documenting the City's concerns.

Thank you for the opportunity to share our comments.

Sincerely,

Jason Nunemaker
Chief Administrator Officer

Cc: Mayor Nick Sortal
Dan Pollio, Utilities Director
Hazen and Sawyer

OFFICE OF THE MAYOR

Nick Sortal
Mayor



CITY COUNCIL

Timothy J. Fadgen
President
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Denise Horland

February 13, 2024

R. Simon A. Sunderland, P.G.
Bureau Chief - Water Use
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Re: City of Plantation Consumptive Use Permit (CUP) Renewal

Dear Mr. Sunderland,

The City of Plantation (City) is pleased to submit its consumptive use permit renewal. The City has previously expressed to the South Florida Water Management District (SFWMD) our concerns that the population projections prepared by the University of Florida’s Bureau of Economic and Business Research (BEBR) are unduly conservative with regard to our municipality. Our concerns were originally raised during the Lower East Coast Water Supply Plan updates. These concerns remain and are detailed in the attached letter from the City’s consultant, TranSystems. The City is in the process (or has requested) BEBR review the evidence submitted and consider revision of these numbers.

The City and its consultants would suggest the following population estimates, based on new development not considered in the BEBR calculations, to be in keeping with the chart below.

Population Estimates, based on new development						
Year	2022	2025	2030	2035	2040	2045
Population [based on construction of new units]	96,042	99,368	104,996	110,729	116,567	122,510
Avg HH Size	2.62	2.65	2.7	2.75	2.8	2.85
Average Units Approved/Built	420	420	420	420	420	420

Accordingly, anticipating revision of the BEBR population estimates, the City is submitting its CUP renewal in keeping with these numbers.

We look forward to working with SFWMD during the CUP renewal process.

Sincerely,

Nick Sortal
Mayor

Enclosure

for unknown, future development projects that will inevitably be brought to the city and further impact infrastructure demand.

Total Units	Total COs Issued to date	2023 Sept-Dec	2024	2025	2026	2027
2,025	971	0	240	794	20	0

Historically, the city issued approximately 800 residential certificates of occupancy in 2021, more than 500 in 2022, and more than 850 in 2023 to date – all far surpassing the annual average of 166 new units anticipated by BEBR’s forecast. In fact, this represents over 50 percent of the growth that was estimated for a 22-year period in just 3-years.

Residential projects historically approved by the city are shown below. Table 2 reflects an average of 420 new residential units approved per year in the city since 2014, which is 2.5 times greater than the household equivalent growth projected by the BEBR. It should also be noted the current number of units in review is approximately 40% of the total number of units approved for the last nine years combined. This demonstrates the exponential growth the city is experiencing and supports increased population projections.

Year	Units Approved	Beds Approved [assisted living facility projects]
2014	555	
2015	0	
2016	1128	
2017	810	
2018	248	140
2019	618	
2020	0	
2021	124	
2022	8	
2023	297	
<i>In Review</i>	<i>1,470</i>	
TOTAL APPROVED	3,788	140
AVERAGE ANNUAL APPROVAL	420 units	15 beds

III. **Future Redevelopment Activities**

It would be inaccurate to assume the city is built-out and experiencing slow growth. As shown in Tables 1 and 2 above, the city has experienced strong residential redevelopment rates as far back as 2014. The redevelopment rates are growing exponentially as indicated by the number

September 14, 2023

Danny A. Holmes, Director
Planning, Zoning and Economic Development Department
401 NW 70th Terrace
Plantation, FL 333317

Subject: Lower East Coast Water Supply Plan Population Projections

Dear Mr. Holmes:

On behalf of the City of Plantation, TranSystems prepared the following analysis to evaluate the population projections prepared by the University of Florida's Bureau of Economic and Business Research (BEBR) and utilized by the South Florida Water Management District (SFWMD). Based upon our review, we have identified a discrepancy in BEBR's projections. As such, TranSystems offers the data and analysis below to support the revision of BEBR's population projections.

I. US Census Bureau Data and Projections

According to the Census Bureau, the city's 2020 population was 91,750. The Bureau estimates the 2022 population was 96,042 – a 2,146 person increase per year. BEBR's population projections show a 2021 population of 94,764 and a 2025 population projection of 96,558 – equaling only a 448 person increase per year. This projected growth rate is generally linear and continues through 2045. As such, a far greater growth rate was proven for the period through 2022. In fact, the growth rather was almost five times the rate projected by BEBR for the same time period. COVID-19 may have largely impacted the original BEBR estimates as we saw historic increases in population growth at a local level. Adjustments to BEBR's projections are warranted given the unanticipated impacts of the pandemic.

Further, BEBR's population projections demonstrate a city-wide population of 105,542 residents in the year 2045. This represents a mere 9,500 person increase from 2023 – 2045 (a period of 22 years). The Census Bureau notes an average household size of 2.6 persons per household at the time of the 2020 Census. As such, the projected population increase translates to an approximately 3,653 new household units over the same time period, or just 166 new households per year.

II. Historic Permitting and Approvals

Through annual permit reporting to the Broward County School Board, the city provided data shown in Table 1 below regarding development underway and remaining for the 2022-2023 year. As shown, the city has over 1,000 residential units in the pipeline, not yet built. These units are anticipated to be completed by 2026. Using the city's average household size of 2.6, these units represent a population increase of 2,740 people over the next three years; or 913 people a year – twice the growth rate shown by BEBR's population estimates. This table does not account

of residential certificate of occupancies issued over the last several years, including over 800 this year alone.

Several factors and conditions will support continued redevelopment at high rates including the impacts of the Live Local Act, which encourages high-density redevelopment. Under the Live Local Act, a developer may develop to the maximum density allowed in a municipality without the need for certain entitlements or approval by the city council, as long as the project meets basic criteria for affordable housing.

Further, the city has recommended establishing an activity center for the Plantation Midtown District. This will reduce development hurdles and encourage redevelopment in the district. Through its current comprehensive plan update process, the city may contemplate increasing the maximum density allowances in the Midtown area. Currently, the maximum density the city allows for is 25 dwelling units/acre. The Midtown master plan recommends a maximum density of 50 dwelling units/acre.

Lastly, the city is in the process of adopting an accessory dwelling unit ordinance. Should this ordinance be adopted, certain properties would be eligible to construct ADUs which would generate additional population.

IV. Proposed Population Projections

Based on the above analysis, TranSystems offers the following population projections through the year 2045. Population projects shown in Table 3 are based on the following factors:

1. The estimated 2022 population is 96,042 residents.
2. The average household size as of 2020 is 2.6 persons per household.
 - a. The average household size as of 2000 was 2.4 persons per household.
 - b. Average household size is increasing at a rate of 0.01 persons per household per year.
 - c. Accordingly, average household size in 2045 will be 2.85.
3. Number of households in 2021 estimated to be 35,371.
4. Average number of residential units approved annually since 2014 has been 420 units.
5. Approved units have historically been built in the city. *[Note, units may take a few years to be constructed after approval].*

Year	2022	2025	2030	2035	2040	2045
Population [based on	96,042	99,368	104,996	110,729	116,567	122,510

construction of new units]						
Avg HH Size	2.62	2.65	2.7	2.75	2.8	2.85
Average Units Approved/Built	420	420	420	420	420	420

Table 3 demonstrates a 2045 population of 122,510 residents. As noted, this is based on rate of growth for the average household size and the development of new units. To account for the growth of household size in existing units, a separate analysis must be done as shown in Table 4.

Table 4: Population Estimates, based on existing households and household size increase			
Year	Number of Existing Households	Average Household Size	Estimated Population
2021	35,371	2.61	92,318
2045	35,371	2.85	100,807
Increase in population based on existing households only			8,489 new residents

Combining the population growth anticipated based on new development (using patterns of historic approvals and construction) and the growth based on increased household size in existing residences, it is estimated the City of Plantation population in 2045 is 130,999.

V. Conclusion

Overall, the market for residential redevelopment in the South Florida region is anticipated to remain strong. The region continues to experience a shortage of housing and an increase in population. This is supported by the historic project approvals and permit issuance. Based on the analysis above, it is clear the BEBR estimates do not reflect the city's historic and projected growth. Historic numbers far surpass the BEBR estimates; and as noted, recent legislation at the State level as well as policy changes at the local municipal level will support intensified redevelopment within the city limits. TranSystems estimates the 2045 population to be approximately 130,999 residents where BEBR estimates 105,542 residents.

Plantation Population Projections

	2021	2025	2030	2035	2040	2045
Population (based on construction of new units)	96,042	99,368	104,996	110,729	116,567	122,510
Average HH Size	2.62	2.65	2.7	2.75	2.8	2.85
Average Units Approved / Built	420	420	420	420	420	420

From: [Hisyam Mohsin](#)
To: [Demonstranti, Nancy](#)
Cc: [Michael Low](#); [Nigel Grace](#); [Hisyam Mohsin](#)
Subject: Riviera Beach Draft 2023-2024 LECWSP Comments
Date: Wednesday, May 15, 2024 9:01:40 AM
Attachments: [image003.png](#)
[image004.png](#)
[2023-2024 LEC Plan Appendices Draft - Riv Bch 5-14.pdf](#)

[Please remember, this is an external email]

Dear Nancy,

I hope this message finds you well. I'm sending this email on behalf of the City of Riviera Beach Utility District (USD) to provide you with written comments on the draft 2023-2024 LECWSP.

The comments mainly consist of updated numbers to reflect the City's recently approved permit, which was issued on February 15, 2024, about a week after SFWMD released the draft for comments. Please feel free to reach out if you have any questions or concerns. We would be happy to participate in a call if needed.

Kind regards,
Hisyam

Hisyam Mohsin

Sr Staff, Environmental Engineering

Brown and Caldwell

T 757.295.8920 | HMohsin@BrwnCald.com



Brown and Caldwell stands with and embraces all people

Table A-1. Continued.

PS Utility or DSS	Service Area Population Projections						
	2020	2021	2025	2030	2035	2040	2045
Palm Beach County (continued)							
Manalapan	2,635	429	440	458	476	490	505
Mangonia Park	2,142	2,180	2,249	2,339	2,433	2,506	2,581
Maralago Cay	1,240	1,240	1,240	1,240	1,240	1,240	1,240
PBCWUD	538,596	545,848	577,044	611,385	635,840	655,340	678,344
PBCWUD Western Region	36,305	36,660	37,405	38,153	38,916	39,695	40,488
Palm Springs	51,866	52,857	53,422	55,024	56,675	58,375	60,127
Riviera Beach	42,749	43,485	44,442	45,898	48,069	50,501	53,531

Riviera Beach
 2025: 46,762
 2030: 51,135
 2035: 52,645
 2040: 53,769
 2045: 54,782

BCWWS = Broward County Water and Wastewater Services; CSID = Coral Springs Improvement District; DSS = Domestic Self-Supply; FKA = Florida Keys Aqueduct Authority; LEC = Lower East Coast; MDWASD = Miami-Dade Water and Sewer Department; NSID = North Springs Improvement District; PBCWUD = Palm Beach County Water Utilities Department; PS = Public Supply; STOF = Seminole Tribe of Florida.

- ^a BCWWS District 3 population is included.
- ^b The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- ^c Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
- ^d Miami-Dade County total is based on Metropolitan Statistical Area population estimates.

The populations shown in **Table A-1** indicate the LEC Planning Area will contain more than 1 million additional permanent residents by 2045, an increase of approximately 17%. Growth rates in Palm Beach, Broward, Miami-Dade, and Monroe counties are projected to gradually decline through 2045. The utilities with the largest populations served, both in 2021 and 2045, are the Miami-Dade Water and Sewer Department, Palm Beach County Water Utilities Department, and City of Fort Lauderdale.

Comparing this 2023–2024 LEC Plan Update population projection to those published in the 2018 and 2013 LEC plan updates can provide insight into the importance of population growth rates based on BEBR medium projections. Prior to the national economic downturn in 2008, higher rates of development in the region pointed to substantial population growth (**Figure A-1**). The BEBR medium projections used in this 2023–2024 LEC Plan Update compared to the 2018 and 2013 LEC plan updates share a more consistent view of future population based on estimates of lower growth rates following the 2008 recession.

Table A-2. Continued.

PS Utility or DSS	2017-2021 Average PCUR
Palm Beach County	
Boca Raton	290
Boynton Beach	119
Delray Beach	204
Golf	145
Highland Beach	301
Jupiter (Palm Beach and Martin)	211
Lake Worth Beach	106
Lantana	184
Manalapan	2,157
Mangonia Park	189
Maralago Cay	205
PBCWUD	102
PBCWUD Western Region	176
Palm Springs	75
Riviera Beach	192
Riviera Beach: 193	
Wellington	104
West Palm Beach	230
Palm Beach County Average	154
LEC Planning Area Average	131

BCWWS = Broward County Water and Wastewater Services; CSID = Coral Springs Improvement District; DSS = Domestic Self-Supply; FKAA = Florida Keys Aqueduct Authority; LEC = Lower East Coast; MDWASD = Miami-Dade Water and Sewer Department; NSID = North Springs Improvement District; PBCWUD = Palm Beach County Water Utilities Department; PCUR = per capita use rate; PS = Public Supply; STOF = Seminole Tribe of Florida.

- ^a The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- ^b DSS and average PCUR are from the *2022 Lower West Coast Water Supply Plan Update* (SFWMD 2022).
- ^c Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
- ^d Manalapan discontinued providing water to Hypoluxo in November of 2020. The per capita is based on an average of 2021 and 2022 for Manalapan only.

Finished-to-Raw Water Conversion

Net (finished) demands (**Table A-3**) were calculated by multiplying the PS service area or DSS area population and the 5-year average PCUR. Gross (raw) water withdrawals are the volumes needed from the water source(s) to produce the required net (finished) water volumes considering water treatment process losses. Water use permit allocations are based on the gross (raw) water volume to meet service area demands. To determine gross (raw) water demand for each PS utility, net (finished) water projections were multiplied by finished-to-raw ratios (**Table A-4**), which are based on the treatment efficiency of each PS treatment plant. For example, if a typical reverse osmosis treatment facility withdraws a gross (raw) volume of 10.00 mgd and produces 8.00 mgd of net (finished) water, its treatment losses are 20%. Therefore, its finished-to-raw ratio would be 1.25 (10 mgd divided by 8 mgd).

Table A-3. Continued.

PS Utility	Net (Finished) Demand – Average Rainfall Conditions (mgd)						
	2020	2021	2025	2030	2035	2040	2045
Miami-Dade County							
Americana Village	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Florida City	2.10	2.16	2.54	2.88	2.97	3.06	3.36
Homestead	11.74	13.32	13.80	14.37	14.89	15.37	15.83
MDWASD	306.97	307.31	317.91	329.18	340.68	351.52	360.34
North Miami	6.69	6.58	6.75	6.96	7.17	7.31	7.34
North Miami Beach	18.89	19.00	19.25	21.05	22.10	22.98	24.44
Miami-Dade County Total	346.62	348.59	360.48	374.66	388.04	400.47	411.54
Monroe County							
FCAA	18.29	18.39	18.52	18.66	18.75	18.80	18.85
Monroe County Total	18.29	18.39	18.52	18.66	18.75	18.80	18.85
Palm Beach County							
Boca Raton	34.39	34.80	35.42	36.12	36.67	37.03	38.14
Boynton Beach	13.80	14.21	14.64	15.07	15.67	16.14	16.29
Delray Beach	14.48	14.67	15.21	15.50	16.12	16.61	16.76
Golf	0.40	0.41	0.42	0.44	0.46	0.47	0.48
Highland Beach	1.23	1.25	1.34	1.40	1.43	1.47	1.50
Jupiter ^c	16.06	16.22	17.20	17.54	18.24	18.60	18.97
Lake Worth Beach	5.14	5.17	5.40	5.62	5.84	6.21	6.27
Lantana	1.94	1.96	2.04	2.12	2.21	2.27	2.34
Manalapan	1.10	0.93	0.95	0.99	1.03	1.06	1.09
Mangonia Park	0.40	0.41	0.43	0.44	0.46	0.47	0.49
Maralago Cay	0.25	0.25	0.25	0.25	0.25	0.25	0.25
PBCWUD	55.48	56.22	59.44	62.97	65.49	67.50	69.87
PBCWUD Western Region	6.39	6.45	6.58	6.71	6.85	6.99	7.13
Palm Springs	3.89	3.96	4.01	4.13	4.25	4.38	4.51
Riviera Beach	8.21	8.35	8.53	8.81	9.23	9.70	10.28

Riviera Beach
 2025: 9.03
 2030: 9.87
 2035: 10.16
 2040: 10.38
 2045: 10.57

and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.

^b Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
^c Values include Palm Beach and Martin counties.

Table A-4. Continued.

PS Utility	Finished-to-Raw Ratio
Palm Beach County (continued)	
Lake Worth Beach	1.27
Lantana	1.18
Manalapan	1.33
Mangonia Park	1.03
Maralago Cay	1.03
PBCWUD	1.15
PBCWUD Western Region	1.33
Palm Springs	1.05
Riviera Beach	1.03

Riviera Beach

1.22 ratio for end of permit in 2053

and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.

^b Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.

Table A-5. Continued.

PS Utility	Gross (Raw) Water Demand – Average Rainfall Conditions (mgd)						
	2020	2021	2025	2030	2035	2040	2045
Miami-Dade County							
Americana Village	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Florida City	2.16	2.22	2.61	2.97	3.06	3.15	3.46
Homestead	12.09	13.72	14.22	14.80	15.34	15.83	16.31
MDWASD	331.53	331.89	343.34	355.52	367.94	379.64	389.17
North Miami	6.89	6.78	6.96	7.17	7.38	7.53	7.56
North Miami Beach	22.86	22.99	23.29	25.47	26.74	27.81	29.57
Miami-Dade County Total	375.77	377.83	390.66	406.15	420.69	434.20	446.30
Monroe County							
FCAA	19.20	19.31	19.44	19.59	19.69	19.74	19.79
Monroe County Total	19.20	19.31	19.44	19.59	19.69	19.74	19.79
Palm Beach County							
Boca Raton	38.52	38.97	39.67	40.46	41.07	41.48	42.72
Boynton Beach	15.04	15.49	15.95	16.42	17.08	17.59	17.76
Delray Beach	14.92	15.11	15.66	15.97	16.61	17.11	17.27
Golf	0.47	0.48	0.50	0.52	0.54	0.55	0.57
Highland Beach	1.63	1.66	1.79	1.86	1.90	1.95	1.99
Jupiter ^c	19.27	19.47	20.64	21.04	21.89	22.32	22.76
Lake Worth Beach	6.48	6.52	6.80	7.08	7.36	7.83	7.90
Lantana	2.29	2.31	2.41	2.50	2.60	2.68	2.76
Manalapan	1.46	1.23	1.26	1.31	1.37	1.41	1.45
Mangonia Park	0.42	0.42	0.44	0.46	0.47	0.49	0.50
Maralago Cay	0.26	0.26	0.26	0.26	0.26	0.26	0.26
PBCWUD	63.80	64.66	68.35	72.42	75.32	77.63	80.35
PBCWUD Western Region	8.50	8.58	8.76	8.93	9.11	9.29	9.48
Palm Springs	4.08	4.16	4.21	4.33	4.46	4.60	4.73
Riviera Beach	8.45	8.60	8.79	9.08	9.51	9.99	10.59

Riviera Beach
 2025: 9.40
 2030: 11.93
 2035: 12.31
 2040: 12.60
 2045: 12.86

Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.

^b Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.

^c Values include Palm Beach and Martin counties.

Table A-6. Continued.

PS Utility	Net (Finished) Demand – 1-in-10- Year Drought Conditions (mgd)						
	2020	2021	2025	2030	2035	2040	2045
Palm Beach County (continued)							
Palm Springs	4.28	4.36	4.41	4.54	4.68	4.82	4.96
Riviera Beach	9.03	9.18	9.39	9.69	10.15	10.67	11.31

Riviera Beach (1.1 multiplier)
2025: 9.93
2030: 10.86
2035: 11.18
2040: 11.42
2045: 11.63

PS – Public Supply, STOR – Seminole Tribe of Florida.

- a The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- b Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
- c Values include Palm Beach and Martin counties.

Table A-7. PS gross (raw) water demands under 1-in-10-year drought conditions in the LEC Planning Area.

