2

Demand Estimates and Projections

This chapter summarizes the water demand estimates and projections for the Upper East Coast (UEC) Planning Area of the South Florida Water Management District (SFWMD or District) for the 2024 base year through 2050. Demand estimates for the base year are developed as a first step when updating water supply plans, using the most recent and best available data. Estimates and projections are presented by water use category and were developed in coordination with various stakeholder groups, including agriculture, utilities, industry, local governments, and other interested groups. A detailed discussion of the data collection and analyses methods is provided in **Appendix A**.

TOPICS

- Water Demand
- Water Use Categories
- Population Estimates and Projections
- Public Supply
- Domestic Self-Supply
- Agriculture
- Commercial/Industrial/Institutional
- Landscape/Recreational
- Power Generation
- Summary of Demand Estimates and Projections
- Demand Projections in Perspective

Water demands in the UEC Planning Area are driven by agricultural irrigation, followed by potable water use provided by utilities. Due to greening disease (huanglongbing), citrus acreage and production continue to decrease. Water demand projections presented for citrus are based on the assumption that the number of active citrus groves will continue to decline through the planning horizon (2050). Acreages of most other crops are also projected to decrease. Starting in early 2020, the COVID-19 pandemic has had significant impacts to the economy, particularly to businesses and tourism. However, residential development has expanded at a robust rate in Martin and St. Lucie counties. The UEC Planning Area population continues to increase, and the average per capita use rate decreased slightly since the *2021 Upper East Coast Water Supply Plan Update* (2021 UEC Plan Update; SFWMD 2021).

WATER DEMAND

Water demands can be described and analyzed in two ways: gross demand and net demand. Gross demand is the volume of water withdrawn or diverted from a groundwater or surface water source. This definition serves as the basis for water allocations established through water use permits issued by the SFWMD. Further information on water use permitting is provided in the *2026–2029 Support Document for Water Supply Plan Updates* (2026–2029 Support Document; SFWMD 2026). Net demand refers to the volume of water delivered to end users after accounting for treatment losses and delivery system inefficiencies. For Public Supply (PS) and Domestic Self-Supply (DSS), demands commonly are referred to as raw and finished demands rather than gross and net demands, respectively. In this *2026 Upper East Coast Water Supply Plan Update* (2026 UEC Plan Update), gross demand is equal to net demand for all water use categories except PS.

This 2026 UEC Plan Update presents demands for average rainfall and 1-in-10-year drought conditions (**Appendix A**). Section 373.709, Florida Statutes (F.S.), states the level-of-certainty planning goal associated with identifying water demands contained in water supply plans shall be based on meeting demands during 1-in-10-year drought conditions. Environmental demands are addressed through resource protection criteria (**Chapter 4**).

INFO

Average Rainfall and 1-in-10-Year Drought

An **average rainfall year** is defined as a year having rainfall with a 50% probability of being exceeded in any other year.

A **1-in-10-year drought** is defined as a year in which below normal rainfall occurs with a 90% probability of being exceeded in any other year. It has an expected return frequency of once in 10 years.

WATER USE CATEGORIES

Water demands for this 2026 UEC Plan Update are estimated in 5-year increments for the following six water use categories established by the Florida Department of Environmental Protection (FDEP) in coordination with the state's water management districts:

- **Public Supply (PS)** – Potable water supplied by water treatment plants with a current allocation of 0.10 million gallons per day (mgd) or greater.
- **Domestic Self-Supply (DSS)** – Potable water used by households served by small utilities (less than 0.10 mgd) or self-supplied by private wells.
- **Agriculture (AG)** – Self-supplied water used for commercial crop irrigation, greenhouses, nurseries, livestock watering, pasture, and aquaculture.
- **Commercial/Industrial/Institutional (CII)** – Self-supplied water associated with the production of goods or provision of services by commercial, industrial, or institutional establishments.

- **Landscape/Recreational Irrigation (L/R)** – Self-supplied and reclaimed water used to irrigate golf courses, sports fields, parks, cemeteries, and common areas, such as land managed by homeowners' associations and commercial developments.
- **Power Generation (PG)** – Self-supplied and reclaimed water used for cooling, processing, and potable water by power generation facilities.

Table 2-1 presents estimated (2024) and projected (2050) average gross water demands, by water use category, in the UEC Planning Area for this water supply plan update. The largest water use category is AG, followed by PS, L/R, PG, DSS, and CII. A small increase in total demand is projected through the planning horizon.

Table 2-1. Estimated (2024) and projected (2050) average gross water demands (in mgd) for the UEC Planning Area by use category.

Water Use Category	2024	2050
Public Supply	68.83	99.83
Domestic Self-Supply	6.23	3.59
Agriculture	156.77	138.52
Commercial/Industrial/Institutional	0.55	0.71
Landscape/Recreational	46.04	56.58
Power Generation	21.11	16.42
UEC Planning Area Total	**299.53**	**315.65**

mgd = million gallons per day; UEC = Upper East Coast.

POPULATION ESTIMATES AND PROJECTIONS

Population estimates and projections for the UEC Planning Area are used to develop demands for all water use categories except PG and AG. Developing population estimates and projections required multiple sources of information, including county-level data from the University of Florida's Bureau of Economic and Business Research (BEBR), pursuant to Section 373.709(2)(a), F.S., data from the 2020 Census (United States Census Bureau 2020), and data from local government Comprehensive Plans. **Appendix A** provides further details on the development of population estimates and projections.

NOTE

All population estimates and projections are for permanent residents, as defined by the United States Census Bureau. However, the per capita use rate, which is used to calculate water demands, reflects use by seasonal residents as well.

In 2024, the total estimated population within the UEC Planning Area was 546,710 permanent residents (**Table 2-2**). BEBR projections indicate the UEC Planning Area population will grow to 742,217 permanent residents in 2050, an increase of approximately 36%. More than two-thirds of the UEC Planning Area population resides in St. Lucie County, while Martin County accounts for nearly one-third, and this trend is expected to continue. As explained in **Appendix A**, BEBR medium projections were used for all counties to develop detailed population projections for PS utilities and county DSS areas (Rayer and Comfort 2025). Only a small population that relies on DSS resides in the northeastern portion of Okeechobee County within the UEC Planning Area.

Table 2-2. Permanent resident population served by PS and DSS in the UEC Planning Area in 2024 and 2050.

County	2024 Population			2050 Population		
	PS	DSS	**Total**	PS	DSS	**Total**
Martin	153,359	12,021	**165,380**	185,386	2,414	**187,800**
Okeechobee[a]	0	557	**557**	0	617	**617**
St. Lucie	336,848	43,925	**380,773**	522,772	31,028	**553,800**
UEC Planning Area Total	**490,207**	**56,503**	**546,710**	**708,158**	**34,059**	**742,217**

DSS = Domestic Self-Supply; PS = Public Supply; UEC = Upper East Coast.
[a] Values listed are only for the area within the UEC Planning Area boundaries.

PUBLIC SUPPLY

PS is the second largest water use category in the UEC Planning Area. The PS category includes potable water supplied by water treatment plants with a current allocation of 0.10 mgd or greater. Developing PS demand projections in the UEC Planning Area was a multistep process that included determining utility service area and DSS populations, calculating per capita use rates (PCURs), and projecting future water needs.

NOTE

Perceived discrepancies in table totals are due to rounding.

Per Capita Use Rates

For each utility, a net (finished) water PCUR was developed using past population and finished water data reported to the FDEP. The PCUR for each utility is a 5-year (2020 through 2024) average, calculated by dividing annual net (finished) water volumes by the corresponding service area populations for each year. For PS demand projections, PCURs were assumed to remain constant through 2050. To calculate projected gross (raw) demands, the treatment efficiency for each utility, based on existing treatment process type(s) and expected changes through 2050, was applied as a finished-to-raw ratio. Any demand reductions due to historical conservation practices are implicitly factored into the projections by using the 5-year average PCUR. Future water conservation savings (**Chapter 3**) were not factored into the demand projections used in this plan update due to water savings uncertainties. Existing (2024) areas served by PS utilities and water treatment plant types and locations are provided in **Appendix A**. Utility profiles containing population and finished water use data and projections as well as permitted allocations are provided in **Appendix B**.