PS Utility	Gross (Raw) Water Demand – 1-in10- Year Drought Conditions (mgd)						
	2020	2021	2025	2030	2035	2040	2045
Broward County							
BCWWS District 1	8.06	8.16	8.42	8.80	9.07	9.24	9.81
BCWWS District 2A	15.05	15.13	15.50	15.66	15.89	15.97	16.37
Cooper City	4.11	4.12	4.15	4.19	4.24	4.28	4.33
Coral Springs	6.89	6.95	7.44	7.67	8.05	8.22	8.30
CSID	5.30	5.32	5.38	5.46	5.48	5.51	5.53
Dania Beach	2.49	2.56	2.75	2.97	3.21	3.46	3.70
Davie	5.85	5.99	6.43	6.82	7.36	7.88	8.43
Deerfield Beach	11.14	11.22	11.59	12.05	12.53	13.03	13.29
Fort Lauderdale	42.37	43.08	44.92	53.05	55.65	58.95	59.81
Hallandale Beach	7.56	7.63	7.94	8.18	8.35	8.51	8.68
Hillsboro Beach	0.77	0.77	0.78	0.80	0.81	0.83	0.85
Hollywood	26.66	26.98	28.26	29.39	30.00	30.28	30.90
Lauderhill	6.73	6.76	7.12	7.34	7.48	7.63	7.78
Margate	7.37	7.44	7.74	8.05	8.29	8.46	8.63
Miramar	18.39	18.56	19.13	19.89	20.49	20.90	21.11
North Lauderdale	3.03	3.05	3.18	3.25	3.31	3.34	3.45
NSID	6.17	6.24	6.55	6.81	6.95	7.09	7.23

Table A-7. Continued.

PS Utility	Gross (Raw) Water Demand – 1-in-10- Year Drought Conditions (mgd)						
	2020	2021	2025	2030	2035	2040	2045
Palm Beach County (continued)							
Palm Springs	4.49	4.58	4.63	4.77	4.91	5.06	5.21
Riviera Beach	9.30	9.46	9.67	9.98	10.46	10.99	11.64
Riviera Beach (1.1 multiplier) 2025: 10.34 2030: 13.12 2035: 13.54 2040: 13.86 2045: 14.15							

PS = Public Supply; STOF = Seminole Tribe of Florida.

- a The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- b Values listed for Hendry County are only for the areas within the LEC Planning Area boundaries.
- c Values include Palm Beach and Martin counties.

DOMESTIC SELF-SUPPLY

The DSS category includes potable water used by households that are served by small utilities with permit allocations less than 0.10 mgd or that are self-supplied by private wells. Permanent resident populations within DSS areas were developed simultaneously with the PS population estimates and projections, as described earlier. All permanent residents outside of PS utility service area boundaries were considered DSS population. To determine the current and future DSS demands, the average PCUR of PS utilities in each county weighted by the population (**Table A-2**) was multiplied by the DSS permanent resident population in each county. Hendry County’s DSS population PCUR published in the *2022 Lower West Coast Water Supply Plan Update* (SFWMD 2022) was used for the portion of the county’s DSS population within the LEC Planning Area. DSS county PCURs remain constant through 2045. There are no DSS demands in Monroe County due to the lack of freshwater resources on the islands. For DSS demands, the finished-to-raw water ratio is assumed to be 1.00. Therefore, no distinction is made between gross (raw) and net (finished) water demands.

Tables A-8 and **A-9** contain the LEC Planning Area’s DSS demand estimates and projections under average rainfall and 1-in-10-year drought conditions. The drought demand factors used for PS were also used to calculate 1-in-10-year drought demands for DSS. The average DSS demands in 2021 were 10.55 mgd for permanent residents (**Table A-8**) and are expected to grow to 14.45 mgd in 2045.

Table B-1. Continued.

Supply Entity/Facility	SFWMD Permit Number	Gross (Raw) Water (mgd)			FDEP PWS ID	Rated Net (Finished) Capacity (mgd)
		Annual Allocation	SAS	FAS		
Monroe County						
FKAA ^h	13-00005-W	23.97 ^a	17.79	6.97	4134357	29.80
Monroe County Total		23.97	17.79	6.97		29.80
Palm Beach County						
Boca Raton	50-00367-W	51.54	51.54	0.00	4500130	70.00
Boynton Beach	50-00499-W	20.86	16.58	6.42	4500145	34.4
Delray Beach	50-00177-W	19.10 ^a	19.10	1.50	4500351	26.00
Golf	50-00612-W	0.69	0.69	0.00	4501528	0.86
Highland Beach	50-00346-W	3.15	0.00	3.15	4500609	3.00
Jupiter	50-00010-W	24.41 ^a	18.80	11.71	4501491	30.00
Lake Worth Beach	50-00234-W	11.25	5.25	6.00	4500773	17.40
Lantana	50-00575-W	2.48	2.48	0.00	4500784	3.84
Manalapan	50-00506-W	1.70	0.58	1.12	4500840	2.35
Mangonia Park	50-00030-W	0.58	0.58	0.00	4500841	1.08
Maralago Cay	50-01283-W	0.27	0.27	0.00	4500062	0.42
PBCWUD	50-00135-W	97.40	97.40	7.00	4504393	103.28
PBCWUD Western Region	50-06857-W	9.43	0.00	9.43	4505005	10.00
Palm Springs	50-00036-W	4.62	4.62	0.00	4501058	10.00
Riviera Beach	50-00460-W	9.08	9.08	0.00	4501229	17.50

Riviera Beach
Annual Allocation: 13.22 MGD
SAS: 9.26 MGD
FAS: 4.95 MGD

- ^b The annual allocation listed is the base condition allocation. See the utility profile and the SFWMD water use permit for increased allocations enabled by implementation of C-51 Reservoir Phase 1 offset water deliveries.
- ^c This facility does not treat water. It provides raw water to the City of Hollywood for treatment before delivery to BCWWS District 3, which serves a population but does not have a wellfield or water treatment plant and thus does not have a permit or FDEP PWS ID.
- ^d The allocation was established in the Water Rights Compact of 1987 not through an SFWMD water use permit, and there is no FDEP PWS ID for the Seminole Tribe of Florida. The Seminole Tribe of Florida is a sovereign Indian Tribe and an independent Tribal Government separate from Broward and Hendry counties. However, for discussion purposes, information relating to the Seminole Tribe of Florida Hollywood Reservation and the Seminole Tribe of Florida Big Cypress Basin Reservation is included in the calculations for Broward and Hendry counties, respectively.
- ^e This system has two FDEP PWS IDs: 4061408 and 4061410.
- ^f The value is the base condition allocation. See the utility profile and the SFWMD water use permit for increased allocations enabled by implementation of alternative water projects providing SAS offsets.
- ^g This system has two FDEP PWS IDs: 4130871 and 4131202.
- ^h Withdrawals are located in Miami-Dade County.
- ⁱ Withdrawal source is surface water from Clear Lake.

Riviera Beach
Population
2025: 46,762
2035: 52,645
2045: 54,782

Annual average finished
water
2025: 9.03
2035: 10.16
2045: 10.57

RIVIERA BEACH

Per capita: 193

Service Area: City of Riviera Beach and Town of Palm Beach Shores.

SAS: 9.26
FAS: 4.95

Description: Potable water supplies are obtained from the SAS via the West Riviera Beach and East Riviera Beach wellfields, and water is treated at the Riviera Beach WTP using lime softening.

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Population and Finished Water Demand						
		Existing	Projected			
		2021	2025	2035	2045	
Population		43,485	44,442	48,069	53,531	
Average 2017-2021 Per Capita (gallons per day finished water)		192				
Potable Water Demands (daily average annual finished water in mgd)		8.35	8.53	9.23	10.28	
SFWMD Water Use Permitted Allocation (mgd)						
Potable Water Source		Permit Number 50-00460-W (expires 2032)				
SAS		9.08				
FAS		0.00				
Total Allocation		9.08				
FDEP Potable Water Treatment Capacity (PWS ID # 4501229)						
Permitted Capacity by Source		Cumulative Facility & Project Capacity (mgd)				
		Existing	Projected			
		2021	2025	2035	2045	
SAS		17.50	17.50	17.50	17.50	
FAS		0.00	0.00	12.00	12.00	
Total Potable Capacity		17.50	17.50	29.50	29.50	
Nonpotable Alternative Water Source Capacity (mgd)						
Reclaimed		0.00	0.00	0.00	0.00	
Total Nonpotable Capacity		0.00	0.00	0.00	0.00	
Project Summary						
Water Supply Projects	Source	Completion Date	Total Capital Cost (\$ million)	Projected Cumulative Design Capacity (mgd)		
				2025	2035	2045
Potable Water						
12 FAS Wells and New 12.00 mgd RO WTP ^a	FAS	2026	\$140.00	0.00	12.00	12.00
Total Potable Water			\$140.00	0.00	12.00	12.00
Nonpotable Water						
No Projects						
Total Nonpotable Water			\$0.00	0.00	0.00	0.00
Total New Water			\$140.00	0.00	12.00	12.00

^a The proposed project would be required for the Riviera Beach to have adequate water supply to meet the 2030 to 2045 demands. The Riviera Beach can choose to implement this project or determine an alternative source to meet the 2030 to 2045 demands.

2025
SAS: 17.50 MGD

2035
SAS: 8.52 MGD
FAS: 7.48 MGD

2045
SAS: 8.52 MGD
FAS: 7.48 MGD

9 FAS Wells and New RO/NF WTP at 16 MGD

Completion Date: 2027

Total Capital Cost: \$250 M (30% cost estimate is ongoing)

Projected Cumulative Design Capacity 2035, 2045: 16 MGD

From: [Dhulashia, Sangeeta](#)
To: [Demonstranti, Nancy](#)
Cc: [Petrides, Ted](#); [Maddox, Donald](#)
Subject: Comments from City of Sunrise on DRAFT LEC WSP Update
Date: Monday, April 22, 2024 11:54:50 AM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image006.png](#)
[2023LEC_PSPProfile_Sunrise_Draft_5072023.docx](#)
[FW RE 2023 Lower East Coast Water Supply Plan Update Utility Information Review and Verification- City of Sunrise.msg](#)
Importance: High

You don't often get email from sdhulashia@sunrisefl.gov. [Learn why this is important](#)

[Please remember, this is an external email]

Good Afternoon Nancy,

Hope you are well! Its been a long time since we last communicated (2008 City of Sunrise WUP application process).

We have reviewed the City of Sunrise information published in the draft appendices and apparently our last communication and SFWMDs understanding is not accurately reflected in the draft appendices.

I have attached the prior email communication with district on July 7th 2023 along with the final numbers proposed by the district. I have also prepared included a snap shot of page B-36 from the published draft appendices below.

There are two discrepancies

1. The permitted allocation for C-51 is actually 34.09 mgd and not 32.77 mgd
2. The reclaimed water capacity is 2.99 mgd and not 4.99 mgd

Additionally, as we have recently bid the Springtree RO conversion to Membrane-Softening Phase I project, the estimate is \$3.8 million dollars instead of what is shown as \$1M.

SUNRISE

Service Area: Cities of Sunrise and Weston, a portion of the Town of Southwest Ranches, a portion of the Town of Davie, and unincorporated Broward County.

Description: Potable water supplies are obtained from four SAS wellfields (Springtree, Sawgrass, Flamingo Park, and Southwest), and from the FAS ASR well at the Springtree Wellfield. Water is treated at the Springtree WTP using lime softening and RO, at the Sawgrass WTP using membrane softening, and at the Southwest WTP using lime softening.

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D

Population and Finished Water Demand						
		Existing		Projected		
		2021	2025	2035	2045	
Population		233,430	236,183	245,725	253,146	
Average 2017-2021 Per Capita (gallons per day finished water)		99				
Potable Water Demands (daily average annual finished water in mgd)		23.11	23.38	24.33	25.06	
SFWMD Water Use Permitted Allocation (mgd)						
Potable Water Source		Permit Number 06-00120-W (expires 2065) ^a				
SAS		29.09				
SAS w/C-51		32.77				
FAS		2.00				
Total Allocation		31.09^b				
Total Allocation w/C-51		32.77^b				
FDEP Potable Water Treatment Capacity (PWS ID # 4061410/4061408)						
Permitted Capacity by Source		Cumulative Facility & Project Capacity (mgd)				
		Existing		Projected		
		2021	2025	2035	2045	
SAS		50.00	50.20	51.90	51.90	
FAS		1.50	0.00	0.00	0.00	
Total Potable Capacity		51.50	50.20	51.90	51.90	
Nonpotable Alternative Water Source Capacity (mgd)						
Reclaimed Water		4.99	4.99	4.99	4.99	
Total Nonpotable Capacity		4.99	4.99	4.99	4.99	
Project Summary						
Water Supply Projects	Source	Completion Date	Total Capital Cost (\$ million)	Projected Cumulative Design Capacity (mgd)		
				2025	2035	2045
Potable Water						
Springtree RO Conversion to Membrane-Softening Phase 1	SAS	2025	\$1.00	0.20	0.20	0.20
Springtree RO Conversion to Membrane-Softening Phase 2	SAS	2028	\$7.00	0.00	1.70	1.70
Total Potable Water			\$8.00	0.20	1.90	1.90
Nonpotable Water						
C-51 Reservoir Phase 1 – Sunrise	Surface Water	2023	\$23.00	5.00	5.00	5.00
Total Nonpotable Water			\$23.00	5.00	5.00	5.00
Total New Water			\$31.00	5.20	6.90	6.90

^a The 2065 expiration date is for the portion of the allocation above the base condition water use served by offset water from the C-51 Reservoir Phase 1 (5 mgd). The base condition SAS allocation expires in 2040.

^b The permitted source allocations do not always total exactly. See the SFWMD water use permit for further information.

Please feel free to call me in case you have any questions.

Have a Good Day!

Sangeeta Dhulashia, PE, PMP

Assistant Director of Utilities | Utilities Department | City of Sunrise

From: [Colios, Thomas](#)
To: [Ramirez, Armando](#)
Cc: [Stahley, Matthew](#); [Demonstranti, Nancy](#)
Subject: RE: 2023-2025 Lower East Coast Water Supply Plan Update
Date: Wednesday, May 8, 2024 9:39:51 AM

Armando,

We did incorporate the information provided by the Tribe for the finished (potable) water demands. However, we had outdated information about the treatment system and used calculations considering the use of lime softening treatment to derive the raw water demands. We now understand that the treatment system was updated to a reverse osmosis system which has treatment losses of 25% as an industry standard. We will make adjustments to the demand tables and utility profile to account for the new RO treatment system efficiency. We would be glad to meet with Telsula and go through the information after the adjustments are made. Also, if there are any other discrepancies noted, please advise.

Thanks,
Tom

From: Ramirez, Armando <aramire@sfwmd.gov>
Sent: Tuesday, May 7, 2024 5:07 PM
To: Colios, Thomas <tcolios@sfwmd.gov>
Subject: FW: 2023-2025 Lower East Coast Water Supply Plan Update
Importance: High

Good afternoon Tom,

Just received the below email from the STOF. Please let me know if there is an answer to their inquiry.

Please let me know if you have any questions.

Thank you.

Armando Ramirez
*Tribal and Federal Affairs Liaison
Ecosystem Restoration and Capital Projects Division
South Florida Water Management District*

From: Telsula Morgan <tmorgan@llw-law.com>
Sent: Tuesday, May 7, 2024 2:53 PM
To: Ramirez, Armando <aramire@sfwmd.gov>
Subject: 2023-2025 Lower East Coast Water Supply Plan Update
Importance: High

[Please remember, this is an external email]

Armando –

I left you a message earlier requesting a call regarding the Lower East Coast Water Supply Plan Update (“Update”). In September 2022, the Seminole Tribe provided the District with updated projections for the Big Cypress and Hollywood Reservation (see attached). It does not appear that the Update accurately reflects the Big Cypress projections provided in the email. Is there a reason why the information provided by the Tribe is not reflected in the Update?

Telsula C. Morgan | Senior Attorney

360 S. Rosemary Avenue, Suite 1100 | West Palm Beach, Florida 33401

tmorgan@llw-law.com | 561.640.0820

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From: [Ramirez, Armando](#)
To: [Telsula Morgan](#)
Subject: FW: 2023-2025 Lower East Coast Water Supply Plan Update
Date: Wednesday, May 15, 2024 9:57:00 AM
Attachments: [2023LEC_Profile_STOF_BigCypress_R_050924.docx](#)

Good morning Telsula,

The water supply team has adjusted the demands for Big Cypress reservation potable use. Please see the table below and attachment and please confirm you/Tribe is ok with the revised numbers. Afterwards, if you still feel it is necessary to meet, please let me know your availability for the next couple of weeks.

Please let me know if you have any other questions.

Thank you.

Gross (Raw) Water Demand - Average Rainfall Conditions (mgd)								
County	PS Utility or DSS	2020	2021	2025	2030	2035	2040	2045
Broward	BCWWS District 1	7.33	7.42	7.66	8.00	8.24	8.40	8.92
	BCWWS District 2A	13.68	13.75	14.09	14.23	14.45	14.52	14.88
	Cooper City	3.73	3.74	3.77	3.81	3.85	3.89	3.93
	Coral Springs	6.26	6.32	6.76	6.97	7.32	7.47	7.54
	CSID	4.81	4.84	4.89	4.96	4.98	5.01	5.02
	Dania Beach	2.27	2.33	2.50	2.70	2.91	3.15	3.37
	Davie	5.31	5.45	5.85	6.20	6.69	7.16	7.66
	Deerfield Beach	10.13	10.20	10.53	10.95	11.39	11.85	12.09
	Fort Lauderdale	38.52	39.16	40.83	48.22	50.59	53.59	54.37
	Hallandale Beach	6.87	6.94	7.22	7.44	7.59	7.74	7.89
	Hillsboro Beach	0.70	0.70	0.71	0.72	0.74	0.75	0.77
	Hollywood*	24.24	24.53	25.69	26.72	27.27	27.53	28.09
	Lauderhill	6.12	6.15	6.47	6.67	6.80	6.94	7.08
	Margate	6.70	6.76	7.04	7.32	7.54	7.69	7.84
	Miramar	16.72	16.87	17.39	18.09	18.63	19.00	19.19
	North Lauderdale	2.75	2.77	2.89	2.95	3.01	3.04	3.13
	NSID	5.61	5.67	5.95	6.19	6.32	6.44	6.57
Parkland	0.27	0.28	0.29	0.31	0.32	0.34	0.36	
Pembroke Pines	13.44	13.48	13.71	13.85	13.99	14.13	14.27	

	Plantation	12.89	13.03	13.28	13.68	13.95	14.23	14.51
	Pompano Beach	16.04	16.33	16.68	17.35	18.04	18.61	18.94
	Royal Utility	0.33	0.34	0.34	0.34	0.34	0.35	0.35
	STOF - Hollywood	0.96	1.03	1.69	1.77	1.85	1.94	2.85
	Sunrise	25.45	25.65	25.95	26.47	27.00	27.27	27.82
	Tamarac	6.77	6.83	6.87	7.01	7.15	7.29	7.36
	Tindall Hammock	0.49	0.51	0.52	0.54	0.57	0.60	0.63
	Broward County PS Total	238.38	241.09	249.57	263.46	271.55	278.92	285.45
Hendry	STOF - Big Cypress	0.35	0.39	0.50	0.54	0.60	0.67	0.77
	Hendry County PS Total	0.35	0.39	0.50	0.54	0.60	0.67	0.77

Armando Ramirez

*Tribal and Federal Affairs Liaison
Ecosystem Restoration and Capital Projects Division
South Florida Water Management District*

From: [Stacy Myers](#)
To: [Demonstranti, Nancy](#)
Cc: [Jim Shore](#); [Tina Osceola](#); [Luis Rioseco](#); [Emran Rahaman](#); [Michelle Diffenderfer](#); [Paul Backhouse](#); [Stephen Walker](#); [Telsula Morgan](#); [Ramirez, Armando](#)
Subject: LEC Water Supply Update
Date: Wednesday, May 15, 2024 5:00:00 PM
Attachments: [image001.png](#)
[LEC water supply comments STOF.pdf](#)

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Good Afternoon Nancy,

Please see attached our comments on the 2023-2025 Lower East Coast Water Supply Plan Update (LEC Update). Thank you for your consideration of these comments.

Best regards,

Stacy Myers



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DIRECTOR

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HOLLYWOOD, FL 33024



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May 15, 2024

VIA EMAIL: ndemonst@sfwmd.gov

Nancy Demonstranti
Lower East Coast Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

RE: South Florida Water Management District 2023-2025 Lower East Coast Water Supply Plan Update

Dear Ms. Demonstranti:

Thank you for the opportunity to comment on the 2023-2025 Lower East Coast Water Supply Plan Update (“LEC Update”). The LEC Update supports the water supply needs and entitlements of the Seminole Tribe of Florida’s (“Seminole Tribe”) Hollywood Reservation, Big Cypress Indian Reservation, and the Coconut Creek Trust lands. Although the Seminole Tribe’s Brighton Reservation falls outside the LEC Planning area, it is supported by the Lake Okeechobee Service Area, which is largely within the LEC Planning Area. The Seminole Tribe appreciates the South Florida Water Management District’s (“District”) recognition of these areas, the associated water supply needs, and the continued commitment to the Seminole Tribe’s water supply entitlements. The Seminole Tribe offers the following comments for your consideration and incorporation into the LEC Update:

1. While the LEC Update appears to incorporate some of the previous feedback provided by the Seminole Tribe on Chapters 1-3 and Appendix A, the ratio of finished-to-raw water for the Big Cypress Indian Reservation in Table A-4 does not appear to reflect the data provided to the District by the Seminole Tribe in 2022. See **Attachment “A”**. The ratio of finished-to-raw water for the year 2020 should reflect 1.3, not 1.03. The Seminole Tribe is requesting that the District update Table A-4 in the final version of the 2023-2025 LEC Update.