PS Demand Estimates and Projections

Tables 2-3 and **2-4** present PS gross (raw) and net (finished) water demands, respectively, in 5-year increments by county. The results indicate PS gross (raw) water demands will increase 45%, from 68.83 mgd in 2024 to 99.83 mgd in 2050 under average rainfall conditions. Calculation of 1-in-10-year demand is based only on the outdoor portion of PS use, and the methodology is explained in **Appendix A**.

Table 2-3. PS gross (raw) water demands in the UEC Planning Area by county.

County	Gross (Raw) Demand – Average Rainfall Conditions (mgd)								2050 1-in-10-Year Demand
	2020	2024	2025	2030	2035	2040	2045	2050	
Martin	24.38	24.92	24.50	25.94	27.27	28.56	29.66	30.59	35.79
Okeechobee[a]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Lucie	39.91	43.91	45.32	51.62	58.43	64.06	68.32	69.24	75.47
UEC Planning Area Total	**64.29**	**68.83**	**69.82**	**77.56**	**85.70**	**92.62**	**97.98**	**99.83**	**111.26**

mgd = million gallons per day; PS = Public Supply; UEC = Upper East Coast.

[a] Values listed are only for the area within the UEC Planning Area boundaries. No PS utilities are located in the portion of Okeechobee County within the UEC Planning Area.

Table 2-4. PS net (finished) water demands in the UEC Planning Area by county.

County	Net (Finished) Demand – Average Rainfall Conditions (mgd)								2050 1-in-10-Year Demand
	2020	2024	2025	2030	2035	2040	2045	2050	
Martin	20.52	20.97	21.06	22.21	22.87	23.76	24.36	25.01	29.27
Okeechobee[a]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
St. Lucie	31.70	34.85	35.64	40.10	45.28	49.11	52.34	53.03	57.81
UEC Planning Area Total	**52.22**	**55.82**	**56.70**	**62.31**	**68.15**	**72.87**	**76.70**	**78.04**	**87.08**

mgd = million gallons per day; PS = Public Supply; UEC = Upper East Coast.

[a] Values listed are only for the area within the UEC Planning Area boundaries. No PS utilities are located in the portion of Okeechobee County within the UEC Planning Area.

DOMESTIC SELF-SUPPLY

The DSS category includes potable water used by households that are served by small utilities with current 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. All permanent residents outside of PS utility service area boundaries were considered DSS population. Population projection methodology and results are provided in the previous section and further described in **Appendix A**.

Table 2-5 contains the UEC Planning Area's DSS demand estimates and projections under average rainfall conditions for 2020 through 2050 and 1-in-10-year drought conditions demands for 2050. The average gross (raw) demands in 2024 were 6.23 mgd for 56,503 permanent residents (**Table 2-2**). DSS average demands are expected to decrease 42%, to 3.59 mgd for 34,059 residents in 2050. This decrease can be attributed to low anticipated growth in DSS areas and expansion of PS utility service areas over the planning horizon.

Table 2-5. DSS gross (raw) water demands in the UEC Planning Area by county.

County	Gross (Raw) Demand – Average Rainfall Conditions (mgd)								2050 1-in-10-Year Demand
	2020	2024	2025	2030	2035	2040	2045	2050	
Martin	1.53	1.65	1.70	1.23	1.21	0.81	0.60	0.33	0.39
Okeechobee[a]	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.07
St. Lucie	1.79	4.52	5.20	5.02	3.18	2.28	1.51	3.20	3.49
UEC Planning Area Total	**3.38**	**6.23**	**6.96**	**6.31**	**4.45**	**3.15**	**2.17**	**3.59**	**3.95**

DSS = Domestic Self-Supply; mgd = million gallons per day; UEC = Upper East Coast.
[a] Values listed are only for the area within the UEC Planning Area boundaries.

AGRICULTURE

Sugarcane Field

AG is the largest water use category in the UEC Planning Area, accounting for 156.77 mgd (52%) of the region's total estimated water demand in 2024. The AG category includes self-supplied water used for commercial crop irrigation, nurseries, greenhouses, livestock watering, pasture, and aquaculture. Agricultural production in the UEC Planning Area is of regional significance, with 92,065 acres under irrigation in 2024 (**Figure 2-1**).