ENVIRONMENTAL PROTECTION OFFICE
Dr. Paul N. Backhouse

EXTERNAL ENVIRONMENTAL COMPLIANCE
Stacy Myers | Director

ENVIRONMENTAL RESOURCES
Whitney Sapienza | Director

WATER RESOURCES
Alfonso Tigertail | Director



- The Big Cypress Indian Reservation raw water demand projections provided by the Seminole Tribe in September 2022, also do not appear to have been incorporated in Table A-5. The Seminole Tribe previously provided the District with the following daily demand projections: 0.32 MGD (2020), 0.50 MGD (2025), 0.55 MGD (2030), 0.61 MGD (2035), and 0.67 MGD (2040). Each of these values are higher than what is shown in Table A-5. The Seminole Tribe based its projections on the Seminole Tribe’s Public Water Supply 2016 Water and Wastewater Systems Master Plan for Big Cypress. The raw water demand projections for 2020 to 2040 are presented in the table below. The Seminole Tribe is requesting that the most recent projections are incorporated into the final version of the 2023-2025 LEC Update.

Big Cypress Raw Water Demand Projections

Year	Potable Water Average Daily Demand Projections (MGD)	Updated Raw Water Average Daily Demand Projections (MGD)
2020	0.26	0.32
2025	0.36	0.50
2030	0.42	0.55
2035	0.43	0.61
2040	0.48	0.67

- Appendix B of the LEC Updates provides summaries of the Public Supply utilities that have an allocation of 0.10 million gallons per day (MGD) or greater of gross (raw) water in the LEC Planning Area. The chart provided on page B-39 of the LEC Update reflects that the total water



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use rights for the surficial aquifer source is 0.17 MGD for the Big Cypress Indian Reservation; however, the existing potable water demand has already exceeded that amount at 0.27 MGD. Additionally, the current potable water treatment capacity provided in the same chart is at 2.0 MGD. Please explain how the total water use rights for the surficial aquifer source value of 0.17 was determined.

The Seminole Tribe appreciates the opportunity to review and comment on the LEC Update. The Seminole Tribe and the District have a long history of working together in planning for water supply, and the Seminole Tribe looks forward to continuing to work with the District throughout the development of the LEC Update particularly as it relates to the Tribe's water supply plans. Thank you for consideration of these comments.

Sincerely,

Stacy Myers
Director Environmental Environmental Compliance

Cc: Jim Shore, Esquire - General Counsel
Tina Osceola - Executive Director of Operations
Luis Rioseco – Senior Director of Administration
Paul Backhouse - Director Environmental Protection Office
Michelle Diffenderfer, Esquire
Emran Rahaman - Director of Public Works
Stephen Walker, Esquire
Telsula C. Morgan, Esquire
Armando Ramirez, Liaison SFWMD

From: [Ramirez, Armando](#)
To: [Stacy Myers](#); [Demonstranti, Nancy](#)
Cc: [Jim Shore](#); [Tina Osceola](#); [Luis Rioseco](#); [Emran Rahaman](#); [Michelle Diffenderfer](#); [Paul Backhouse](#); [Stephen Walker](#); [Telsula Morgan](#); [Colios, Thomas](#)
Subject: RE: LEC Water Supply Update
Date: Wednesday, May 15, 2024 5:27:27 PM
Attachments: [FW 2023-2025 Lower East Coast Water Supply Plan Update.msg](#)
[image001.png](#)

Good afternoon Stacy et al,

Thank you for the correspondence on the subject. I am forwarding the latest communication with LL&W on the subject in reference to the comments you have provided. The water supply team has adjusted the demands for Big Cypress reservation potable use. Once you have had an opportunity to review the changes made, please confirm you/Tribe is ok with the revised numbers. Afterwards, if you feel it is necessary to meet, please let me know your availability for the next couple of weeks so we can schedule a conference call.

Please let me know if you have any other questions.

Again, thank you.

Armando Ramirez

*Tribal and Federal Affairs Liaison
Ecosystem Restoration and Capital Projects Division
South Florida Water Management District*

From: Stacy Myers <StacyMyers@semtribe.com>
Sent: Wednesday, May 15, 2024 4:59 PM
To: Demonstranti, Nancy <ndemonst@sfwmd.gov>
Cc: Jim Shore <JimShore@semtribe.com>; Tina Osceola <TinaOsceola@semtribe.com>; Luis Rioseco <Luis.Rioseco@semtribe.com>; Emran Rahaman <EmranRahaman@semtribe.com>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Paul Backhouse <PaulBackhouse@semtribe.com>; Stephen Walker <swalker@llw-law.com>; Telsula Morgan <tmorgan@llw-law.com>; Ramirez, Armando <aramire@sfwmd.gov>
Subject: LEC Water Supply Update

[\[Please remember, this is an external email\]](#)

Good Afternoon Nancy,

Please see attached our comments on the 2023-2025 Lower East Coast Water Supply Plan Update (LEC Update). Thank you for your consideration of these comments.

Best regards,

Stacy Myers



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STACY D. MYERS
DIRECTOR

O. (954) 965-4380 EXT. 10624

M. (954) 668-4823

E. STACYMYERS@SEMTRIBE.COM

A. 6363 TAFT ST. SUITE 309
HOLLYWOOD, FL 33024



From: [Telsula Morgan](#)
To: [Ramirez, Armando](#); [Stacy Myers](#); [Demonstranti, Nancy](#)
Cc: [Jim Shore](#); [Tina Osceola](#); [Luis Rioseco](#); [Emran Rahaman](#); [Michelle Diffenderfer](#); [Paul Backhouse](#); [Stephen Walker](#); [Colios, Thomas](#)
Subject: RE: LEC Water Supply Update
Date: Thursday, May 16, 2024 8:51:25 AM
Attachments: [image003.png](#)

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Armando –

The Seminole Tribe has reviewed the adjusted demand projections, and agrees with the revised numbers contained in your May 15, 2024 email. There is no need to meet with the District at this time concerning the adjustments. Thank you for your assistance!

Telsula C. Morgan | Senior Attorney
360 S. Rosemary Avenue, Suite 1100 | West Palm Beach, Florida 33401
tmorgan@llw-law.com | 561.640.0820
[vCard](#) | [Website](#) | [Bio](#) | [join us online](#)



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From: Ramirez, Armando <aramire@sfwmd.gov>
Sent: Wednesday, May 15, 2024 5:27 PM
To: Stacy Myers <StacyMyers@semtribe.com>; Demonstranti, Nancy <ndemonst@sfwmd.gov>
Cc: Jim Shore <JimShore@semtribe.com>; Tina Osceola <TinaOsceola@semtribe.com>; Luis Rioseco <Luis.Rioseco@semtribe.com>; Emran Rahaman <EmranRahaman@semtribe.com>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Paul Backhouse <PaulBackhouse@semtribe.com>; Stephen Walker <swalker@llw-law.com>; Telsula Morgan <tmorgan@llw-law.com>; Colios, Thomas <tcolios@sfwmd.gov>
Subject: RE: LEC Water Supply Update

External Email

Good afternoon Stacy et al,

Thank you for the correspondence on the subject. I am forwarding the latest communication with LL&W on the subject in reference to the comments you have provided. The water supply team has adjusted the demands for Big Cypress reservation potable use. Once you have had an opportunity to

review the changes made, please confirm you/Tribe is ok with the revised numbers. Afterwards, if you feel it is necessary to meet, please let me know your availability for the next couple of weeks so we can schedule a conference call.

Please let me know if you have any other questions.

Again, thank you.

Armando Ramirez

*Tribal and Federal Affairs Liaison
Ecosystem Restoration and Capital Projects Division
South Florida Water Management District*

From: Stacy Myers <StacyMyers@semtribe.com>

Sent: Wednesday, May 15, 2024 4:59 PM

To: Demonstranti, Nancy <ndemonst@sfwmd.gov>

Cc: Jim Shore <JimShore@semtribe.com>; Tina Osceola <TinaOsceola@semtribe.com>; Luis Rioseco <Luis.Rioseco@semtribe.com>; Emran Rahaman <EmranRahaman@semtribe.com>; Michelle Diffenderfer <mdiffenderfer@llw-law.com>; Paul Backhouse <PaulBackhouse@semtribe.com>; Stephen Walker <swalker@llw-law.com>; Telsula Morgan <tmorgan@llw-law.com>; Ramirez, Armando <aramire@sfwmd.gov>

Subject: LEC Water Supply Update

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Good Afternoon Nancy,

Please see attached our comments on the 2023-2025 Lower East Coast Water Supply Plan Update (LEC Update). Thank you for your consideration of these comments.

Best regards,

Stacy Myers



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May 19, 2024

Ms. Nancy Demonstranti
South Florida Water Management District
Lower East Coast Plan Manager
ndemonst@sfwmd.gov

RE: 2023-2024 Draft Lower East Coast Water Supply Plan
Town of Jupiter Review Comments

Dear Nancy:

We have completed our review of the South Florida Management District's (SFMWD's) 2023-2024 Draft Lower East Coast Water Supply Plan (LECWSP) with respect to the Town of Jupiter. We previously provided our comments regarding Chapters 1-3 and Appendix A on September 29, 2023, which is included as an attachment to this letter for convenience.

In Chapter 2, Demand Estimates and Projections, we are concerned that the future population projections for the Town of Jupiter's Water System do not include Jupiter Farms, the agricultural residential community west of Jupiter Farms Road. Jupiter Farms is within the Town of Jupiter's current water service area, however municipal potable water service is currently only extended to two commercial shopping centers in Jupiter Farms. With a population of 13,358 in 2022, Jupiter Farms is rapidly growing and the demographics is changing. We believe it is only a matter of time before residents of Jupiter Farms request municipal water service be extend to their community. We believe that day is within the planning horizon of the 2023-2024 draft LECWSP. The maps in Chapter 2 and Appendix A do not currently reflect the Town of Jupiter's Water Service Area to include Jupiter Farms. The attached map provides additional information related to the Town's Water Service Area.

Chapter 2, also does not address the increase in raw water supply demand that will be required of public water systems as they upgrade treatment facilities to comply with the recently promulgated EPA PFAS regulations. Many conventional water treatment facilities will be required to upgrade to advanced membrane treatment technologies, which will increase finish to raw water ratios, in order to comply with regulations.

Chapter 4, Water Resource Protection discusses minimum flow levels (MFLs) required for various sensitive water bodies including the North West Fork of the Loxahatchee River. Over the years, the Town of Jupiter has invested nearly \$3M to construct infrastructure for a surface water recharge system for the surficial aquifer in the Jupiter area. The recharge system is intended to divert flow from the C-18 Canal, when minimum flow levels to the North West Fork are achieved, such that excess fresh water is diverted from the C-18 Canal to the Town's surface water recharge system instead of being wasted to tide. The Town requests that the SFWMD consider the water resource protection that can occur in the northern portion of the LECWSP, by recharging the surficial aquifer with water that will otherwise be wasted to tide. In addition, recharging the surficial aquifer with fresh water becomes increasingly important considering

the negative impacts that PFAS has on the surficial aquifer. Chapter 4 discusses Aquifer Storage and Recovery (ASR) in the upper Floridan Aquifer, near the C-18W Reservoir but does not discuss how it will impact water quality of the Floridan Aquifer, especially for public water supply systems that utilize the Floridan Aquifer for raw water supply, such as the Town of Jupiter. Please provide us with information on how the Town's Floridan Aquifer wells, which are located along the C-18 Canal in Jupiter will be protected from being negatively impacted by the C-18W Reservoir ASR project.

Chapter 5, Water Source Options, encourages expansion of the Floridan Aquifer as an alternative water supply. The Town of Jupiter, as well as many other public water systems in Florida have recognized an increasing upward trend in salinity of the Floridan Aquifer raw water supply over time. Increasing use of the Floridan Aquifer should be managed carefully to avoid continued negative impacts to the resource. Chapter 5, encourages expansion of reclaimed water systems but does not consider the impacts that reclaimed water has on surficial aquifer and surface water quality with respect to PFAS, which is present in reclaimed water. Chapter 5 encourages Aquifer Storage and Recovery (ASR) in the upper Floridan Aquifer, but does not consider the negative impacts that this may have to existing legal users of the Floridan Aquifer. Page 97 in Chapter 5 states that there are 15 public water systems with a total combined treatment capacity of 79.5 mgd utilizing reverse osmosis (RO) to treat raw water supplied from the Floridan Aquifer. Can you provide us with the utilities and capacities of RO treatment included in count of 15? The opportunity for utilities to blend higher salinity Floridan Aquifer treated water with surficial aquifer raw water, ion exchange treated water, or lime softened treated water will be difficult or not possible with the recent low level PFAS regulations for drinking water.

Appendix D, page D-33 states that Jupiter has been using the Floridan Aquifer for raw water supply since 1999, but we have been using the Floridan Aquifer since 1989. In addition, RO-1 was abandoned in 2007 in order to construct the Town's 14.5 mgd nanofiltration plant.

We appreciate this opportunity to provide the SFWMD with our comments regarding the 2023-2024 Draft Lower East Coast Water Supply Plan.

Kind Regards,

Amanda Z. Barnes, P.E.
Director of Utilities

AZB/azb

cc: Rebecca Wilder, Chris McKenzie, Allyson Felsburg, Martin Schneider, John Sickler, Stephanie Thoburn – TOJ

<V:\Utilities\Water\Mngmt\Amanda\SFWMD-LECWSP\2023 Update>

From: [Amanda Barnes](#)
To: [Demonstranti, Nancy](#)
Subject: LECWSP Comments
Date: Sunday, May 19, 2024 11:57:22 PM
Attachments: [image002.png](#)
[image004.png](#)
[image006.png](#)
[image008.png](#)
[TOJ Comments for SFWMD Draft LECWSP Chap 4-9 05192024.pdf](#)

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Nancy,

Hello. I apologize for my delay in providing our comments to you regarding the 2023-2024 Draft Lower East Coast Water Supply Plan. I hope that you can still consider them in your update. We provided comments for Chapters 1-3 and Appendix A on Sept. 29, 2023. I have attached those comments to this email as well.

Should you have any questions, please feel free to contact me.

Thank you,



Amanda Z. Barnes, P.E.

Director of Utilities

Phone 561-741-2537 **Mobile** 561-301-7632

Email amandab@jupiter.fl.us

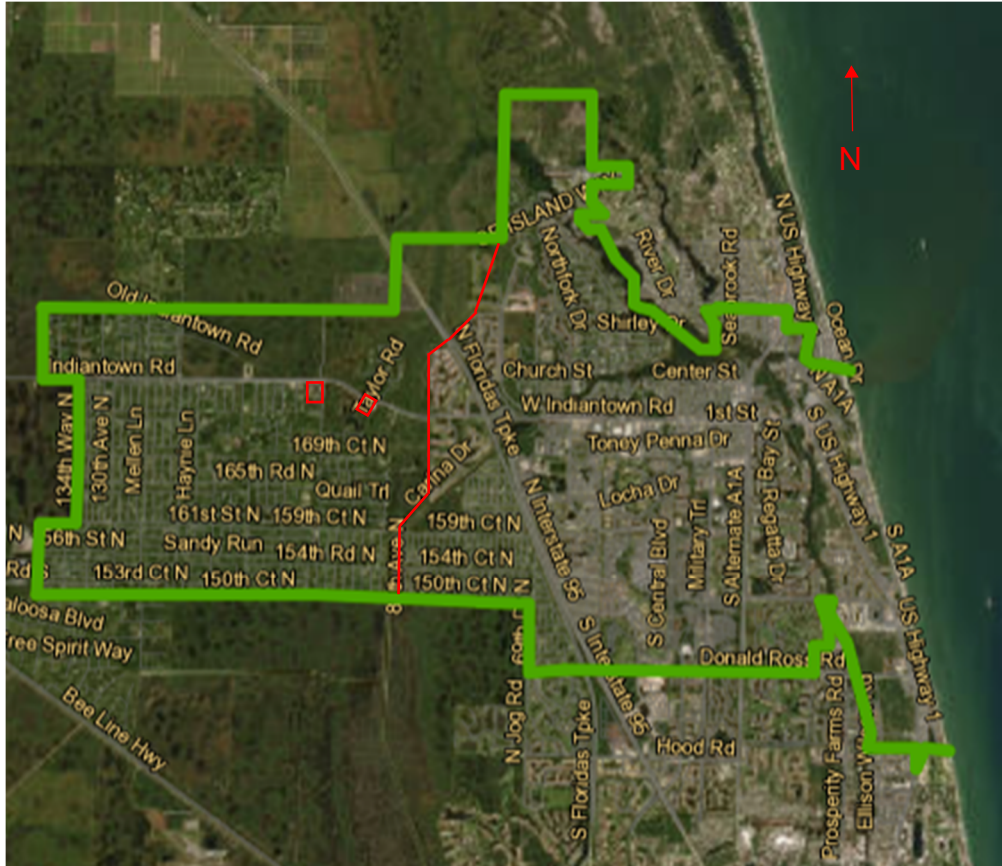
Web www.jupiter.fl.us

17403 Central Blvd., Jupiter, Florida 33458



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Town of Jupiter Water System Water Service Area



Green border identifies the Town of Jupiter Water Service Area.

Water service is currently provided to all areas east of the red line, and the two red boxes in west of the red line.

The area west of the red line is Jupiter Farms, which is in the Town of Jupiter Water System's water service area, but is not currently not served with Town potable water, with the exception of two commercial plaza's identified by the small red boxes. In 2022, the population of Jupiter Farms was 13,358.

The population of Jupiter Farms should be considered in future water supply needs for the Town of Jupiter Water System, as interest in obtaining municipal water in Jupiter Farms is increasing.



September 29, 2023

Ms. Nancy Demonstranti
South Florida Water Management District
Lower East Coast Plan Manager
ndemonst@sfwmd.gov

RE: 2023 Draft Lower East Coast Water Supply Plan
Town of Jupiter Review Comments

Dear Ms. Demonstranti:

We have reviewed Chapters 1-3 and Appendix A of the South Florida Management District's (SFMWD's) 2023 Draft Lower East Coast Water Supply Plan (LECWSP) with respect to the Town of Jupiter's (Town's) recently completed 2022 Water Master Plan Update (WMPU) and in-progress, Town-Wide Sustainability Plan. Our comments are provided below.

Population Estimates and Projections

Population projections provided in the LECWSP, which were derived from US Census Bureau block data and BEBR growth rate estimates differ slightly from the projections provided in the 2019 10-Year Water Supply Facilities Work Plan (WSFWP), which used Palm Beach County Planning and Zoning Department's 2020-2035 population projections and BEBR data for the 2035-2040 projections. Jupiter water service area populations as reported on monthly operating reports (MORs) and based on actual number of residential and multi-family metered accounts times the number of persons per household (2.42) as reported by the U.S. Census Bureau are significantly higher than that the projections in the both the draft LECWSP and WSFWP. The MOR methodology provides the total population for both permanent and seasonal residents, which is likely the contributing factor to the observed difference. The Town plans to conduct an in-depth review of service area population growth trends and forecasts within the water service area in the coming years.

Jupiter Farms, a western community to Jupiter, represents the largest portion of the service area to which potable water service has yet to be extended. Neither the 2019 WSFWP nor LECWSP include Jupiter Farms in service area population forecasts. Should future extension become a reality, especially in consideration of recent proposed PFAS regulations, then service area population would be expected to increase. While the community has not indicated their intent to connect to Jupiter's water supply, they represent potential future growth in the water service area population for the planning horizon.

Demand Estimates and Projections

The SFWMD should consider including discussion on EPA's proposed PFAS regulations for drinking water supplies and potential impacts to future water demands within the 2023 LECWSP. Finished to raw water

ratios may increase for public supply due to treatment system upgrades necessary to comply with PFAS regulations. observed utilization of the surficial aquifer and alternative water supplies including reclaimed water and brackish groundwater.

We appreciate the opportunity the SFWMD has provided to partners, stakeholders and the public to provide written comments for Chapters 1-3 and Appendix A of the 2023 Draft Lower East Coast Water Supply Plan. We look forward to the opportunity to review upcoming draft chapters of the LECWSP as they become available.

Kind Regards,

A handwritten signature in blue ink that reads "Amanda Z. Barnes". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Amanda Z. Barnes, P.E.
Director of Utilities

AZB/azb

cc: Chris McKenzie, Allyson Felsburg, Martin Schneider, John Sickler, Stephanie Thoburn – TOJ
Rebecca Wilder, Eric Stanley, Gerrit Bulman - Hazen

V:\Utilities\Water\Mngmt\Amanda\SFWMD-LECWSP\2023 Update

From: [Thera, Jennifer](#)
To: [Demonstranti, Nancy](#)
Cc: [Chelette, Angela](#); [Escribano, Yesenia](#); [Elliott, Rebecca](#); [Gregory, West](#); [Fraitses, John](#); [Raulerson, Raulie](#); [Smith, Steve](#); [Thera, Jennifer](#)
Subject: FDACS comments on the Draft 2023-2024 LEC WSP
Date: Thursday, May 23, 2024 9:08:44 AM
Attachments: [Draft_2023-2024_LEC_WSP_FDACS_comments.pdf](#)
[LOSOM July 2022 FDACS Tech Comments.pdf](#)

[Please remember, this is an external email]

Hello Nancy,

Attached are FDACS comments on the Draft 2023-2024 Lower East Coast Water Supply Plan and supporting information (LOSOM July 2022 FDACS Tech Comments).

Please let me know if you have any questions regarding these comments.

And thank you again for giving us this extra time to submit our comments.

Best,
Jennifer

Jennifer Thera
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Date: May 23, 2024

To: Nancy Demonstranti, South Florida Water Management District
Water Supply Bureau

From: Jennifer Thera, Florida Department of Agriculture and Consumer Services
Office of Agricultural Water Policy

RE: Draft 2023-2024 Lower East Coast Water Supply Plan Update

The Florida Department of Agriculture and Consumer Services (FDACS) appreciates the opportunity to comment on the South Florida Water Management District's (SFWMD) Draft 2023-2024 Lower East Coast (LEC) Water Supply Plan (WSP) Update.

FDACS supports the goal of improving the ecological health of Lake Okeechobee (LO), the Northern Estuaries, and Greater Everglades that protects both natural environments and human environments. This goal must meet the water supply authorized purposes of the Central and South Florida Project (C&SF Project) and meet the provisions of the State of Florida water supply planning statutes.

Additional comments will be provided pending the completion of the Executive Summary and Draft Appendix C (MFLs and Prevention and Recovery Strategies). Consideration of possible revisions to Chapter 9 - Conclusions and Future Direction after Appendix C has been finalized is recommended.

General Comments:

1) DRAFT Lake Okeechobee System Operating Manual (LOSOM)

The Draft 2023-2024 LEC WSP Update's reliance on a draft LOSOM regulation schedule is problematic because the final operational guidance has not been adopted and no draft is currently available for review. The water supply uncertainties identified during the LOSOM planning process have not been addressed in the LEC WSP Update. These include a lack of specific operations for conservation during low LO stages leading into the Water Shortage Management zone, uncertainties for possible violation of the LO MFL, and deficiencies in the RSM-BN model that under simulate the water supply demands in the Lake Okeechobee Service Area (LOSA). A copy of the comments submitted by FDACS regarding the draft regulation schedule is attached (LOSOM July 2022 FDACS Tech Comments).

The United States Army Corps of Engineers (USACE) has not finalized the current Draft LOSOM for authorization. It is premature for the Draft 2023–2024 LEC WSP Update to conclude its evaluation of water supply availability under LOSOM operations until the LOSOM Environmental Impact Statement (EIS) and associated Water Control Plan (WCP) are completed

and authorized. The LOSOM EIS is expected to be released for review and comment by the end of May 2024. Acknowledgement of future uncertainties may be needed to complete the 2023-2024 LEC WSP Update in the time allowed.

2) Lake Okeechobee Minimum Flow and Minimum Level (MFL) Recovery Strategy

The outcome of the revised LO MFL Prevention and Recovery strategy is critical to water resources for the LEC WSP region. The pending Draft Appendix C (MFLs and Prevention and Recovery Strategies) is delayed due to an incomplete modeling and storage assessment analyses for the revised LO MFL Recovery Strategy. FDACS understands this is due to deficiencies in the Lake Okeechobee Service Area (LOSA) irrigated water supply budget existing in the RSM-BN model used for LOSOM that need to be corrected. FDACS looks forward to providing additional comments on the Draft Appendix C MFL Recovery and Prevention Strategies when it becomes available.

The USACE and SFWMD modeling team is working to correct the water supply budget in LOSOM that could potentially reduce the water available for other areas by 50,000 to 100,000 acre-feet. This is a substantial volume during drier Central and Southern Florida Project (C&SF Project) conditions. Once the water budget corrections are complete for the RSM-BN model, the SFWMD should undertake additional investigation to understand the unresolved water demand issue's impact on other LOSOM performance measure categories, including a comprehensive evaluation of how it will affect water supply performance.

The comments below are based on the "Draft 2023-2024 LEC WSP Update" (February 7, 2024) letter to stakeholders. The letter outlines future plans for providing a revised LO MFL Recovery Strategy. The revision is anticipated to take several months as the modeling and storage assessment analyses has to be completed and a stakeholder meeting held.

The LOSOM regulation schedule could support an LO MFL Prevention Strategy in 2024 with the appropriate operational guidance. The excerpt below from the LEC WSP 2018 Update, Appendix C, page C-13 describes the impact of the 2008 Lake Okeechobee Regulation Schedule (2008 LORS) on the LO MFL and expectations for returning the LO MFL to a Prevention Strategy:

"With implementation of the 2008 LORS, water levels within Lake Okeechobee were lowered and MFL violations were projected to occur. As a result, it became necessary to change the prevention strategy for the lake to a recovery strategy [Subsection 40E-8.421(2), F.A.C.]. See SFWMD Order No. SFWMD 2008 – 364-DAO-WU (SFWMD 2008) for background information. The current Integrated Delivery Schedule (USACE 2018c) indicates completion of the Herbert Hoover Dike rehabilitation by 2022 and evaluation of a revision of the 2008 LORS beginning in 2019. Additional water from Lake Okeechobee resulting from operational changes or a revised regulation schedule is expected to return the lake to an MFL prevention strategy."

The Draft 2023-2024 LEC WSP Update could include a recommendation to investigate operational guidance for inclusion in LOSOM as a strategy to return of the LO MFL to a prevention strategy. The 2008 LORS is an interim schedule to address Herbert Hoover Dike (HHD) safety concerns during the rehabilitation of the HHD. Initially, the 2008 LORS schedule was anticipated by the USACE and SFWMD to be in place approximately three years. Instead, 2008 LORS and the LO MFL Recovery Strategy has lasted sixteen years as of 2024. A 2023-2024 LEC WSP Update recommendation for an operational LO MFL Prevention Strategy is consistent with past expectations that the Interim 2008 LORS LO MFL Recovery provisions would be short term and associated with the rehabilitation of the HHD. The LOSOM regulation schedule could support an LO MFL Prevention Strategy as early as 2024 with the appropriate operational guidance given the post rehabilitation ability to store more water in LO.

3) Comprehensive Everglades Restoration Plan (CERP)

The LEC WSP should include the multi-purpose water supply aspect of Comprehensive Everglades Restoration Plan (CERP) projects. The CERP is an extensive restoration effort in the LEC WSP area. It also is intended to be an extensive effort to meet other water related needs. The model output for full CERP implementation indicated that by the end of CERP implementation, urban uses and agriculture received about 36 percent of the new water, the Northern Estuaries received nearly 25 percent and the headwaters, Everglades/Southern Estuaries, and Big Cypress received 40 percent.

There are many Chapters where the CERP Projects are described in only ecosystem restoration terms without acknowledging the societal water supply benefits in the project plans. Below are text sections that could be revised in the Draft 2023-2024 LEC WSP Update to include societal water supply.

- Introduction, Regulations and Operations, page 10
- Chapter 4, Water Resource Protection, LO MFL, page 48
- Chapter 5, Water Source Options, LO and Water Conservation Areas, page 62
- Chapter 6, Water Resource Analyses, page 98- 7th bullet
- Chapter 7, Water Resource Development, page 140

CERP related Restricted Allocation Areas (RAA) were adopted to be temporary regulatory mechanisms for resource protection until such time as additional water is made available by CERP and non-CERP water development projects.

Chapter 7, Water Resource Development, page 144, describes MFLs, Water Reservations and RAAs as water development activities. They are water resource protection tools through limiting water available for allocation. Each one protects water from allocation for different purposes in different ways using different development processes. The CERP-related RAAs are intended to be interim until the water needed and made available by CERP projects is determined during project planning, design and operations.

RAAs should not be capping projected water demands during CERP project planning efforts or capping the projection of reasonable beneficial uses in the LEC WSPs. The addition of text describing the temporary nature of CERP-related RAAs on page 144 in the MFLs, Water Reservations and RAAs section would clarify that RAAs are not a permanent limitation on water supply availability and should not be used as a restriction on water demand projections for future scenarios.

4) Brackish Water Use by Agriculture

The use of brackish water for irrigation of most crops is unsustainable and is not recommended at all for those with low salt tolerance. FDACS recommends more consideration be given to the limited usability of brackish water for agriculture and that concerns regarding how other user withdrawals increase the salinity of brackish water be addressed.

Page 206 - “Water supply opportunities for AG may be available in the future by capture and use of on-site water normally lost to a farm’s water management system (tailwater recovery), capture and use of stormwater, and blending of brackish groundwater with fresh water.”

Page 211 - “Meeting these demands requires continued demand reduction through water conservation and use of diverse water sources, including brackish groundwater, reclaimed water, seasonally available surface water, and ASR.”

Chapters with relevant sections are Chapter 4 - Water Resource Protection, Chapter 5 – Water Source Options, Chapter 8 - Water Supply Development Projects, Chapter 9 - Conclusions and Future Direction.

5) Conservation

The statements regarding how implementing best management practices (BMPs) can reduce the amount of water for crop demands are not accurate. BMPs can increase irrigation efficiencies for water conservation; however, the water demand requirements for the crop itself are not reduced and need to be met for successful agricultural production. Conservation measures may reduce the amount of water needed to meet future demands but rarely, if ever, reduce future water demands to an amount less than the existing demands. The LEC WSP should include the specific edits regarding conservation provided by FDACS in the suggested edits section.

Specific Comments:

FDACS’s review focused on aspects of the Draft 2023-2024 LEC WSP which have the potential to impact agricultural lands and operations. The comments provided are specific to the topics below and do not constitute a review of the entire LEC WSP.

Suggested edits are bolded and underlined.

Suggested deletions are bolded with strikethrough.

Executive Summary

Not available for comments

Chapter 3: Demand Management: Water Conservation

- **Page 33 – Agriculture paragraph, last sentence**

“Hardware and technology that can improve system management, reduce water quantities ~~required~~ used to meet crop needs, and minimize water losses include the following:”

The efficiency of the delivery of water required to meet crop needs is increased so less water is used but the water requirements of the crops do not change (see general comments #5). Consider removing “required” from the sentence.

Chapter 4: Water Resource Protection

- **Page 45 – 3rd paragraph**

Recommend including “RAAs can be established to protect existing legal users” in this paragraph.

See general comments #3 for more information.

- **Page 52 - Restricted Allocation Areas**

Consider suggested change below:

“RAAs are defined geographic areas where water allocations from water resources (e.g., lakes, rivers, wetlands, canals, aquifers) are limited. Additional allocations beyond the established limitation are restricted or prohibited. RAAs are established for a variety of reasons, including 1) where there is a lack of available water to meet the projected needs of a region, 2) to protect water for natural systems and future restoration projects (e.g., CERP), ~~or~~ 3) as part of MFL prevention or recovery strategies, **or 4) to protect legally existing water users**. RAA criteria are listed in Section 3.2.1 of the Applicant’s Handbook (SFWMD 2022), which is incorporated by reference in Rule 40E-2.091, F.A.C. Figure 4-5 shows the locations of established RAAs wholly or partially within the LEC Planning Area.”

- **Page 54 - L-1, L-2, and L-3 Canal System**

Consider suggested change below:

“In 1981, an RAA was established for the L-1, L-2, and L-3 canal system to protect existing legal users permitted at the time of rule adoption (Subsection 3.2.1.C of the Applicant’s

Handbook [SFWMD 2022]), which lies along the western boundary of LOSA. This canal system is a limited surface water network that is not connected to Lake Okeechobee. The RAA prohibits increases in surface water pump capacity and additional surface water allocations from the L-1, L-2, and L-3 canals above existing allocations.”

Chapter 8: Water Supply Development Projects

- **Page 206 Agriculture Section, 4th paragraph**

Consider suggested change below:

“Continued use of best management practices (BMPs) **may induce conservation, including water conservation, could reduce the amount of water needed to meet crop demands** (Chapter 3).”

BMPs may induce conservation, but not reduce demand nor expand supply. See general comments #5 for more information.

Chapter 9: Conclusions and Future Direction

- **Page 217, 1st paragraph**

Consider suggested change below:

“Water conservation by all users reduces **the amount of water needed to meet future demands and is a component of meeting future water needs** (Chapter 3).”

- **Page 217, 2nd paragraph**

Consider suggested change below:

“There are several activities planned or under way to meet natural systems **and** water **supply** needs, ...”

- **Page 219, Natural Systems and Resource Protection**

Consider suggested change below:

“CERP includes regional projects to improve the quality, timing, volume, distribution, and delivery of water to the natural system **and water supply**.”

- **Page 220, 3rd bullet**

Restricted allocation areas (RAAs) are only supposed to be restricted until more water is available from CERP projects (see general comment #3). We suggest rewording this bullet and to include water supply benefits.

“The SFWMD will continue to develop and implement new regulatory rules and criteria, such as ~~water reservations and~~ restricted allocation areas, **until water is made available from projects, and water reservation**, to protect water created for natural systems by CERP and other restoration projects **and water supply benefits**.”

- **Page 221, Surface Water**

Consider suggested change below:

Bullet 3: “Local governments, agricultural operations, and utilities are encouraged to create additional storage capacity for excess surface water to use for water supply purposes, when **technically and economically** feasible.”

- **Page 224 New Storage Capacity for Surface Water or Groundwater**

Consider suggested change below:

Bullet 2: “New or retrofitted surface water storage systems for agricultural operations could provide additional water supply for irrigation but ~~may have limited~~ **are not usually considered a new source of water for permit allocations due to the uncertainty of** availability during a 1-in-10-year drought.”

New or retrofitted surface water storage systems are not usually considered a new source of water for permit allocations.

- **Page 226 Climate Change and Sea Level Rise**

Consider suggested change below:

Bullet 6: “Water users ~~should~~ **are encouraged to** periodically review irrigation schedules and consider installing weather-based controllers.

- **Page 226 Conclusions**

Please see General Comments regarding the Draft LOSOM Water Supply Performance. The ability of the LOSOM regulation schedule to meet future water needs for the environment and society is uncertain.

Thank you for the opportunity to provide comments on the Draft 2023-2024 LEC WSP Update. **Additional comments may be necessary after the completion of the Executive Summary and Appendix C (MFLs and Prevention and Recovery Strategies).**

Please contact me if you would like any follow-up concerning the comments provided.

Jennifer Thera
(850) 617-1722 Office
(850) 631-0743 Cell
Jennifer.Thera@FDACS.gov

Part II: 2023-2024 Draft Lower East Coast Water
Supply Plan Update Appendix C and the
Executive Summary Comments Received



FLORIDA FARM BUREAU FEDERATION

THE VOICE OF AGRICULTURE

August 6th, 2024

Nancy Demonstranti
Lowe East Coast Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, FL 33406

Delivered via email to ndemonst@sfwmd.gov

Re: Comments on the Draft Versions of the Executive Summary and Appendix C (MFLs and Prevention and Recovery Strategies) of the 2023-2024 Lower East Coast Water Supply Plan Update

Dear Ms. Demonstranti:

On behalf of the Florida Farm Bureau Federation and our 132,000 member families, many of which live and farm within the boundaries of the Lower East Coast Water Supply Plan (LEC WSP) area, I appreciate the opportunity to comment on the Lower East Coast Water Supply Plan Update.

Florida's economy depends on viable, productive agriculture, and honest, hardworking farmers. The Lower East Coast area specifically, is a unique place where a multitude of agriculture takes place such as cattle, and crops including sugarcane, vegetables, fruit, sod, and rice. South Florida crop production feeds much of the eastern United States (up to 180 million Americans) during the winter months, bringing huge economic impacts and tens of thousands of jobs to South Florida. This is possible due to the practices and infrastructure implemented by farmers, the area's long growing season, mild winters, and availability of water.

Farm Bureau has remaining concerns regarding how the upcoming Lake Okeechobee System Operating Manual (LOSOM) will be handled in the Water Supply Plan Update. Uncertainty remains on how to create and implement this plan without knowing what the lake schedule will truly be. The unprecedented flexibility described in the current LOSOM Water Control Plan does not provide the certainty and predictability needed for uniform and reliable operations. When we go back and review prior water supply plans, heavy reliance is placed on the lake

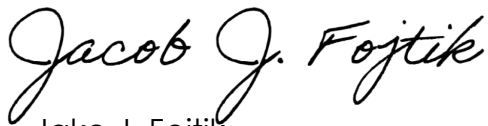
regulation schedule, and with current LOSOM operations, and its inability to meet the lake's MFL, we have no way of knowing how this will affect water supply.

Farming takes time and an immense amount of planning around a multitude of factors; adequate, legal water supply should not be one of them. Farmers, as all other water users across south Florida, need certainty that they will have access to sufficient water supply in order to survive and continue to provide food security and a safe, abundant, and affordable food supply for the citizens of Florida, and for the United States.

Due to these concerns, we would like to request a delay in the plan process.

Florida Farm Bureau Federation greatly appreciates the District's openness and willingness to listen to the concerns of our industry. We are thankful for the opportunity to provide these comments and look forward to continued collaboration.

Sincerely,

A handwritten signature in black ink that reads "Jacob J. Fojtik". The signature is written in a cursive style with a large, prominent initial "J".

Jake J. Fojtik
Assistant Director of Government & Community Affairs
Florida Farm Bureau Federation



**ENVIRONMENTAL
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August 7, 2024

VIA EMAIL: ndemonst@sfwmd.gov

Nancy Demonstranti
Lower East Coast Plan Manager
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida 33406

RE: South Florida Water Management District 2023-2024 Lower East Coast Water Supply Plan Update

Dear Ms. Demonstranti,

Thank you for the opportunity to comment on the Executive Summary and Appendix C (MFLs and Prevention and Recovery Strategies) as part of the Draft 2023-2024 Lower East Coast Water Supply Plan Update (“LEC Update”). The LEC Update supports the water supply needs and entitlements of the Seminole Tribe of Florida’s (“Seminole Tribe”) Hollywood Reservation, Big Cypress Seminole Indian Reservation, and the Coconut Creek Trust lands. Although the Seminole Tribe’s Brighton Seminole Indian Reservation is outside the LEC Planning Area, it is supported by the Lake Okeechobee Service Area, which is largely within the LEC Planning Area. The Seminole Tribe appreciates the South Florida Water Management District’s (“District”) recognition of the Tribe’s Reservations and Trust Lands, the associated water supply needs, and the continued commitment to the Seminole Tribe’s water supply. The Seminole Tribe has reviewed the above-referenced documents and offers the following concerns regarding the proposed water supply effects relative to the revised regulation schedule, known as Lake Okeechobee System Operating Manual (“LOSOM”). The Seminole Tribe is concerned that the LEC Update appears to underestimate the effect of the revised LOSOM on water supply for the region. Not only does LOSOM fail to restore Lake Okeechobee’s water supply performance to its prior levels or performance, as acknowledged in the Update, LOSOM appears to perform worse in several key water supply measures than even LORS 08.

While the LEC Update bases its Lake Okeechobee MFL Recovery strategy on the assumption that LOSOM results in modest improvement to Lake Okeechobee MFL performance, LOSOM sensitivity modeling, performed by the United States Army Corps of Engineers (“USACE”), shows the potential for significantly increased Lake Okeechobee MFL exceedances. As the Seminole Tribe noted in its comment letter on the LOSOM Final Environmental Impact Statement, the MFL performance depends on water management decisions used in modeling that was not subsequently included in the LOSOM regulation schedule. LOSOM favored operational flexibility over codifying operational logic that would

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EXTERNAL ENVIRONMENTAL COMPLIANCE
Stacy Myers | Director

ENVIRONMENTAL RESOURCES
Whitney Sapienza | Director

WATER RESOURCES
Alfonso Tigertail | Director



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ensure the modeled MFL performance would be realized in real-world operations. Therefore, the potential exists for impacts to water supply and the Lake Okeechobee MFL to be worse than what the District has proposed. Thus, under LOSOM, day-to-day water management decisions carry much greater down-side risk from a Lake MFL and water supply perspective. It will be incumbent on the District to be vigilant in working with the USACE to manage Lake Okeechobee to avoid these down-side risks to water supply.

The Seminole Tribe appreciates the opportunity to review and comment on the LEC Update. The Tribe believes that addressing these issues will ensure that the Lower East Coast Water Supply Plan effectively safeguards our water resources and supports ecological sustainability.