Agricultural acreage data published by the Florida Department of Agriculture and Consumer Services (FDACS 2025) were used to determine AG water demands for this 2026 UEC Plan Update. Pursuant to Section 373.709(2)(a), F.S., water management districts are required to consider FDACS water demand projections. Any adjustments or deviations from the projections published by FDACS, "…must be fully described, and the original data must be presented along with the adjusted data." A detailed description of the analyses is provided in **Appendix A**.

Agricultural water demand was determined using the Agricultural Field Scale Irrigation Requirements Simulation (AFSIRS) model (Smajstrla 1990). No distinction is made between gross and net water demands. The FDACS irrigated crop acres, soil types, growing seasons, and irrigation methods were used as input data for the AFSIRS model. AG demand estimates and projections are based on the commercially grown crop categories in **Table 2-6**.

Sugarcane and citrus are the predominant irrigated land use in the UEC Planning Area, encompassing 50,076 acres with an average demand of 81.87 mgd in 2024 (**Table 2-6**). Together, these two crop types account for approximately half of the irrigated acreage and demand under average rainfall conditions. Irrigated hay/pasture, fresh market vegetables, and greenhouse/nurseries are the next largest AG categories, with a combined 35,415 acres and 58.70 mgd of irrigation demand in 2024.

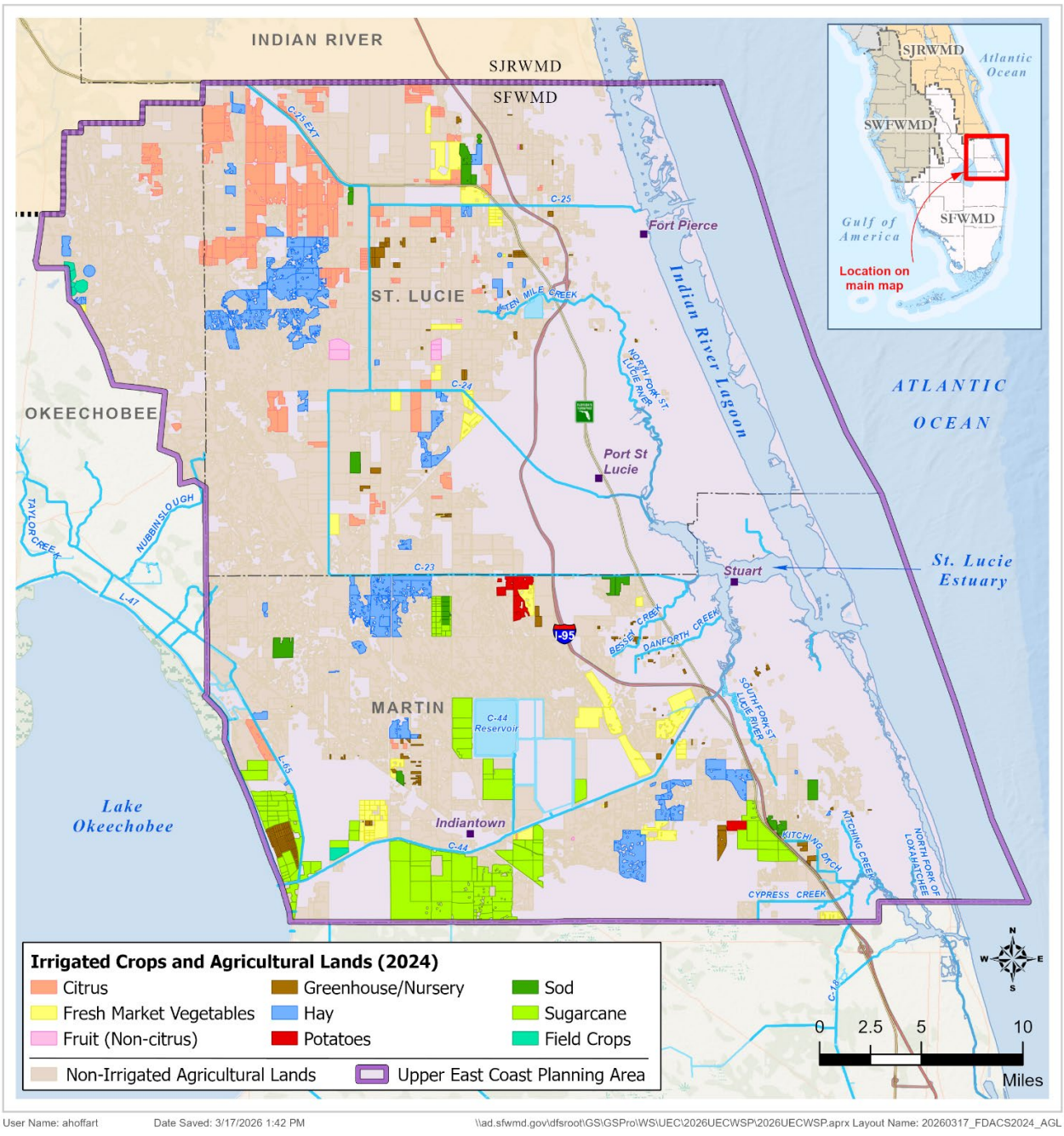

Figure 2-1. Agricultural irrigated land in the UEC Planning Area (Data from FDACS 2025).

Table 2-6. Summary of average and 1-in-10-year water demands (in mgd) for all agricultural acreage, livestock, and aquaculture in the UEC Planning Area.

Crop	2024			2050		
	Acres	Average Demand	1-in-10-Year Demand	Acres	Average Demand	1-in-10-Year Demand
Sugarcane	26,152	54.35	63.12	22,716	47.60	55.72
Citrus	23,924	27.52	34.71	23,422	26.76	34.09
Hay/Pasture	19,780	28.97	33.65	18,938	27.62	32.07
Fresh Market Vegetables	11,446	19.26	22.73	9,811	16.28	19.18
Greenhouse/Nursery	4,189	10.47	11.56	3,488	8.58	9.50