Sincerely,

Paul Backhouse, Ph.D., RPA
Senior Director Environmental Protection Office

- c:
- Maricruz Fincher, Esquire, General Counsel SFWMD
 - Armando Ramirez, Liaison SFWMD
 - Jim Shore, Esquire, General Counsel
 - Tina Osceola, Executive Director of Operations
 - Whitney Sapienza, Director of Environmental Resources
 - Emran Rahaman, Director of Transportation
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 - Ashley Wilson, Environmental Protection Manager
 - Maria Angelica Ocampo Pinzon, Program Analyst II
 - Joseph John, Program Analyst I
 - Michelle Diffenderfer, Esquire
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August 7, 2024

Nancy Demonstranti
LEC Plan Manager
South Florida Water Management District
3301 Gun Club Rd.
West Palm Beach, FL 33406

SENT VIA ELECTRONIC MAIL TO: ndemonst@sfwmd.gov

Subject: Lower East Coast Water Supply Plan Update Comments Submitted by the Lake Worth Drainage District

Dear Ms. Demonstranti:

The Lake Worth Drainage District (LWDD) appreciates the opportunity to provide input on the South Florida Water Management District's (SFWMD) Draft Lower East Coast Water Supply Plan Update (LECWSP). We value the opportunity to participate in the public input sessions, collaborate with SFWMD staff, and provide comments on the current draft plan. We commend the SFWMD team for their extensive efforts to date in developing this plan.

However, we are concerned that the draft plan does not address the potential impacts of the new Lake Okeechobee Systems Operations Manual (LOSOM) on regional water supply, particularly in southeast Palm Beach County. While the plan thoroughly examines the effects of previous regulation schedules on the Lake Okeechobee Minimum Flow and Level (MFL) rules, it lacks a corresponding analysis of how LOSOM will affect water availability in the region as compared to the past schedules that defined the relationship of Lake Okeechobee operations with the water allocated to permitted users.

INTRODUCTION

LWDD was created by the Florida Legislature in 1915 and manages the water resources for much of southeastern Palm Beach County, providing comprehensive flood control, water conservation, and water supply protection for more than 800,000 residents (approximately one-half of the total county population), including thousands of acres of agricultural land. The agency monitors and controls a complex system of approximately 500 miles of canals, 20 major water control structures, and numerous minor structures, encompassing approximately 200 square miles in southeastern Palm Beach County. It is bordered on the west by Water Conservation Area No. 1 (WCA-1) (aka. Arthur R. Marshall Loxahatchee National Wildlife Refuge), on the east by Interstate 95, on the north by Okeechobee Boulevard, and on the south by the Hillsboro Canal. Included within its boundaries are all or portions of 13 municipalities and portions of their potable water utility well fields.

In general terms, LWDD's water supply mission is to divert regionally available water from specific locations identified in our Diversion and Impoundment Consumptive Water Use Permit issued by the SFWMD, for the purpose of impounding the supplemental water within its canal network. This impounded water provides groundwater recharge that serves utility potable water demands as well as supplemental agricultural / landscape irrigation needs within the LWDD boundary. The primary source of regional water for LWDD is WCA-1. LWDD also has the capability under its consumptive use permit to withdraw regional water from the primary canal network of the Central & Southern Florida Flood Control Project (C&SF Project), and indirectly from Lake Okeechobee. While most of the developed areas along the Lower East Coast (LEC) do not benefit directly from water in Lake Okeechobee, the Lake has long been identified as a 'back-up' water supply source that could be relied upon to assist in the recharge of the LEC canals during major droughts. And this source of water is frequently used to offset water supply demands on WCA-1 from LWDD. Accordingly, LWDD has a vested interest in the current and future Lake Okeechobee operation schedules to ensure protection of water supply for its constituents.

Lake Okeechobee Regulation Schedule Comparative Analysis Not Performed

In addition to participating in the LECWSP Update process, LWDD served as a member of the Project Delivery Team (PDT) in the development of the U.S. Army Corps of Engineers' (USACE) Lake Okeechobee System Operations Manual (LOSOM). While participating in the LOSOM planning process, we identified significant water supply impacts to southeastern Palm Beach County when comparing the new operating schedule under LOSOM to the current Lake Okeechobee Regulation Schedule, 2008 (LORS08) (See attached June 24, 2024, letter to USACE Col. James Booth). Furthermore, the USACE did not conduct a comparative analysis of water supply performance between LOSOM and the earlier operating schedules that formed the basis for permitted consumptive use allocations for many users across south Florida. This type of evaluation could have offered significant insight into the implications of operational modifications on both current and future regulatory and infrastructure planning efforts.

In 2000, the USACE, with assistance from SFWMD, implemented a regulation schedule revision that specified the operation of the water control structures surrounding Lake Okeechobee. This schedule was known as WSE – 'Water Supply & Environment'. As the name implies, the WSE schedule was focused on balancing the often-competing objectives of meeting 'Water Supply' demands and improving the 'Environment', primarily associated with the Lake littoral zone and the connected coastal estuary ecosystems. While much of the regional hydrologic modeling that the Comprehensive Everglades Restoration Plan (CERP) used in its authorization process was based on an earlier Lake Okeechobee schedule (Run25), the WSE schedule was considered a component of CERP that helped define a 'Base Condition' against which the performance of CERP Alternative Plans would be compared.

LWDD's regional water supply availability concerns stretch back to 2008 when the Corps implemented an Interim Regulation Schedule for Lake Okeechobee (LORS08) that replaced WSE. This schedule was developed in recognition that portions of the Herbert Hoover Dike (HHD) surrounding the Lake were structurally deficient and in immediate need of refurbishment. It was recognized at the time that the effort would require an enormous commitment of funding and resources on behalf of the federal government to accomplish.

Due to the magnitude and expense of the endeavor, the refurbishment of the HHD was naturally expected to take years (if not decades) to complete. To assure that federal dam safety regulations were appropriately considered in the operation of the Lake Okeechobee water control structures during this interim period, the Corps in coordination with the SFWMD, implemented LORS08, which significantly lowered water levels in the Lake to provide sufficient storage freeboard and reduce pressure on the HHD from high stages.

However, the implementation of LORS08 imposed significant risks associated with diminished water storage capability to water users around Lake Okeechobee and along the Lower East Coast when compared to WSE. The 'lowering' of water levels within the Lake under LORS08 had a profound impact on water supply and environmental interests in the region. The lower water stages associated with LORS08 provided the fundamental protections to human safety and property against a possible failure of the HHD. But it also reduced regional water supply made available within the Lake to adequately serve the communities, farms and businesses surrounding the Lake, as well as diminishing the supplemental source of water to assist the utilities and other governmental entities in managing emergency conditions associated with major droughts along the Lower East Coast of Florida. To address the concerns expressed by the water user community at the time, the USACE responded that when the repairs to the HHD were completed, considerations would be made through a 'new' regulation schedule to return the water supply LOS back to a level closer to that provided by the WSE schedule.

During the development and evaluation of the new schedule, it was our hope that LOSOM would be in some way bench-marked or compared to WSE. Only through this type of comparison could legally permitted water users in South Florida come to understand the implications of LOSOM to the regional water availability identified in their consumptive use permits. This understanding is critical for utilities, agricultural operations, commercial businesses, and residential communities to develop reliable water supply infrastructure to support their needs. For these interests to incorporate the availability of regional water into their infrastructure plans, reliable sources must be identified and ensured through the implementation of consistent and predictable water management protocols. However, in the hundreds of thousands of hydrologic computer simulations that were performed in support of LOSOM, this single comparison was never developed. Furthermore, there is currently no federal or state effort that is prepared to address any remaining water supply shortfalls from the implementation of LORS08 that could affect permitted water allocations.

While LOSOM appears to have improved some water supply capability over LORS08 in some areas, no analysis had been performed by either the USACE or SFWMD comparing the water supply performance of LOSOM to the pre-LORS08 (WSE) condition.

However, in the development of the LECWSP Update, a detailed statistical analysis was developed by SFWMD to assess the effects of LOSOM on the Lake Okeechobee MFL ("Poisson Point Process for Lake Okeechobee Minimum Flow and Level exceedance and violation events", Alaa Ali, PhD, PE, PMP, F.ASCE., DWRE). This comprehensive and well developed analysis relied upon SFWMD's Regional Simulation Model (RSM) to compare the hydrologic performance of three pertinent regulation schedules for Lake Okeechobee operations: 1) WSE, 2) ECB19 (aka LORS08), and 3) LOSOM. While these computer model simulations served a critical role in the assessment of the Lake Okeechobee MFL, there has been no corresponding assessment of water supply performance in the LECWSP Update using these currently existing tools.

Given the long-standing anecdotal description of Lake Okeechobee as the 'Liquid Heart of South Florida', it would stand to reason that the update of the regional plan that addresses water uses associated with Lake Okeechobee and the Lower East Coast would include an analysis of revised Lake operational protocols and its effect on regional water supply allocations. This consideration is even more obvious considering that an equivalent detailed analysis was performed specifically for this Plan to address revised Lake operations and its impact on the Lake Okeechobee MFL.

Possible LOSOM Operational Considerations for LWDD Water Supply

Given the previously described water supply issues associated with the implementation of LOSOM, there may be interim operational protocols not specifically enumerated in LOSOM that could be identified to mitigate some concerns in southeast Palm Beach County.

Based on the hydrologic simulations supporting the LOSOM Preferred Alternative, the operational intent to send excess Lake Okeechobee water south to the Everglades has an apparent unintended impact on LWDD and WCA-1 under dry conditions. The flow paths supporting the goal to send more water south from the Lake to the WCAs, bypasses WCA-1 in favor of WCA-2 and WCA-3. This results in increased drying event severity in WCA-1, with a corresponding decrease in drying event severity in WCA-2 and WCA-3 when compared to operations under LORS08. It's apparent that the lack of available regional water under drought conditions fails to sufficiently support minimum canal levels in southeastern Palm Beach County. This lack of regional supplemental water requires LWDD to rely more heavily on WCA-1 as a source in accordance with its Consumptive Use Permit. This exacerbates the drying of the internal perimeter of WCA-1 as well as depressing groundwater levels throughout LWDD due to the lack of available water in WCA-1 during significant dry periods.

The modeling analyses presented in the USACE's LOSOM Final Environmental Impact Statement indicate an increased frequency and severity of local water supply impacts in southeast Palm Beach County along with significant associated drying trends in WCA-1 when compared with LORS08 operations. These projected impacts appear to result from the reduction in Lake Okeechobee regulatory releases to tide via the C-51 and L-8 canals associated with LOSOM as compared to those same releases associated with LORS08. These releases of excess water from Lake Okeechobee have historically been utilized by the Lake Worth Drainage District (LWDD) as an alternative source of regional water that sometimes offsets the need to make surface water withdrawals directly from WCA-1, which can in-turn impact hydro-patterns in the marsh ecosystem under certain conditions.

Under LOSOM, excess water in Lake Okeechobee is released south to WCAs 2 & 3 via the North New River and Miami canals. This tends to reduce the frequency and duration of high stages in Lake Okeechobee and provides a source of water to enhance hydro-patterns in the southern Everglades ecosystem. This operational route avoids discharges to WCA-1 along with the St. Lucie, Caloosahatchee, and Lake Worth Lagoon estuaries. A potential operational solution would allow the discharge of excess Lake Okeechobee water to the L-8 & C-51 canals but avoid the subsequent damaging discharge to the Lake Worth Lagoon via S-155, S-40 & S-41. This operational modification provides an alternative source of regionally available excess water to LWDD that would offset the need to make comparable water supply withdrawals from WCA-1. To avoid conflicts with other regional water needs or permitted water uses, this operation would be limited only to those periods when the excess water was available from Lake Okeechobee.

From: [Paul Linton F.](#)
To: [Demonstranti, Nancy](#)
Cc: [Tommy Strowd](#); [Patrick Rutter](#); abayat12@outlook.com
Subject: Palm Beach County's Comments on 2024 LECWSP
Date: Wednesday, August 7, 2024 8:52:45 PM
Attachments: [Attachment_2024.03.01_Letter.pdf](#)
[USACOE SFWMD letter.2024.03.01.pdf](#)

You don't often get email from plinton@pbc.gov. [Learn why this is important](#)

[Please remember, this is an external email]

Nancy

As previously expressed in comments on the LOSOM Lake Okeechobee Water Control Plan (see attached document) Palm Beach County (PBC) continues to have concern that the SFWMD is not meeting the water supply obligation prescribed in the Saving Clause. The SFWMD should be planning and implementing projects to provide reliable water supply such that water supply shortage occur with a frequency of less than or equal to 1 year in ten years. The planning for water supply should reflect accurate water supply for the EAA as Lake Okeechobee is the backup water supply for the Lower East Coast. PBC acknowledges that it will take time to restore this level of water supply. PBC would be less concern if the SFWMD was expressing an explicit commitment to providing water supply reliability prescribed by the saving clause. Water utilities in the Lower East Coast need this reliability and clarity on this reliability in order to plan for dependable and economically feasible water supply.

Under Florida law, e-mail addresses are public records. If you do not want your e-mail address released in response to a public records request, do not send electronic mail to this entity. Instead, contact this office by phone or in writing.

Attachment 1 – Additional Information on Operational Issue with LORS2008 and LOSOM

The following discussions and information are intended to illustrate Palm Beach County's (PBC's) technical, operational, and policy concerns with recent and future management of Lake Okeechobee. PBC fully acknowledges the challenges of balancing the multiple and often conflicting project objectives of Lake Okeechobee. It is this complexity and the limitation of the systems that make it prudent to manage the Lake in a disciplined and transparent manner. PBC and many other stake holders objected to the unbridled operational flexibility that was incorporated into the Lake Okeechobee Regulation Schedule of 2008 (LORS2008). Specifically, LORS2008 replaced the previous release guidance of up to the extent practicable achieve the release guidance to "up to" values that have been interpreted by the USACE as making it acceptable to have releases that are only a fraction of the prescribed releases. As the stakeholder expressed during the development of LORS2008 and LOSOM the modeling runs that were used to perform the Environmental Impact Analysis (EIA) use the full amount of the "up to" values so meaningful departures from the "up to" values weakens the validity of the EIS conclusion which rely on the modeling results. The introduction of this magnitude of operation flexibility included statements that the operational decisions would be based on the best available information and science. This commitment was stated as addressing the concerns over the unprecedented operational flexibility. However, the Water Control Plan only contained qualitative guidance some of which have not been proven. For example both LORS2008 and LOSOM have moderate El-Nino as factors for increased releases. At most moderate El-Nino only has a small effect on rainfall (see Figure 1 below). PBC recommend an analysis of the correlation between Weak (< 1.0), Moderate (1.0 to 1.5), Strong (1.5 to 2.0), and Very Strong (>2.0) with Lake Okeechobee Net Inflow (LONIN) for the portion of the dry season (November through April) and monthly correlation for October through May (to confirm that October and May are not substantively affected by El-Nino). The results of this analysis can be used to provide quantitative input into operations. PBC recommends that the SFWMD Position Analysis be updated to reflect the smaller flow ranges of LOSOM and reflect the expected period(s) when the actual releases will be considerably less than the flows prescribed by LOSOM. For example, releases postponed or minimized for one month to facilitate Oyster recruitment (see Appendix A for more details).

As with the LORS2008, LOSOM include "up to" for Zone D, Zone B/C, and Lake Okeechobee Recovery Operations. A welcomed change was the removal "up to" text in Zone A. While the range of operational flexibility will be less as the flow ranges are considerably smaller (see Appendix A for more details) the issue of underutilization will still persist. Under normal conditions LOSOM removes the option of releases to the Saint Lucie River Estuary (SLRE) in Zone D and limits the release to 1,400 cfs measured at the downstream structure (S-80) during Lake Okeechobee Recovery Operations. This leaves the Caloosahatchee River Estuary (CRE) and the Lake Worth Lagoon Estuary (LWLE) as the only estuaries receiving Lake releases in Zone D. Can water be sent to the C-44 Reservoir for a week and the released after treatment by the C-44 STA for two to three weeks to at least achieve a release similar to the release to the LWL Estuary. The LOSOM modeling run estimate that: 1) the volume released to the CRE will reduce by about 2%, 2) the volume released to the LRE will be reduced by 51%, and 3) the volume released to the LWLE will be reduced by 80%; but the base value for LWL Estuary releases is anomalously high. The reductions require that the operations successfully move an additional annual average rate of about 236 cfs to the conservation areas. Comparing the estimated LOSOM releases to the LWLE with DBHYDRO data for the 1986 through 2016 period indicates that the LOSOM model runs

overestimate the base LWLE release by 79% so there is like much less reduction releases to the LWLE between LORS2008 and LOSOM than the performance measure suggest.

The LWLE like the SLRE rarely needs fresh water for salinity reductions as the tidal circulation is sufficient to prevent the type of hyper saline conditions that are problematic for Florida Bay. The high turbidity, suspended solids, and nutrient level of Lake Okeechobee will impact the LWLE. The July 2023 Draft of the Water Control Plan (WCP) states that “Lake Okeechobee has no releases at S-80 in Zone D, and only beneficial releases up to 300 cfs are provided to the Lake Worth Lagoon (via S-271 or S-352) unless the Lake Recovery Operations are implemented.”; page 7-20. However, the WCP does not provide any water quality criteria for when releases are beneficial and there is no requirement for coordination with Palm Beach County. PBC is concerned that the USACE will not adhere to the beneficial requirement during normal conditions as the LOSOM model runs show year round releases to the LWLE and Section 7.5.4.1.6 Synthesis has two examples where water is release to the LWLE when “LWL would not benefit from water to maintain optimum salinity.”

With the lack of constraints on the operational flexibility PBC is concerned that underutilization of the up to values will result in more frequent Zone B/C and Lake Recovery releases where there is no beneficial requirement. PBC has throughout the development of the LOSOM Water Control Plan express concern that overuse of the “up to” values in the lower half of Zone D, without the constraining conservation criteria in the that was in the LOSOM modeling, that the Lake will be lowered too far in the hopes of avoiding future regulatory releases at the expense of water supply. Figure 2 shows Lake Okeechobee Service Area (LOSA) cutbacks from the LOSR2008 (No action) of 31.5 to 22.1 percent in the LOSOM Model Run with the conservation criteria (Index 260467). This is a 9.4 percent reduction in LOSA cutbacks. If the water conservation criteria are removed from the modeling the reduction is only from 31.5 to 29.1 percent (2.4 percent reduction). This means that there is the potential to lose 74% of the improvement in LOSA cutback if there is unconstrained operation in the bottom half of Zone D.

Lake Okeechobee Watershed Rainfall (Jan-Mar) vs Nino3.4(SON) 1951-2014

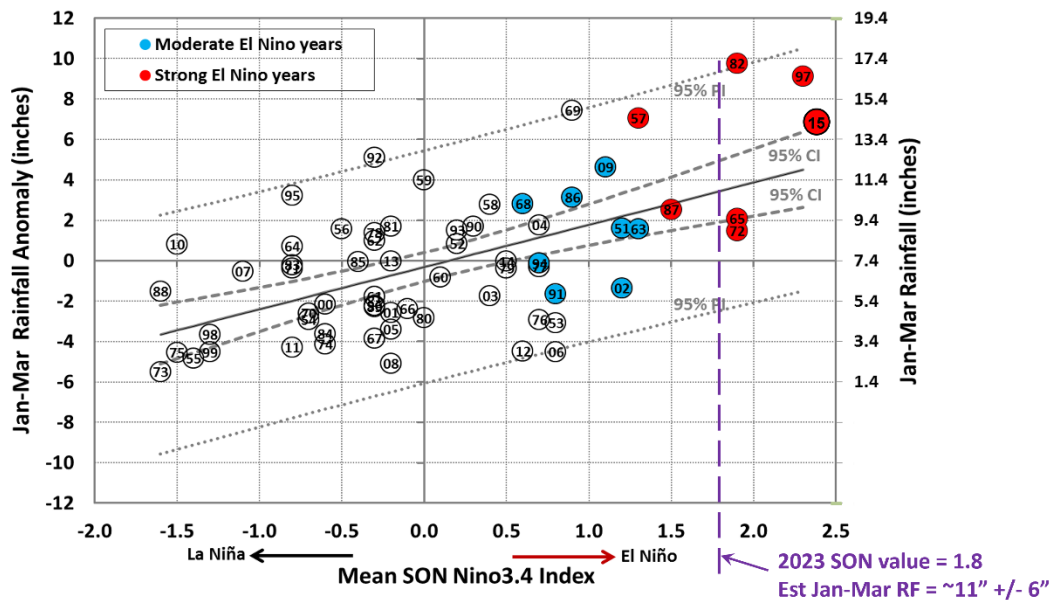


Figure 1 – Rainfall for the January through March Period versus Mean SON Nino 3.4 Index

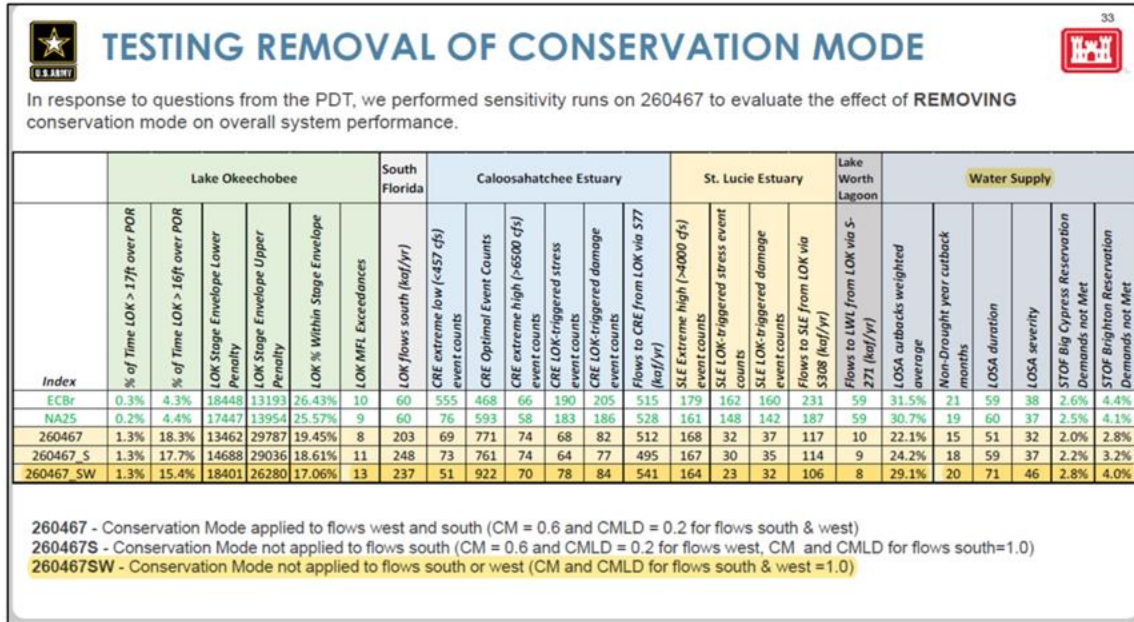


Figure 2 – Modeling Runs to Evaluate the Impact of Removing the Conservation Criteria.

Appendix A – Documentation on the inaccuracies of the SFWMD Position Analysis arising from the unprecedented Operational Flexibility in the Lake Okeechobee Regulation Schedule 2008.

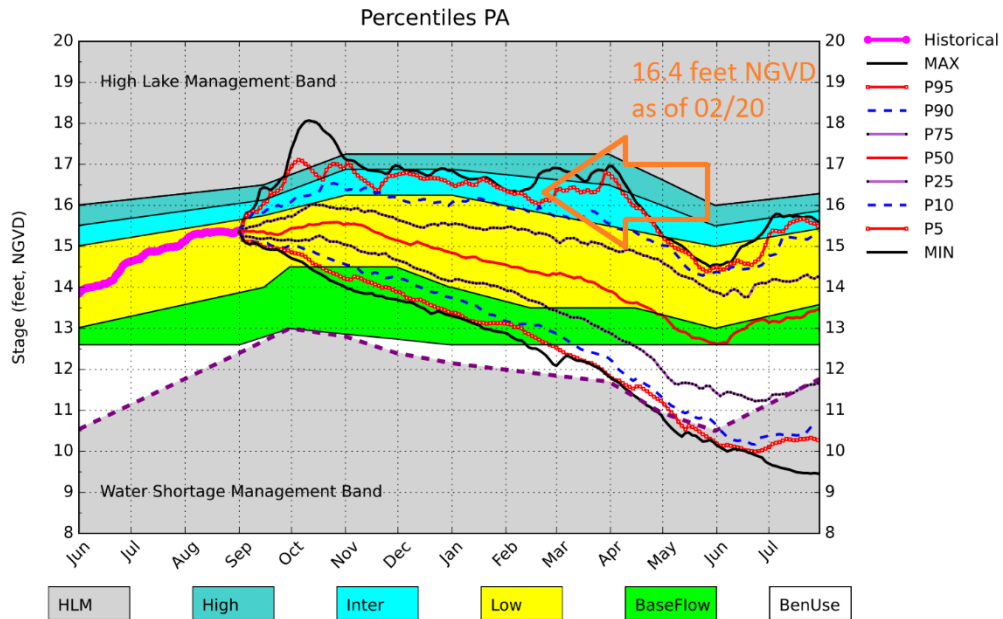
For the 2023 through 2024 dry season (using data from the September 16, 2023 through February 14, 2024 period) the USACE has only used about 30 percent of the up to discharge rates. Specifically, the USACE has discharge almost completely through the Caloosahatchee River about 289,043 acre-feet and retained about 829,890 acre-feet (equaling about 1.78 feet on Lake Okeechobee).

Looking at SFWMD September Position Analysis it was forecast that it would take upper decile runoff for Lake Okeechobee to be at 16.4 feet NGVD on February 20, 2024 (Figure 1). While we have had above average rainfall we have not had upper decile runoff. Figure 2 provides statistics of the daily runoff from the entire Kissimmee Basin (measured as the addition of S65E and S65EX1). The Kissimmee basin is the largest basin of the Lake Okeechobee watershed and is a good indicator of watershed conditions. For the period from September 16, 2023 through February 20, 2023 the average daily flow rate was 1,817 cfs which is between the 50 percentile (median) flow rate of 1,150 cfs and the upper quartile percentile of 1,989 cfs (roughly the 68 percentile). The 1,817 cfs is 1,587 cfs below the upper decile (P90) of 3,404 cfs. The inaccuracies of the SFWMD Position Analysis will reduce once the LOSOM regulation schedule is implemented as the flow ranges prescribed by the schedule are smaller but it will still under predict the rise in Lake Okeechobee if the USACE does not use the up to rates. Also during wet periods the lake stage will rise faster in Zone D due considerably reduced discharges. In LOSOM Zone D will normally only allow flows up to 2,300 cfs to the estuaries (2,000 to Caloosahatchee River measured at S-79, 0 cfs to the Saint Lucie, and 300 cfs to the Lake Worth Lagoon limited to beneficial releases). During Lake Recover Operations the total flow to the estuary increases to 3,800 cfs (2,100 to Caloosahatchee River measured at S-79, 1,400 cfs to the Saint Lucie Measured at S-80, and 300 cfs to the Lake Worth Lagoon without the beneficial criterion). The Zone D releases to the estuaries range from 650 cfs during dry conditions when the lake is near the bottom of Zone D (450 cfs to Caloosahatchee River measured at S-79 and 200 cfs to the Saint Lucie Measured at S-80) to 9,300 cfs (6,500 cfs to Caloosahatchee River measured at S-77 and 2,800 cfs to the Saint Lucie Measured at S-80). The difference for the upper end of Zone D ranges from about 7,000 cfs to 5,500 cfs which equates to a lake rise of 0.91 to 0.72 feet

The SFWMD could adjust the Position Analysis to reflect the underutilization of the “up to” capacity in LORS2008 but this may not be worthwhile with the time left before LOSOM becomes the authorized operation plan.

With LOSOM having a considerably smaller range of “up to” flows a LOSOM Position Analysis would have less potential for inaccuracy. Factors such as 1) a desire to facilitate oyster recruitment by providing flow and salinities favorable for oyster larvae attachment (spat), 2) basin flows severely limiting the release capacity from Lake Okeechobee, and 3) harmful algae blooms will continue to result in pressure to postpone or minimize releases. A LOSOM Position Analysis should include periods with lower flow to address these factors. With no adoption of modeling criteria that reduced release rates in the bottom third of Zone D there is increased risk that Lake releases to the estuaries will impact water supply; as the drier conditions allow more flow to the estuaries. To properly identify this risk the LOSOM Position Analysis should use the full up to amounts for the bottom half of Zone D.

Lake Okeechobee SFWMM September 2023 Position Analysis



09/07/23 09:09:25

(See assumptions on the Position Analysis Results website)

Figure 1 SFWMD September 2023 Position Analysis with the Current Lake Okeechobee Stage.

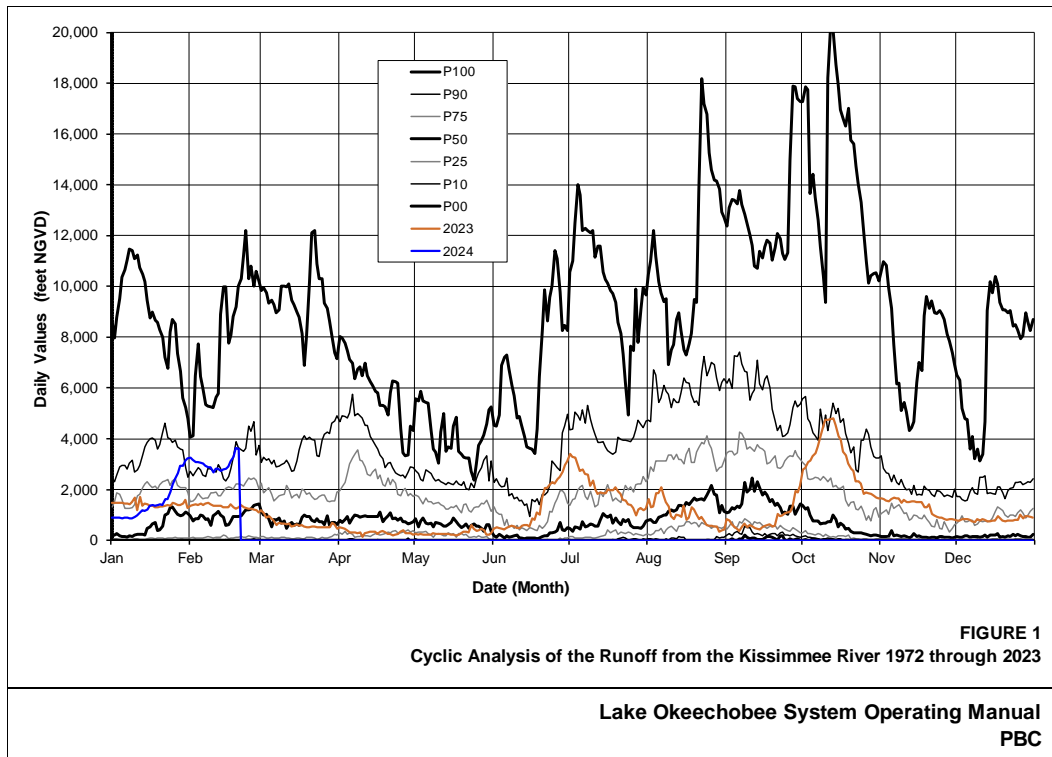


FIGURE 1
Cyclic Analysis of the Runoff from the Kissimmee River 1972 through 2023

Lake Okeechobee System Operating Manual
PBC

Figure 2 Daily Statistic of Runoff from the Kissimmee Basin 1972 through 2023.

Appendix B – Discrepancies in the LOSOM Water Control Plan on Beneficial Releases to the Lake Worth Lagoon Estuary.

The following excerpts from the July 2023 Draft Water Control Plan illustrate the lack of water quality criteria for beneficial releases to the Lake Worth Lagoon (LWL) and the presence of conflicting text. Specifically, release example prescribing releases to the LWL Estuary when releases to “LWL would not benefit from water to maintain optimum salinity”. The LWLE like the SLRE rarely needs fresh water for salinity reductions as the tidal circulation is sufficient to prevent the type of hyper saline conditions that are problematic for Florida Bay. The high turbidity, suspended solids, and nutrient level of Lake Okeechobee will impact the LWL Estuary. Figure 1 shows that year round release were occurring in the modeling runs used to develop and evaluate the Lake Okeechobee System Operating Manual (LOSOM).

Excerpt from Section 7.5.4 Zone D Operations Page 7-20 of the July 2023 Draft Water Control Plan

Zone D releases from Lake Okeechobee may be made up to 2,000 cfs as measured at S-79. Releases to the C-43 Canal through S-77 in Zone D are made to achieve defined flow targets at S-79. Local runoff and water withdrawals can still cause flows to exceed or fall short of the target at S-79. **Lake Okeechobee has no releases at S-80 in Zone D, and only beneficial releases up to 300 cfs are provided to the Lake Worth Lagoon (via S-271 or S-352) unless the Lake Recovery Operations are implemented.** Releases to the C-44 Canal through S-308 in Zone D are made to maintain optimal canal elevations for navigation and water supply. **Section 7.5.8** provides further details on the Lake Recovery Operations.

Excerpt from Section 7.5.4.1.6 Synthesis Page 7-23 of the July 2023 Draft Water Control Plan

1. Lake levels are rising (positive LONIN) in the upper portion of Zone D and above ecological envelope in November (end of the wet season), northern WCA-3A would benefit from more inflows, salinity in the CRE is in the optimal range for oysters and would benefit from lake flows, **LWL would not benefit from water to maintain optimum salinity.** ENSO conditions are neutral. This scenario constitutes conditions where releasing water from Lake Okeechobee would benefit the lake for flood risk management and lake ecology, the CRE ecology, and the Everglades ecology while there is lower risk of stages entering WSM Zone. Release decision: Release 2,000 cfs at S-79, 1,100 cfs at S-351/354, **and 300 cfs at S-271** subject to downstream capacity and re-assess at the mid-dry season assessment point based on rainfall patterns, lake level projections for June, recession rates, and system conditions.
2. Lake levels are in the upper portion of Zone D in October and receding (negative LONIN), a strong La Niña is forecasted for the dry season, CRE salinity levels are high and lake water could help bring levels down to optimal, the WCAs are below schedule and could benefit from increased inflows, the **LWL would not benefit from water to maintain optimum salinity.** Early in the dry season releasing water to lower lake levels and to help manage salinity in CRE would be beneficial, but due to the increased risk of below normal rainfall (La Niña) maximum releases are not recommended. Release decision: Release 750 cfs at S-79, medium releases at S-351/S-354 and **200 cfs at S-271** subject to downstream capacity and re-assess at the mid-dry season assessment point based on rainfall, lake levels, and water supply needs.

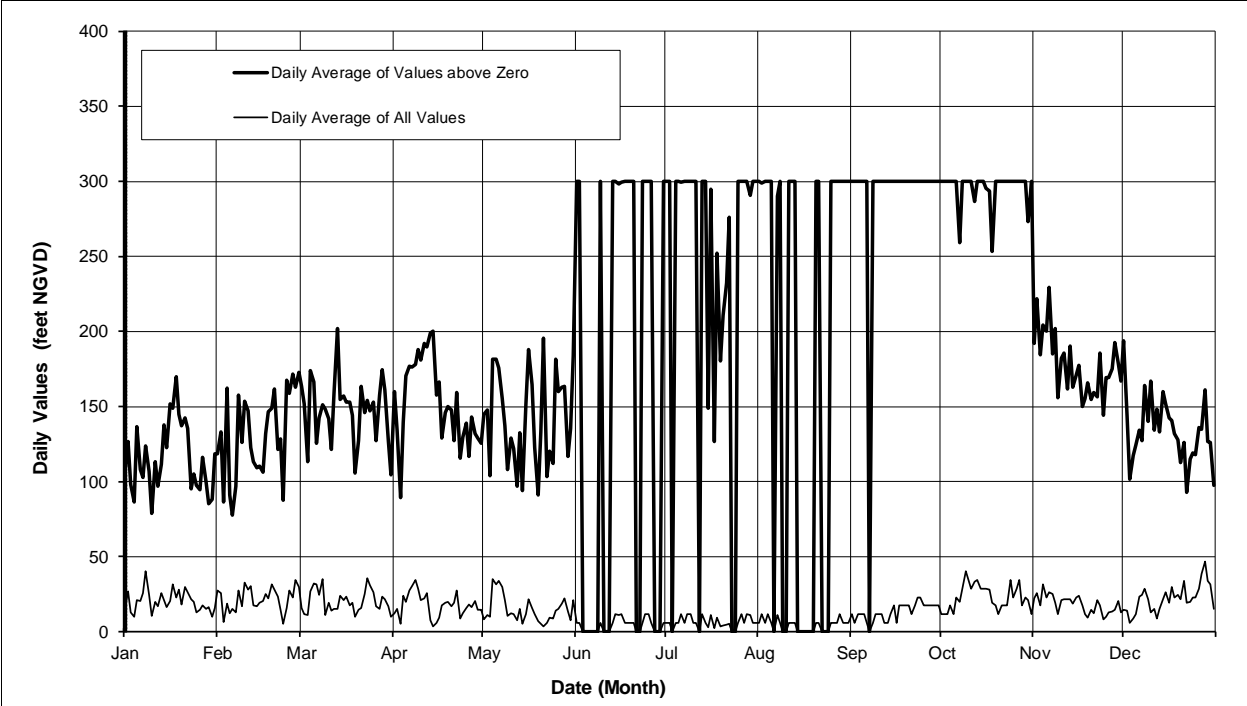


FIGURE 1
Daily Averages of the Discharges to Lake Worth Lagoon (LWL) Estuary 1965 through 2016

Appendix C – Copy of previous letter reiterating Palm Beach County’s concerns over several aspects of the proposed Lake Okeechobee System Operating Manual.



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**Palm Beach County
Board of County
Commissioners**

Robert S. Weinroth, Mayor

Gregg K. Weiss, Vice Mayor

Maria G. Marino

Dave Kerner

Maria Sachs

Melissa McKinlay

Mack Bernard

County Administrator

Verdenia C. Baker

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October 12, 2022

Ms. Jessica Menichino
U.S. Army Corps of Engineers
701 San Marco Boulevard
Jacksonville, FL 32207
Telephone: 904-858-5101
E-mail: LakeOComments@usace.army.mil

Subject: DRAFT ENVIRONMENTAL IMPACT STATEMENT
Lake Okeechobee Systems Operating Manual (LOSOM)
Glades, Martin, Palm Beach, Henry, Lee, St Lucie,
and Okeechobee Counties, Florida

Dear Ms. Menichino:

This letter is a follow-up to comments sent by Palm Beach County (PBC) to the U.S. Army Corps of Engineers (USACE) Jacksonville District by e-mail (LakeOComments@usace.army.mil) on September 12, 2022.

PBC is committed to protecting the interests of its residents and the natural environment in which they live and work. Lake Okeechobee is a critical component to achieving environmental restoration, water supply, navigation, agriculture, tourism, and recreation objectives in South Florida. As such, Palm Beach County residents, taxpayers and visitors depend on healthy and predictable lake levels to sustain a robust and diverse economy. Today, PBC is providing additional comments to the U.S. Army Corps of Engineers (USACE) on the subject document. The following paragraphs summarize PBC issues.

Palm Beach County, in collaboration with state and local partners, has invested over \$500 million in the acquisition, restoration and management of 32,000 acres of natural areas and invested approximately \$88 million to restore the Lake Worth Lagoon. PBC has responsibilities to promote, provide, and protect agriculture, wetlands, natural rivers such as the Loxahatchee River, the Lake Worth Lagoon Estuary (LWL Estuary), and water supply for its 1.5 million residents. PBC understands the challenge and complexity of the Comprehensive Everglades Restoration Plan (CERP) and supports it figuratively and literally.

PBC staff reviewed the USACE Draft Environmental Impact Statement (EIS) and Lake Okeechobee System Operating Manual (LOSOM). While there was improvement in the process (more time for participation and review), some improvement in water supply, and meaningful improvement for Lake Worth Lagoon, LOSOM does not provide the water supply that the Water Supply and Environment (WSE) Regulation Schedule provided in 2000. The WSE regulation schedule was replaced by the interim (emergency) regulation schedule that lowered Lake Okeechobee while the repairs to the Herbert Hoover Dike (HDD) were completed.

Based on the modeling results, the LOSOM regulation schedule shows improvement over the emergency schedule required during the repairs of the Herbert Hoover Dike (HDD), but we don't think it provides the congressionally protected [WRDA 2000 Section 601(h)(5) of Public Law 106-541] water supply nor the schedule for when water supply will be restored to the 2000 levels. The absence of modeling of the WSE performance removes the ability to directly compare the new regulation with WSE. The USACE could have provided WSE results for comparison while still using the emergency (LORS08) regulation schedule as the "no-action alternative". The EIS performed thousands of runs in the plan development process but did not include a WSE run. In our opinion, this decision substantively reduces the credibility of the EIS.

Palm Beach County believes it is incongruent that Congress would make law to prevent the implementation of the CERP that would diminish water supply temporarily or permanently, and also be ok with a Lake Okeechobee regulation schedule which during normal conditions impacts water supply. It is acknowledged, that the USACE had good cause and the authority to lower Lake Okeechobee's schedule during the period that the vulnerabilities of the Herbert Hoover Dike (HDD) were addressed. An interim schedule in response to an emergency should not circumvent a foundational commitment of the CERP.

The USACE has not communicated a commitment to providing the congressionally protected water supply within this study. If there is any chance that the deficient water supply performance of LOSOM will reduce the congressionally protected water supply for CERP then this should have been declared clearly in the EIS. If not, how and when will the congressionally protected water supply be restored? Clearly, the WRDA 2000 requirements to protect water supply and flood damage reduction should apply to the next CERP component.