Sod	3,388	6.38	7.60	2,827	5.67	6.98
Potatoes	1,398	3.93	4.57	272	0.77	0.89
Fruit (excluding citrus)	945	1.93	2.22	618	1.28	1.48
Field Crops	843	2.06	2.37	843	2.06	2.37
Livestock	N/A	1.82	1.82	N/A	1.82	1.82
Aquaculture	N/A	0.08	0.08	N/A	0.08	0.08
UEC Planning Area Total	**92,065**	**156.77**	**184.43**	**82,935**	**138.52**	**164.18**

mgd = million gallons per day; UEC = Upper East Coast.

Total irrigated AG acres in the UEC Planning Area are projected to decrease 10% by 2050. Most crops are projected to decrease in acreage over the planning horizon. The largest change in irrigated acreage and demand is expected to occur in the sugarcane industry. By 2050, sugarcane is expected to decrease by 3,436 acres, and average demands are projected to decrease by 6.75 mgd.

INFO

Examples of crop categories used by FDACS include the following:

Fresh Market Vegetables:

- Tomatoes
- Green beans
- Peppers
- Melons

Fruits (excluding citrus):

- Dragon fruit
- Strawberries

Overall, total AG gross water demands under average rainfall conditions in the UEC Planning Area are projected to decrease from 156.77 mgd in 2024 to 138.52 mgd in 2050 (**Table 2-7**). These totals include demands from livestock and aquaculture in addition to the demands from crop irrigation shown in **Table 2-6**. Demands for livestock and aquaculture in the UEC Planning Area are estimated to be 1.82 mgd and 0.08 mgd, respectively, in 2024 and are projected to remain constant over the planning horizon.

Table 2-7. AG gross water demands for all agricultural acreage, livestock, and aquaculture in the UEC Planning Area by county.

County	Gross Demand – Average Rainfall Conditions (mgd)								2050 1-in-10-Year Demand
	2020	2024	2025	2030	2035	2040	2045	2050	
Martin	99.06	98.05	97.80	94.89	92.00	89.82	86.13	83.63	97.34
Okeechobee[a]	4.24	4.24	4.24	4.16	4.16	4.16	4.16	4.16	4.77
St. Lucie	54.48	54.48	54.29	53.54	53.02	51.93	51.35	50.73	62.07
UEC Planning Area Total	**157.78**	**156.77**	**156.33**	**152.59**	**149.18**	**145.91**	**141.64**	**138.52**	**164.18**

AG = Agriculture; mgd = million gallons per day; UEC = Upper East Coast.