Palm Beach County is concerned with the unconstrained operational flexibility in the Water Control Plan. For example, the Water Control Plan does not have the three sub-bands that the modeling used to achieve balanced results and has an unranked list of factors. In Palm Beach County's opinion, without guidance and constraints on the operational flexibility, the balance achieved in the selected plan will likely diminish. We recommend that the releases and stages prescribed by the modeling criteria should be calculated and provided to water managers and stakeholders. The accumulation of several months of overuse of the operational flexibility can meaningfully reduce water supply. During the EIS process, the statement that the releases are small and only amount to a few inches on the Lake has been made. For perspective, the maximum annual allocation for the City of West Palm Beach (Water Catchment Area and the Water Treatment Plant) equates to about 3 inches on the Lake.

The long-term issues communicated in Palm Beach County's Resolution 2019-0379 have not been resolved. Resolution 2019-0379 clearly documents that PBC communicated the concerns of insufficient water supply and unconstrained operational flexibility early enough in the LOSOM process to be addressed. A copy of Resolution 2019-0379 is included as Appendix I in the detailed comments attachment.

Sincerely,



Verdenia C. Baker
County Administrator

Attachments: Comments on the Draft Environmental Impact Statement and Lake Okeechobee System Operating Manual ... including Appendix 1: Palm Beach County Board of County Commissioners Resolution 2019-0379 (9/12/2022)

Copies to: Mayor and Members, Palm Beach County Board of County Commissioners
Drew Bartlett South Florida Water Management District
John Mitnik, South Florida Water Management District
Jennifer Reynolds, South Florida Water Management District
Colonel James L. Booth, U.S. Army Corps of Engineers
Members and Alternates, Palm Beach County Water Resources



March 1, 2024

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Mr. Drew Bartlett, Executive Director
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■
**Palm Beach County
Board of County
Commissioners**

Col. James L. Booth, District Commander
United States Army Corps of Engineers, Jacksonville District
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Jacksonville, FL 32207
james.l.booth@usace.army.mil

Maria Sachs, Mayor
Maria G. Marino, Vice Mayor

**Subject: Palm Beach County Concerns about Lake Okeechobee
Management and Impacts to Lake Worth Lagoon**

Gregg K. Weiss
Michael A. Barnett
Marci Woodward
Sara Baxter
Mack Bernard

Dear Director Bartlett and Colonel Booth:

County Administrator

Verdenia C. Baker

This letter is sent on behalf of and as directed by the Board of County Commissioners (BCC) at their 2/21/24 meeting, and at the recommendation of the Palm Beach County (PBC) Water Resources Task Force Advisory Committee. PBC fully acknowledges the challenges of balancing the multiple and often conflicting project objectives of Lake Okeechobee, however, the BCC has concerns about the U.S. Army Corps of Engineers (USACE) unconstrained use of “operational flexibility” within the current Lake regulation schedule [Lake Okeechobee Regulation Schedule 2008 (LORS2008)]. The hesitancy to follow recommendations in LORS2008 led the USACE to “bank” considerable water (i.e. not release it) resulting in Lake Okeechobee stage increasing considerably in the dry season when a Lake recession should be occurring. From September 16, 2023 through February 24, 2024 the Lake rose from 15.4 to 16.28 feet. The USACE “banked” approximately 840,000 acre-feet of releases (which equates to a depth of about 1.8 feet) to minimize the releases to the St. Lucie Estuary and somewhat reduce releases to the Caloosahatchee Estuary. During this period, the USACE only discharged about 28% (330,700 acre-feet /1,160,000 acre-feet) of the “up-to” discharges allowed by LORS2008.

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Affirmative Action Employer”*



Also during this time, the St. Lucie Estuary received no flows, and the Caloosahatchee Estuary received an average of 1,000 cubic feet / second (cfs), while the Lake level continued to increase to the detriment of the Lake's littoral zone ecosystems. During this time, Caloosahatchee stakeholders communicated that while the additional flows would not be beneficial, they understood that increased releases could be helpful in preventing larger more damaging releases later.

Palm Beach County does not support harmful and unwanted freshwater releases to any of the estuaries. As a result of intentionally allowing higher Lake level by ignoring the reality of what only 28% of allowable discharges under LORS08 would do, the St. Lucie, Caloosahatchee and Lake Worth Lagoon (LWL) estuaries are all receiving larger damaging freshwater releases laden with highly turbid, high nutrient Lake water, and the Lake is being subjected to prolonged higher stages. These elements increase the likelihood of summer conditions that support extreme cyanobacteria blooms.

Recently, the South Florida Water Management District has made a policy decision which is solely in their discretion to make releases to the LWL in the name of "shared adversity" anytime discharges are being made to the St. Lucie Estuary. In the past this only occurred when the Lake was in the upper zones of the regulation schedule. The works of the SFWMD in the LWL Estuary watershed were created for a purpose of local flood control and water supply. They were not a planned part of regulatory releases from Lake Okeechobee. Simply put, the water management system is not designed nor was it anticipated to make large regulatory releases to the Lake Worth Lagoon.

Lake discharges to the LWL Estuary are typically down the C-51 canal and released into the LWL estuary through S-155. This location is 8 miles from the nearest inlet to the north, and 10 miles from the nearest inlet to the south. Given the unique morphology and geography, the tidal flushing velocities this far from the inlets are insufficient to keep the solids suspended, resulting in the deposition of muck sediments. The turnover of water is also slow at this location resulting in greater impacts to water quality.

Palm Beach County and our numerous partners have invested \$63 million in the creation of islands and living shorelines that created seagrass habitat, mangrove wetlands, and marsh grass areas that support fish and wildlife and create recreational opportunities, as well as water quality improvement when not overloaded with pollutants. We created nearly 236 acres of habitat in the Lake Worth Lagoon, with future projects planned to add 60 more acres of similar habitats, including bird nesting mounds.



Restored and created habitat within LWL Estuary supports unique circumstances for threatened and endangered species. Seagrass habitat in the northern LWL Estuary provides vital nursery habitat for a large population of juvenile green sea turtles (federally endangered). Created islands support the southernmost documented breeding pairs of American Oystercatchers, as well as documented nesting by least terns and black skimmers, listed species which had not been known to utilize our area until habitat restoration efforts began. Our team has completed bird monitoring on these islands, and we have documented tagged birds from Indian River Lagoon, Martin County, Brevard County, Citrus County, the Ten Thousand Islands/Cape Romano, and the Caloosahatchee area. We are providing refuge for animals all over the state when conditions are stressed elsewhere.

The SFWMD has completed extensive modeling and other research in the St. Lucie and Caloosahatchee estuaries. However, there has been relatively very little scientific investment made in LWL Estuary. While we appreciate the SFWMD's partnership on some limited water quality efforts, we respectfully request a more sophisticated assessment to understand the full impacts of Lake Okeechobee discharges on LWL, including a 3D hydrodynamic model and more extensive water quality monitoring at multiple outfall locations to comprehensively understand water quality impacts.

Finally, we have previously expressed concerns about the proposed Lake Okeechobee System Operating Manual (LOSOM) operation plan for Lake Okeechobee, including indications that water supply can be impacted by the overuse of operational flexibility in the lower half of Zone D. This is the same operational flexibility that resulted in our current situation. We have attached additional information on technical and clarity issues to bring them to your further attention and to help you better understand PBC's perspective on protecting our LWL Estuary and PBC's long term water supply concerns.

Our Board represents 1.5 million residents, and growing, including a community and economy that relies on clean water to succeed.

Very respectfully,

A handwritten signature in blue ink, which appears to read "Maria Sachs".

Maria Sachs, Mayor

Palm Beach County Board of County Commissioners



Attachment 1 – Additional Information on Operational Issue with LORS2008 and LOSOM

c: with Attachment

Palm Beach County Board of County Commissioners

Palm Beach County Water Resources Task Force members

Verdenia C. Baker, PBC County Administrator

Patrick Rutter, PBC Deputy County Administrator

Todd Bonlarron, PBC Assistant County Administrator

Paul Linton, PBC Water Resources Manager

Deborah Drum, PBC Environmental Resources Management

Director

Savannah H. Lacy, P.E., Chief, Operations Unit, Water Management, USACE Jacksonville District

John Mitnik, Assistant Executive Director and Chief District Engineer, South Florida Water Management District



Utilities Department

A. Randolph Brown, Utilities Director

City of Pompano Beach

1205 NE 5 Avenue, Pompano Beach, Florida 33060

Phone: 954.545.7044

August 7, 2024

South Florida Water Management District
Water Supply Implementation Unit
Nancy Demonstranti, Lower East Coast Plan Manager
3301 Gun Club Road
West Palm Beach, FL 33406

Dear Ms. Demonstranti:

The City of Pompano Beach (City) has reviewed the South Florida Water Management District (SFWMD) 2018 and 2023-2024 Lower Coast Water Supply Plan Update (LEC Plan Update).

Future planning efforts need to include utilities in the SFWMD that must switch to membrane treatment from lime softening to offset water supply impacts due to the Environmental Protection Agencies' PFAS/PFOS regulation. These projects are not just about water supply; they are about the well-being and sustainability of our community, and we rely on your support. Like other utilities, the SFWMD reduced water allocation when Herbert Hoover Dike was in disrepair. This reduction was to be temporary. The district needs to put planning and construction dollars into the water supply and increase allocations for the growing population. Water supply, after all, is one of the three key missions.

The following identified projects, located within the jurisdiction of the City's Utilities Department, with summaries of those projects and their current status.

Ocean Outfall Program

- The Ocean Outfall Program requires the elimination of the six ocean outfalls in southeastern Florida as the primary means of disposal of treated wastewater effluent by December 31, 2025. In addition, affected wastewater utilities must reuse at least 60 percent of the outfall flows by December 31, 2025. Based on reports submitted to the Florida Department of Environmental Protection (FDEP), Broward County is planning to meet the 60 percent reuse requirement by expanding its public access irrigation in northern Broward and southern Palm

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Beach counties, including expanding reuse systems in the cities of Pompano Beach and Coconut Creek. Additional deep injection wells are being installed to serve as a backup disposal option and decrease flows through the ocean outfall.

- In 2014, the Reclaimed Water Distribution Project was completed to supply the Pompano Beach Highlands area with reclaimed water. The City is providing approximately 0.4 mgd of the agreed limit of 1.0 mgd reclaimed water to the area to saving water for Broward County.
 - As of 2024, the pipelines for this Reclaimed Water Distribution Project to supply the Pompano Beach Highlands have been installed and is in service.
- Broward County Water and Wastewater Services is currently installing a new 24-inch influent service line to provide the City's reuse water treatment facility, OASIS, future inflow once the County's ocean outfall line is no longer in service.

Reclaimed Water

The City has expanded the reuse system to serve hundreds of residences since the last plan update and continues to actively expand the reuse distribution system every year.

- SFWMD Cooperative Funding Program Projects:
As part of the Cooperative Funding Program for Fiscal Years 2013 to 2018 and 2018 to 2022, SFWMD provided funds for the development of alternative water supplies. All projects funded in the LEC planning area during these periods are related to reclaimed water. The projects funded by this program and the Utility in the City's jurisdiction and their corresponding status are the following:

- *Reclaimed Water Distribution System Expansion.*

Every year, the City performs construction work, increasing the coverage of the reclaimed water distribution system. A bond will be issued in 2025 with \$15 million for reuse expansion efforts vs. \$2 million over five years. The City looks forward to continuing its partnership with the SFWMD for funding opportunities.

- *Reclaimed Water Distribution System Expansion: NE 16th Street to NE 24th Street and NE 23rd Avenue to Intracoastal Waterway (Hillsboro Harbor), Capacity 0.34 mgd.*

This project is complete and provides reuse water to approximately 500 Pompano Beach water customers in the City.

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- *Reclaimed Water System Expansion – NE Pompano and Lighthouse Point Scheduled for fiscal year 2017-2026, Capacity 0.04 mgd.*

This project was divided into five phases, in which phases 1, 2, 3, and 5 have already been constructed. Phase 4 is under design and projected to be completed in 2026. Currently, the City has a contract with Lighthouse Point to provide reclaimed water to almost 500 customers throughout this system.

- Reclaimed water treatment added capacity.

- *Pompano WRF 5.00 mgd Expansion Study, project for 2035.*

This project will require expanding the reuse water treatment facility, new storage tanks, and pump stations. Based on feasibility studies, the plant could be expanded to up to 12.5 mgd by 2035.

- Reclaimed water treatment projects that do not increase overall treatment capacity. However, we have projects to increase storage and system pressure over the expansion of the system.

- *3.5 mg Reuse Storage Tank with Booster Station, projected for 2027*
- *3.5 mg Reuse Storage Tank, projected for 2035*

These projects provide additional reuse storage, a pump station, and a maintenance work area to support the expanding residential reuse service within the City.

- *Reclaimed Water Plant Expansion, 5 mgd design capacity increase. Projected for 2030.*

Water Supply

Efforts to provide an effective use of the LEC water supply are identified throughout the LEC Plan Update. The following is an effort being implemented by the City:

Alternative Water Supply:

- The City's commitment to developing alternative water supply sources has been demonstrated for decades. The reduction of potable water used for irrigation, water conservation efforts, reuse expansion progress, community outreach programs, and ordinance modifications have all led to a substantial decrease in per-capita water usage. Overall, the City's efforts have reduced the per-capita usage (level

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of service standard) from a high of approximately 200 gpcd in the 1990s to a rate of 150 gpcd for the year 2023.

- As of December 2023, Phase I of the C-51 Reservoir Alternative Water Supply Project has been implemented, providing an additional 2.0 mgd capacity. On March 20, 2024, the City received notice from the SFWMD that permit conditions have been met for the C-51 Project, and withdrawals above the prior established permit capacity can begin. The City's SFWMD Water Use Permit Allocation has increased from 18.39 mgd to 19.73 mgd.
- Traditional Water Supply:
 - As per the City's reissued Consumptive Use Permit, the total permitted allocation of groundwater from the Biscayne Aquifer for use in raw water supply is a daily average of 19.73 mgd. The permit has a maximum monthly allocation of approximately 24 mgd.
 - The Eastern Wellfield has a permitted allocation of approximately 7.4 mgd across 15 wells.
 - The Western Wellfield has a permitted allocation of approximately 12.34 mgd across 10 Wells. The C-51 Reservoir Project applies to the Western Wellfield.
 - Based on the current wellfield and water treatment facility capacities, planned facility improvements included in the City's CIP, and increases in the City's raw water supplies and WUP, the City has sufficient water supplies to meet its anticipated service needs through a 20-year period.
 - However, the City is actively engaged in developing a wellfield plan that will allow the abandonment of older wells and potential construction of newer wells further away from the saltwater interface. The City's new CIP for FY 2019 through FY 2024 includes the Wellfield Performance and Relocation project. This study incorporated a comprehensive assessment of both wellfields, including evaluations of well production, specific capacity, and mechanical upgrades. The plan reviewed existing well rehabilitation, potential relocation, and well replacements.
 - Well No. 3 in the eastern wellfield has been abandoned due to its proximity to a new injection well. A new well in the western wellfield will be cited at a pumping capacity of 1,500 gpm to replenish the system's full raw water capacity.

Water Treatment

- In the 2018 LEC Plan Update, the City of Pompano Beach reported plans to investigate mechanisms to improve the efficiency of its nanofiltration WTP by adding a concentrate recovery system that will yield 0.6 mgd of water. The objective of the investigation would be to define how much water savings could be attained.

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- The City is taking proactive measures to add treatment processes and capacity to meet the new PFAS regulatory standards within the required timeframe.
 - The City's 2024 Water Facilities Plan: COPB Emerging Contaminants Water Treatment Plant Upgrades report recommended a phased approach to meet both short- and long-term water demands and compliance with PFAS regulations.
 - The short-term recommendation is to expand the existing NF process to approximately 20 mgd using existing Water Use Permit allocations.
 - The long-term recommendation is to replace 10 mgd of the existing lime softening facility with a new NF or reverse osmosis (RO) facility to meet longer-term water demands. This may require a WUP modification to meet raw water supply needs due to a lower production yield for NF and RO treatment.
 - The City has completed the research to determine the best course of action is nanofiltration technology for the removal of PFAS chemicals.

Water Conservation

Water conservation efforts are identified throughout the 2023-2024 LEC Plan Update for all planning areas to reduce the future amount of water supply needed to meet water demands. The conservation-related actions identified in the 2023-2024 LEC Plan Update and the efforts being implemented by the City are the following:

- *"The SFWMD should continue to implement its Comprehensive Water Conservation Program and its Cooperative Funding Program."* (2023-2024 LEC Work Plan Update)

The initiatives and actions being implemented by the City are in accordance with the 2008 District's Comprehensive Water Conservation Program. The City continues to seek supplemental sources of revenue to expand the reuse system and provide alternative water supply.

- *"PS utilities are encouraged to develop goal-based water conservation plans and proactively implement water-saving measures and programs."* (2023-2024 LEC Work Plan Update)

The city has conservation goals of increasing reuse by 5% per year and saving 30 MG water per year.

The City promotes water conservation through various ways:

- (1) the OASIS reuse water connection program for single-family residents called the ICanWater program;

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- (2) distribution of plumbing retrofits and informing the public on water conservation through public events and homeowners associations meetings;
- (3) providing tips and answers to FAQs on the City's Water Conservation website (<https://www.pompanobeachfl.gov/residents/utilities/water-conservation>);
- (4) through the Broward County Mobile Irrigation program, which helps large users of drinking water, such as condominiums, save water and money by increasing the performance of their irrigation system and making it more efficient. This program is free of charge and voluntary for these large water users; and
- (5) through Residential Irrigation Rebates in which the City, in partnership with Broward County, offers rebates for the installation of EPA WaterSense-labeled smart irrigation controllers and pressure regulating spray bodies.

In addition, the City has assigned funds in the Five-Year Capital Improvement Plan for Fiscal Years 2024 – 2028 (\$100,000/year) to the Utility Renewal and Replacement Capital Fund. This fund serves to conserve potable water resources through the proactive implementation of a Water Conservation Program. The City will revise the Code of Ordinances as required to include any update to this Water Conservation Program.

- *“Local governments should evaluate whether mandated water conservation measures, such as requirements for construction of water-efficient homes and commercial properties, are appropriate for their jurisdiction.” (2023-2024 LEC Work Plan Update)*

Under § 157.127(C)(2) of the Pompano Beach Code of Ordinances, new installations of automatic irrigation systems shall be equipped with a water-sensing assembly that will automatically discontinue irrigation during periods of rainfall (City Ordinance 50.05). The City has also implemented programs such as offering free plumbing retrofits, Mobile Irrigation Lab, and Residential Irrigation Rebates.

- *“Local governments should adopt a year-round irrigation ordinance that fully comports with the SFWMD’s Mandatory Year-Round Landscape Irrigation Conservation Measures Rule (Chapter 40E-24, Florida Administrative Code). Although 71 of the 116 local governments have adopted acceptable ordinances, 45 in the LEC Planning area have not yet adopted irrigation ordinances. (2023-2024 LEC Work Plan Update)*

The City has adopted Year-Round Water Restrictions to comply with the SFWMD’s Mandatory Year-Round Landscape Irrigation Conservation Measures Rule (Chapter 40E-24, Florida Administrative Code). These restrictions include the following: users must follow the current two-day-week year-round landscape

August 7, 2024

irrigation restrictions to protect water resources; and irrigation is not allowed between the daily hours of 10:00 am to 4:00 pm (City Ordinance 50.05).

- *“Local governments should consider developing or enhancing ordinances regarding Florida-Friendly Landscaping Program principles [Section 373.185, Florida Statutes].” (2023-2024 LEC Work Plan Update)*

The City encourages the planting of “Florida Friendly” plants and supports “Florida Friendly Best Management Practices for Protection of Water Resources by Green Industries, 2008” (City Ordinance 155.52).

- *Public Education programs can help instill a year-round conservation ethic. Local and tribal government and PS Utilities are encouraged to provide conservation-related information, messaging, and educational programs in cooperation with the SFWMD. (2023-2024 LEC Work Plan Update)*

The City has continuously implemented local public education programs to encourage water conservation. The City also participates in Broward County’s water conservation programs, such as “Mobile irrigation,” “Water Matters,” and “Know the Flow.”

The City embraces conservation efforts by employing a full time Utilities Reuse Outreach and Conservation Coordinator. We conduct direct outreach and advertise conservation continually on our City’s local cable channel.

- *All eligible water users are encouraged to seek cost-share funding opportunities that may be available for water conservation projects. (2023-2024 LEC Work Plan Update)*

The City regularly applies for alternative water supply (AWS) funding. We appreciate the District’s recognition of past efforts for AWS grants. The City has implemented local public education programs and participated in Broward County water conservation outreach programs. The City also encourages the planting of “Florida Friendly” plants and supports “Florida Friendly Best Management Practices for Protection of Water Resources by Green Industries, 2008.”

- *“Water users are encouraged to use advanced irrigation technology, improve landscape design and best management practices, and participate in user recognition programs (e.g. Florida-Friendly Landscaping program) to further increase landscape water use efficiency.” (2023-2024 LEC Work Plan Update)*

The City encourages improved landscape design standards and employs a full-time City Arborist to ensure that new development is compliant with the adopted codes.