[a] Values listed are only for the area within the UEC Planning Area boundaries.

COMMERCIAL/INDUSTRIAL/INSTITUTIONAL

The CII water use category includes water demands at commercial, industrial, and institutional facilities. CII demands only include self-supplied users and do not include users that receive water from PS utilities; those users are included in the PS category. CII projections assume demands for average rainfall and 1-in-10-year drought conditions are the same and withdrawal demand is equal to user demand. Therefore, no distinction is made between gross and net water demands. Growth within the CII category is expected to be driven by regional population growth. Estimated CII demands for 2024 were 0.55 mgd, with minimal projected growth resulting in demands of 0.71 mgd in 2050 (**Table 2-8**).

Table 2-8. CII gross water demands in the UEC Planning Area by county.

County	Gross Demand – Average Rainfall Conditions (mgd)							
	2020	2024	2025	2030	2035	2040	2045	2050
Martin	0.36	0.24	0.24	0.25	0.26	0.27	0.27	0.28
Okeechobee[a]	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05
St. Lucie	0.29	0.27	0.28	0.32	0.34	0.36	0.38	0.38
UEC Planning Area Total	**0.69**	**0.55**	**0.56**	**0.61**	**0.64**	**0.67**	**0.70**	**0.71**

CII = Commercial/Industrial/Institutional; mgd = million gallons per day; UEC = Upper East Coast.
[a] Values listed are only for the area within the UEC Planning Area boundaries.

LANDSCAPE/RECREATIONAL

L/R is the third largest water use category in the UEC Planning Area, encompassing irrigation of golf courses and other landscaped areas, such as parks, sports fields, and homeowners' association common areas. L/R demands are met with the use of groundwater, surface water, and reclaimed water. L/R acreages reflect only the acres with water use permits, including systems using reclaimed water as a supplemental or backup supply. Acreages irrigated solely with reclaimed water do not require a water use permit and are not included. For L/R, acreage and demands are disaggregated into landscape and golf irrigation subcategories because they are projected to grow at different rates. Details regarding development of the L/R demands are provided in **Appendix A**.

Within the L/R category in 2024, an estimated 8,749 acres of land were attributed to landscape irrigation. These landscaped areas are expected to grow at the same rate as the local population through 2050. In 2024, there were 44 golf courses irrigating 5,304 acres under water use permits in the UEC Planning Area (SFWMD 2025). Following the development of three proposed golf courses in Martin County and two in St. Lucie County, golf course acreage and demands are projected to remain stable through 2050. Under average rainfall conditions, total estimated L/R gross water demands are projected to increase from 46.04 mgd in 2024 to 56.58 mgd in 2050 (**Table 2-9**).

Table 2-9. L/R gross water demands (in mgd) in the UEC Planning Area.

Land Use	Gross Demand – Average Rainfall Conditions (mgd)								2050 1-in-10-Year Demand
	2020	2024	2025	2030	2035	2040	2045	2050	
Martin County									
Landscape	8.43	12.13	12.13	12.61	12.98	13.27	13.49	13.69	17.25
Golf	8.57	11.60	11.60	12.06	12.06	12.06	12.06	12.06	15.68
Martin County Total	**17.00**	**23.73**	**23.73**	**24.67**	**25.04**	**25.33**	**25.55**	**25.75**	**32.93**
Okeechobee County[a]									
Landscape	0.09	0.12	0.12	0.12	0.13	0.13	0.13	0.13	0.17
Golf	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Okeechobee County Total	**0.09**	**0.12**	**0.12**	**0.12**	**0.13**	**0.13**	**0.13**	**0.13**	**0.17**
St. Lucie County									
Landscape	12.61	16.91	17.56	19.46	21.05	22.39	23.55	23.71	29.87
Golf	5.16	5.28	5.28	6.99	6.99	6.99	6.99	6.99	9.09
St. Lucie County Total	**17.77**	**22.19**	**22.84**	**26.45**	**28.04**	**29.38**	**30.54**	**30.70**	**38.96**
UEC Planning Area Total									
Landscape	**21.13**	**29.16**	**29.81**	**32.20**	**34.16**	**35.79**	**37.18**	**37.53**	**47.29**
Golf	**13.73**	**16.88**	**16.88**	**19.05**	**19.05**	**19.05**	**19.05**	**19.05**	**24.77**
UEC Planning Area Total	**34.86**	**46.04**	**46.69**	**51.25**	**53.21**	**54.84**	**56.23**	**56.58**	**72.06**

L/R = Landscape Recreational; mgd = million gallons per day; UEC = Upper East Coast.
[a] Values listed are only for the area within the UEC Planning Area boundaries.