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- “Commercial/Industrial/Institutional (CII) entities are encouraged to use the Water Efficiency and Self-Conducted Water audits at Commercial and Institutional Facilities, a Guide for Facility Managers (SFWMD 2013) to improve water use efficiency and reduce operating costs.” (2023-2024 LEC Work Plan Update

The City encourages the implementation of EPA WaterSense guidelines including industrial, commercial, and institutional entities. Self-conducted water audits are encouraged.

- *Smart Meter Technology*

The City provides smart meters for all water and reuse water services that allow customers to receive alerts and review historic usage.

The Water Supply Facilities Work Plan will be adopted and incorporated into the applicable elements of the City’s Comprehensive Plan. We hope the District finds the information included in this letter useful. The City of Pompano Beach continues to plan for and support future water supply and management alternatives for the City.

Sincerely,



A. Randolph Brown

Utilities Director

cc: Phil Hyer, Utilities Treatment Plant Superintendent
Nathaniel Watson, Utilities Field Superintendent
Lawrence Teich, Utilities Compliance and Efficiency Manager

FLORIDA SUGAR CANE LEAGUE, INC

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August 7, 2024

Nancy Demonstranti
Lower East Coast Plan Manager
South Florida Water Management District 3301 Gun
Club Road
West Palm Beach, FL 33406

VIA Email to: ndemonst@sfwmd.gov

Re: Draft LEC Regional Water Supply Plan - 2024 Update

Dear Nancy,

Please consider this letter as a supplement to the comments previously provided May 15, 2024, and October 19, 2023, by the Florida Sugar Cane League (“FSCL”). The latest draft Lower East Coast Regional Water Supply Plan Update of 2024 (“LEC Plan Update”) now contains Appendix C (“MFLs and Prevention Recovery Strategies”). In reviewing the LEC Plan Update and the slides provided at the July 12, 2024, stakeholder meeting, we note that the SFWMD explains that the regulatory criteria for consumptive uses of water is the Lake Okeechobee Service Area (“LOSA”) Restricted Allocation Area (“RAA”) Rule. The LEC Plan Update states that this regulatory criteria will not change.

The RAA Rule does not specifically reference future lake regulation schedules, but does list the applicable regulatory criteria. Since this Water Supply Plan Update, including the Recovery Strategy, will likely apply to future lake regulation schedules, we suggest clarifying the exact provisions of the RAA Rule that are applicable to the LEC Plan Update.

Thank you for the opportunity to comment. In providing this letter, we are preserving the comments previously submitted. We also reserve the right to provide future comments on the LEC Plan Update, once the final version is available and retain our points of entry on the LEC Plan Update and the interrelated activities of the LOSOM. As in the past, the FSCL looks forward to a continued partnership in protecting permitted water users and the environment.

Respectfully,



Noah Valenstein

Date: August 8, 2024

To: Nancy Demonstranti, South Florida Water Management District
Water Supply Bureau

From: Jennifer Thera & Rebecca Elliott, Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy

RE: Draft 2023-2024 Lower East Coast Water Supply Plan Update

The Florida Department of Agriculture and Consumer Services (FDACS) appreciates the opportunity to provide additional comments on the South Florida Water Management District's (SFWMD) Draft 2023-2024 Lower East Coast (LEC) Water Supply Plan (WSP) Update with the completion of the Executive Summary and Draft Appendix C (MFLs and Prevention and Recovery Strategies).

Please see our general comments below and the attachment "2023-2024 LEC WSP FDACS Editing and Technical Comments" for specific editing recommendations and detailed technical comments on the Executive Summary and Draft Appendix C.

General Comments:

FDACS recommends a pause before the completion of the Draft 2023-2024 LEC WSP Update to hold a public workshop on the modeling and conclusions used to support the proposed Lake Okeechobee Minimum Flow and Level (LO MFL) Recovery Strategy. A pause would allow the public and stakeholders to meaningfully engage during the development process and have an opportunity to provide input for the modeling approaches and assumptions. Because model results are the main driver in the LO MFL conclusions, additional time to inform and interact with the public will support a transparent process and provide an opportunity to address these high-level modeling concerns:

- Model results for the LEC WSP LO MFL evaluation using Lake Okeechobee System Operation Manual (LOSOM) operations predict more incidents of water supply cutbacks and more occurrences where the LO MFL is not met than the LOSOM(PA25) regulation schedule.
- The predicted increase in Lake Okeechobee water supply cutbacks and LO MFL exceedances is expected to impact the Lower East Coast Service Areas (LECSA) water supply and Everglades MFLs. Draft Appendix C, however, does not provide modeling results encompassing the LECSA and Everglades region to evaluate water supply and MFL performance south of the Lake Okeechobee Service Area (LOSA).
- The probabilistic model inputs include rainfall amounts in excess of what is indicated by the 52-year historical records. The assumption of increased rainfall during the 20-year planning period is based on a predicted disruption of the Atlantic Multidecadal

Oscillation (AMO) cycle that will continue the warm phase of the AMO indefinitely. This new approach in water supply planning for meeting the prospective 20-year planning horizon for MFL evaluation merits opportunities for additional public input and technical review.

FDACS recommends the LO MFL be updated as required by section 373.0421(5), F.S. and recommended in the 2005 – 2006 LEC WSP Update. It will be most effective if the update process is completed before the 2028 LEC WSP Update. The 2005-2006 LEC WSP noted that *“questions had been raised as to whether the MFL criteria accurately represent significant harm to water resources and ecology of the lake”* and that *“data collected since the original lake MFL was established suggest the low lake stage may be beneficial to several functions of the lake”*. The WSP also recommended that the lake MFL be re-evaluated based on current information to determine if changes were warranted. To date, no such re-evaluation of the lake MFL has been undertaken. There is an ever-growing body of information about the harmful impacts of high lake stages on lake ecology and the need for periodic lower stages to protect and restore the lake littoral zone and fisheries.

FDACS recommends adjusting the LOSOM operational guidance or developing a new LO regulation schedule to return the LO MFL to a prevention strategy in one to five years instead of twenty. Appendix H of the 2005-2006 Water Supply Plan (Final Order 2008-364) concluded the source water needed to return the LO MFL to a prevention strategy currently exists in the quantities and timing needed. All subsequent LEC WSPs rely on Lake Okeechobee operations as the determining factor in meeting the LO MFL criteria. In fact, the WSPs projected LO MFL violations to occur as a result of implementation of the interim LORS08 schedule and not as a direct result of existing water use permit allocations. Previous SFWMD LEC WSPs anticipated additional water from Lake Okeechobee resulting from operational changes or a revised regulation schedule was expected to return the lake to an MFL prevention status and improve water supply availability for existing permitted water users.

Thank you for the opportunity to provide additional comments on the Draft 2023-2024 LEC WSP Update. Please contact me if you would like any follow-up concerning the comments provided.

Jennifer Thera
(850) 617-1722 Office
(850) 631-0743 Cell
Jennifer.Thera@FDACS.gov

Attachment: 2023-2024 LEC WSP FDACS Editing and Technical Comments

Date: August 8, 2024

To: Nancy Demonstranti, South Florida Water Management District, Water Supply Bureau

From: Jennifer Thera & Rebecca Elliott, Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy

RE: Draft 2023-2024 Lower East Coast Water Supply Plan Update: Specific editing recommendations and detailed technical comments on the Executive Summary and Draft Appendix C.

Specific Comments:

Executive Summary

- **Page ES-2, Table ES-1**

Including a 1-in-10 demands column would account for the planning condition of meeting water supply demands in a 1-in-10-year drought.

- **Page ES-2, Last Paragraph**

Consider adding “***for both ecosystem restoration and societal benefits***” after “increase water availability” in the third sentence. This will provide a more comprehensive description of the CERP goals and objectives.

- **Water Source Options, Page ES-5, Paragraph 1**

Consider adding some form of “***at the current level of surface water usage***” in this paragraph.

- **Surface Waters, Page ES-6, Paragraph 1**

Consider adding “***due to prioritization of increased lake releases west and south for environmental purposes downstream of the lake during drier, low stage conditions***” after “MFL prevention strategy at this time” in the fourth sentence.

- **Conclusions, Page ES-9, Second bullet**

“Implementation of CERP Restoration Strategies and other water resource development projects to provide additional storage.”

The term “CERP Restoration Strategies” appears to be a merger of CERP Restoration Projects and the SFWMD Restoration Strategies Projects. If this is the case, we suggest using the terminology in ES- 9 Future Direction Bullet - “*Continue supporting ecosystem restoration efforts, including the Restoration Strategies Regional Water Quality Plan and CERP.*”

- **Conclusions, Page ES-9, Third bullet**

“Implementation of LOSOM and construction of CERP capital projects identified in MFL prevention and recovery strategies.”

Please see General Comments.

Draft Appendix C - MFLs and Prevention and Recovery Strategies

C-10 – C-12 Lake Okeechobee (LO) MFL History

To complete the history of the LO MFL, consider adding a version of all or a sub-set of the timeline information below:

LORS08 was an interim schedule initially expected to be in place for three years to address public health and safety in the nearer term during the rehabilitation of the Herbert Hoover Dike (HHD).

LORS08 has remained the LO regulation schedule for sixteen years.

The next regulation schedule after LORS08 was expected to return the LO MFL to a prevention strategy.

LOSOM, the next LO regulation schedule expected to be adopted in late 2024, does very little to improve the performance of the LO MFL and water supply. This is contrary to the expectation of Final Order 2008-364 Amending Appendix H of the 2005 -2006 Lower East Coast Water Supply Plan, the 2013 LEC WSP Update and the 2018 LEC WSP Update.

Twenty more years and the Central Everglades Planning Project (CEPP) EAA A-2 Reservoir and Stormwater Treatment Area (STA), the Lake Okeechobee Component A Storage Reservoir (LOCAR), and finally, the Lake Okeechobee Watershed Restoration Project (LOWRP) consisting of 55 aquifer storage and recovery (ASR) wells are needed to improve the LO MFL exceedance performance from a LOSOM only 1-in-4.3 yr return frequency to a with projects 1-in-6.4 yr. return frequency. Previous modeling efforts and evaluations dating back to 2000 indicate that an exceedance return frequency of 1-in-8 years is needed to support an LO MFL prevention strategy.

The LO MFL return to a prevention strategy in the next twenty years depends on the disruption of the Atlantic Multidecadal Oscillation (AMO) cycle resulting in future years continuing in a warm phase resulting in more rainfall in the next twenty years compared to the historical record.

An LO MFL prevention strategy could be accomplished in the next one to five years with adjustments to LOSOM low lake stage guidance or adoption of a post-LOSOM 2024 regulation schedule supportive of meeting LO MFL criteria.

Modeling Technical Review

Below is modeling technical review information regarding:

1 - Use of the Prospective, Probabilistic Approach to Determine LO MFL Status

2 - LOSOM and LEC WSP Modeling Concerns

3 - Model Information Access

All figures referenced are from the DRAFT 2023-2024 Lower East Coast Water Supply Plan Update, Appendix C: MFLs and Prevention and Recovery Strategies – DRAFT

1 - Use of the Prospective, Probabilistic Approach to Determine LO MFL Status

The LO MFL may already be close to or in a prevention status condition. The possibility of climatological changes returning the LO MFL to a prevention strategy before the completion of three large, regional storage projects merits further evaluation. The AMO returned to the warm phase around 2000 (Page C-18, Figure C-8. Atlantic Multidecadal Oscillation phases from the mid-1800s to present.). Due to the persistence and historically high extent of the warm AMO phase through 2024, the AMO is now predicted to be disrupted and not likely to return to the cool phase in the next twenty years.

Below are some technical next steps to further engage a prospective approach for the LO MFL evaluation. The current LO MFL modeling has used probabilistic tools in combination with large, regional water storage projects to determine whether the LO MFL is in a recovery or prevention status. The current determination of the LO MFL being in recovery status is mainly based on an historical 52-year Period of Record (POR) that includes AMO cool phase dry climatological conditions predicted to not occur in the next twenty years.

Revisiting the need for a recovery strategy over the next twenty years could be supported by the results of a Lake Okeechobee Regulation Schedule 2008 (LORS08) comparison. The Appendix C DRAFT reports there has been no LO MFL exceedance since 2011, thirteen years and counting. (Page C-11 Figure C-2 Lake Okeechobee MFL exceedances and violations since the inception of the MFL in 2001). Consider a technical exercise using the LORS08 deterministic model simulations regarding the LO MFL exceedances and violations compared to real world data from 2008 – 2024. This comparison exercise can determine how the probabilistic models using historic rainfall for a 1965 – 2016 POR and historic rainfall for a 1995 – 2016 POR are skewed by not including the more recent AMO warm phase rainfall volume and patterns (Page C-19 Figure C-9).

A probabilistic approach weakness could be the high bar needed to achieve a zero probability of a violation event in 20 years. Probability does not account for extreme events that are beyond the planning conditions for MFLs and water supply plans. To my knowledge, there are no probability guidelines for MFL evaluation in the MFL rules.

All future MFL evaluations will benefit by engaging the public through workshops to share possible approaches and receive feedback before determining the modeling process to support the evaluation. The current Draft Appendix C evaluation probabilistic approach, while not novel

in many other forecasting efforts, is relatively new to water supply plans. A robust exchange on the aspects of evaluating an MFL, such as the pros and cons of deterministic and probabilistic approaches or the appropriate POR, will support a transparent process and greater technical understanding of the MFL evaluation outcomes.

2 - LOSOM and LEC WSP Modeling Concerns

Additional detailed modeling information will be useful to understand why there are significant differences between the LEC WSP LO MFL evaluation results under LOSOM operations compared to LOSOM (PA22) and LOSOM (PA25). The LOSOM assumptions and operations have been modified for use in the LEC WSP in ways that increase both the occurrence of water supply cutbacks and LO MFL exceedances. One example is LOSOM PA22 simulated 52 water supply cut back months compared to the LEC WSP LOSOM (PA 22) simulating 63 water supply cut back months. Another example is LOSOM PA22 and PA25 simulated 8 LO MFL exceedances compared to the LEC WSP LOSOM simulating 12 LO MFL exceedances. It is counter-intuitive that adding the three large, regional projects to the LEC WSP LOSOM results in a return to the LOSOM PA25 simulation results of 8 LO MFL exceedances.

Because the LEC WSP LO MFL evaluation resulted in more LO water supply cutback months and more LO MFL exceedances when compared to LOSOM (PA25), potential impacts for the LECSAs and Everglades MFLs are a concern. The Regional Simulation Model Basins (RSMBN) was used exclusively for LO MFL evaluation without an evaluation of the LEC WSP region south of the Lake Okeechobee Service Area (LOSA). The Model Documentation Report (MDR) Model Assumptions Notes state that *“The boundary conditions along the eastern and southern boundaries of the RSMBN model were provided from either the South Florida Water Management Model (SFWMM) or the RSM Glades-LECSA Model (RSMGL). The SFWMM was the source of the eastern boundary groundwater/surface water flows, while the RSMGL was the source of the southern boundary structural flows.”* Detailed modeling information on how the downstream boundary conditions from the RSMGL were integrated with the upstream flows from the RSMBN will be useful to understand how the LEC WSP areas south of LOSA are not expected to be impacted by LEC WSP RSMBN water supply and LO MFL performance compared to LOSOM (PA25).

3 – Modeling Information Access

Technical understanding of model results will be expedited if a modeling matrix is made available by the modeling group that documents the changes or differences in baseline model assumptions for major modeling efforts since LOSOM PA25 became the model run for the LOSOM Water Control Plan. The basis for modeling most projects is now RSMBN and RSMGL with LOSOM-like operations over the 1965 – 2016 POR. The LOSOM-like operations can be PA22 (without the C-43 Reservoir) or PA25 (with the C-43 Reservoir). These include the LEC WSP’s LO MFL evaluation, Lake Okeechobee Component A Reservoir (LOCAR), Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER), Central Everglades Planning Project (CEPP) 1.0 and STA A2 Operations. More public access to the model development process and modeling information will benefit understanding and support for project and program planning. Model assumptions, LOSOM-like operations, and the overall

water budget for a variety of projects and water supply purposes are becoming more reliant on an integrated approach to support simulated results across projects that do not conflict with each other.



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 Village of Tequesta
 Village of Wellington
 Indian Trail Improvement District
 Tindall Hammock Irrigation and Soil

August 14, 2024

VIA EMAIL TO ndemonst@sfwmd.gov

Nancy Demonstranti
 LEC Plan Manager
 South Florida Water Management District
 3301 Gun Club Road
 West Palm Beach, Florida 33406

Subject: Southeast Florida Utility Council Comments on Lower East Coast Water Supply Plan Update

Dear Ms. Demonstranti:

I am writing on behalf of the Southeast Florida Utility Council (SEFLUC) regarding the South Florida Water Management District's (SFWMD) draft Lower East Coast (LEC) Water Supply Plan Update. Thank you for the opportunity to submit comments on this document and supporting analysis that is critical to the evaluation of water resources and water supplies in this region.

SEFLUC represents a network of water and wastewater utilities serving over 6 million residents and visitors in Southeast Florida. SEFLUC is deeply committed to ensuring superior-quality water supply and wastewater services, and its members are committed to providing safe water and public health protection. SEFLUC and its members have been monitoring the LEC Water Supply Plan Update. We appreciate the hard work that goes into the preparation of the water supply plan update by SFWMD staff, and appreciate the history of coordination between SFWMD and public water supply utilities regarding these important issues.

We are writing based on our concern that the LEC Water Supply Plan Update appropriately evaluate the availability of water for public supply in the region, based on changes that have or are expected to occur during the planning period. The most significant concern is with the evaluation of the potential impacts of the US Army Corps of Engineers (Corps) new Lake Okeechobee Systems Operations Manual (LOSOM) on water supply availability. SEFLUC's members directly or indirectly rely on water distributed from Lake Okeechobee under the Corps' operating schedule for their water withdrawals, which occur

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pursuant to water use permits issued by SFWMD. Any unexpected reduction in water supply availability has direct and potentially severe consequences for the public of southeast Florida, either through the increased frequency of water shortages, or the need to identify and develop new regional alternative water supplies whose high costs are ultimately borne by our citizens and customers.

We have recently received the August 7, 2024 comment letter that the Lake Worth Drainage District (LWDD) submitted to SFWMD regarding the LEC Water Supply Plan Update. As LWDD indicates in its letter, many public supply utilities in the LEC, including numerous members of SEFLUC, rely on LWDD and its canal network to provide groundwater recharge that serves public utility water demands. Indeed, many SEFLUC member's water use permit allocations are explicitly conditioned on the maintenance of groundwater levels through LWDD's operations. As a result, impacts to water availability for LWDD's system have significant implications for many public supply utilities in the LEC.

We join in LWDD's concern that the impact of LOSOM on water supply availability for public supply utilities has not been sufficiently evaluated as part of the LEC Water Supply Plan Update, and that the lack of such an evaluation could result in unintended and potentially severe consequences for public supply in the LEC. As SEFLUC has pointed out in its comment letters to the Corps throughout the LOSOM adoption process, the LOSOM schedule replaces the interim LORS 2008 schedule which had the effect of lowering Lake Okeechobee, and therefore regional water availability, while the Corps completed repairs to the Herbert Hoover Dike. The water supply allocations authorized by SFWMD in the water use permits issued to public suppliers are premised on the more abundant regional water availability that existed prior to the initiation of the more restrictive LORS 2008 schedule. As proposed by the Corps, LOSOM does not appear to restore water supply availability to that which existed before LORS 2008 was adopted, and upon which LEC water use permits are based. In addition, there has not been an analysis that quantifies water supply availability under LOSOM to that which existed before LORS 2008. Such an evaluation is critical to evaluating the current availability of water for existing legal users, including SEFLUC members, a required and cornerstone aspect of any regional water supply plan.

As LWDD explains in its letter, though a statistical analysis was performed by SFWMD to assess the effects of LOSOM on the Lake Okeechobee MFL, no similar analysis was performed to evaluate water supply availability to see whether and to what extent water supply availability would be constrained under LOSOM. We join LWDD in requesting that an evaluation of water supply performance of LOSOM be conducted comparing LOSOM to previous Lake schedules, including the schedule that existed prior to LORS 2008.

We also agree that the LEC Water Supply Plan Update should not be finalized until after these requested technical analyses can be completed and taken into consideration in the LEC Regional Water Supply Plan Update.

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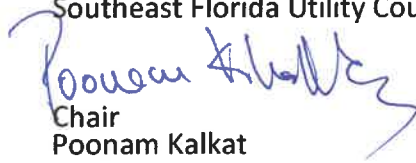
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In conclusion, we thank SFWMD staff for the significant work that has gone into preparation of the LEC Water Supply Plan Update, and for the opportunity to provide these comments and work with SFWMD staff on these important matters.

Sincerely,

Southeast Florida Utility Council



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CC: SEFLUC Members

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