POWER GENERATION

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 two power generation facilities operating in the UEC Planning Area that are addressed in this plan update: Florida Power & Light (FPL) Martin Plant near Indiantown (Martin County) and the Treasure Coast Energy Center in Fort Pierce (St. Lucie County).

Also operating in the UEC Planning Area is the FPL St. Lucie Nuclear Plant on Hutchinson Island. However, the facility uses potable water (permitted separately) and seawater (which does not require a water use permit) for cooling; therefore, the facility is not addressed in this water supply plan update. The Indiantown Cogeneration Plant in Martin County was demolished in 2023.

The FPL Okeechobee Clean Energy Center, located in Okeechobee County, is within the St. Johns River Water Management District, approximately 6 miles outside the UEC Planning Area. Because the facility is beyond the planning area and SFWMD boundary, its demands are not included in this 2026 UEC Plan Update. However, the facility's demands were simulated in the groundwater modeling analysis because the influence of the withdrawals extends into the UEC Planning Area. The facility is estimated to need an average of 9.00 mgd (11.00 mgd peak) of water from the Floridan aquifer system for operation.

The need for additional power is expected to increase as the population in the UEC Planning Area and other portions of South Florida grows. The area's major power supplier, FPL, expects that much of the region's future power generation capacity will use fresh or alternative (brackish or reclaimed) water sources for cooling.

The FPL Martin Plant uses cooling pond and tower technology that varies by unit and substantially decreases overall water supply demands at the facility because the cooling pond is the intake and release point. The Mainland Water Reclamation Facility is currently under construction and is anticipated to be supplying the Treasure Coast Energy Center with reclaimed water in 2027. PG demands are expected to remain relatively stable from 2024 to 2050 (**Table 2-10**). More information on the development of PG estimates and projections is provided in **Appendix A**.

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

Facilities	Gross Demand (mgd)[a]							
	2020	2024	2025	2030	2035	2040	2045	2050
FPL – Martin Plant	11.81	19.61	16.01	16.01	16.01	16.01	16.01	16.01
Treasure Coast Energy Center	1.50	1.50	1.50	0.41	0.41	0.41	0.41	0.41
UEC Planning Area Total	**13.31**	**21.11**	**17.51**	**16.42**	**16.42**	**16.42**	**16.42**	**16.42**

FPL = Florida Power & Light; mgd = million gallons per day; PG = Power Generation; UEC = Upper East Coast.

[a] Includes groundwater from the surficial and Floridan aquifer systems, reclaimed water, and surface water; does not include harvested rainwater, seawater, or surface water returned to the source.

SUMMARY OF DEMAND ESTIMATES AND PROJECTIONS

Total gross water demands under average rainfall conditions in the UEC Planning Area are projected to be 315.65 mgd by 2050, a 5% increase from 2024 demands (299.53 mgd). Demands under 1-in-10-year drought conditions are approximately 17% higher than those for average rainfall conditions.

Table 2-11 provides 5-year incremental summaries of gross demands for all water use categories under average rainfall and 1-in-10-year drought conditions. Gross demands under average rainfall conditions are used to demonstrate projected trends, including the following key highlights:

- PS and DSS gross demands combined are expected to increase 38%, from 75.06 mgd in 2024 to 103.42 mgd in 2050. PS will remain the second largest water use category in the UEC Planning Area.
- AG gross demands are projected to decrease from 156.77 mgd in 2024 to 138.52 mgd in 2050. AG will remain the largest water use category in the UEC Planning Area.
- CII gross demands are projected to increase 0.16 mgd over the planning period. The projected demand growth is related to regional population growth.
- L/R gross demands are projected to increase by 10.54 mgd by 2050. L/R will remain the third largest water use category in the UEC Planning Area.
- PG gross demands are projected to remain relatively constant, with 16.42 mgd expected in 2050.

Table 2-11. Summary of gross water demands under average rainfall and 1-in-10-year drought conditions in the UEC Planning Area by water use category.

Water Use Category	2020	2024	2025	2030	2035	2040	2045	2050
Demand – Average Rainfall Conditions (mgd)								
PS	64.29	68.83	69.82	77.56	85.70	92.62	97.98	99.83
DSS	3.38	6.23	6.96	6.31	4.45	3.15	2.17	3.59
AG	157.78	156.77	156.33	152.59	149.18	145.91	141.64	138.52
CII	0.69	0.55	0.56	0.61	0.64	0.67	0.70	0.71
L/R	34.86	46.04	46.69	51.24	53.21	54.84	56.22	56.58
PG	13.31	21.11	17.51	16.42	16.42	16.42	16.42	16.42
UEC Planning Area Total	**274.31**	**299.53**	**297.87**	**304.73**	**309.60**	**313.61**	**315.13**	**315.65**
Demand – 1-in-10-Year Drought Conditions (mgd)								
PS	72.00	77.03	78.07	86.63	95.61	103.27	109.18	111.26
DSS	3.81	6.93	7.73	6.98	4.96	3.51	2.42	3.95
AG	185.56	184.43	183.89	179.60	175.59	172.40	167.41	164.18
CII	0.69	0.55	0.56	0.61	0.64	0.67	0.70	0.71
L/R	44.47	58.68	59.50	65.33	67.81	69.86	71.61	72.06
PG	13.31	21.11	17.51	16.42	16.42	16.42	16.42	16.42
UEC Planning Area Total	**319.84**	**348.73**	**347.26**	**355.57**	**361.03**	**366.13**	**367.74**	**368.58**

AG = Agriculture; CII = Commercial/Industrial/Institutional; DSS = Domestic Self-Supply; L/R =Landscape/Recreational; mgd = million gallons per day; PG = Power Generation; PS = Public Supply; UEC = Upper East Coast.

DEMAND PROJECTIONS IN PERSPECTIVE

Demand projections presented in this 2026 UEC Plan Update are based on the best available information. **Table 2-12** shows the 2045 average gross demands projected in 2021 UEC Plan Update (SFWMD 2021) compared to the 2050 demands projected in this 2026 UEC Plan Update. The projection for 2050 in this 2026 UEC Plan Update is 12% higher than the estimated 2045 demands projected in the 2021 UEC Plan Update (SFWMD 2021). The projections reflect trends, economic circumstances, and industry intentions that will change over time. Like any predictive tool based on past assumptions, there is uncertainty and a margin for error. The differences, beyond increases in demands due to population growth from 2045 to 2050, can be primarily attributed to the following:

- BEBR population projections used to develop PS and L/R demands for this plan update are higher for the total planning area than the projections in the 2021 UEC Plan Update.
- Agriculture acreage data published by FDACS used to develop AG demands for this plan update are higher than projected in the 2021 UEC Plan Update, including increases in irrigated acres for citrus, sugarcane, fresh vegetables, and hay/pasture.
- Projected water needs for PG in 2050 are less than in the 2021 UEC Plan Update for 2045 because the construction of additional fossil fuel and/or nuclear generation plants is no longer anticipated.

Table 2-12. Comparison of gross water demands under average rainfall conditions at the end of the respective planning horizons in the 2021 UEC Plan Update and this 2026 UEC Plan Update.

Water Use Category	2021 UEC Plan Update 2045 Demand (mgd)	2026 UEC Plan Update 2050 Demand (mgd)	Percent Difference
Public Supply	81.62	99.83	22%
Domestic Self-Supply[a]	5.61	3.59	-36%
Agriculture	130.10	138.52	6%
Commercial/Industrial/Institutional	5.74	0.71	-88%
Landscape/Recreational	40.64	56.58	39%
Power Generation	17.47	16.42	-6%
UEC Planning Area Total	**281.18**	**315.65**	**12%**

mgd = million gallons per day; UEC = Upper East Coast.

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