

Regional Water Supply Plan

Public Involvement Schedule

Components	Time Frame
Briefings/Presentations	Ongoing
 Live Webinar Recorded & Distributed (Polk)	Aug. 29, 2013 1:30 p.m.
Public Status Update Workshop Winter Park Civic Center (Orange)	Sept. 26, 2013 4–7 p.m.
Technical Methods Workshop Osceola Heritage Park (Osceola)	Nov. 7, 2013 10 a.m.–noon
Draft RWSP Available for Review Public Comment Period (45 Days)	Nov. 26, 2013 Nov. 26, 2013 – Jan. 10, 2014
Draft RWSP Workshop Clermont Community Center (Lake)	Dec. 12, 2013 4–7 p.m.
Draft RWSP to WMD Governing Boards SJR: Dec. 10; SF: Dec. 12; SWF: Dec. 17	Dec. 2013
Final RWSP to WMD Governing Boards	April/May 2014

CFWI Timeline

Ongoing



Technical Teams:

- Data Monitoring & Investigations
- Environmental Measures
- Groundwater Availability
- Hydrologic Analysis
- MFLs & Reservations
- Regional Water Supply Plan

Nov. 30, 2013

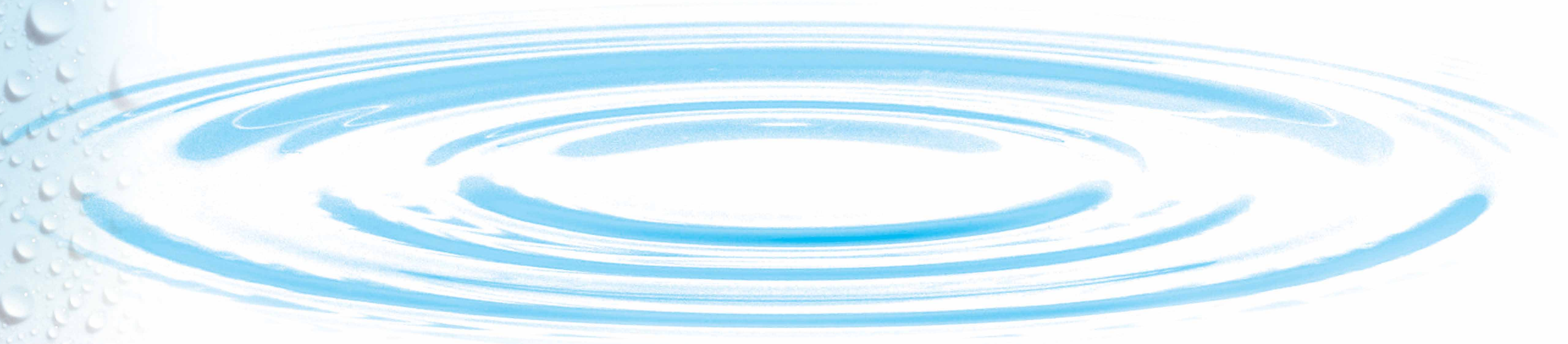
Technical Work:

- Findings & Conclusions
- Draft Regional Water Supply Plan

Dec. 31, 2014

Solutions Work:

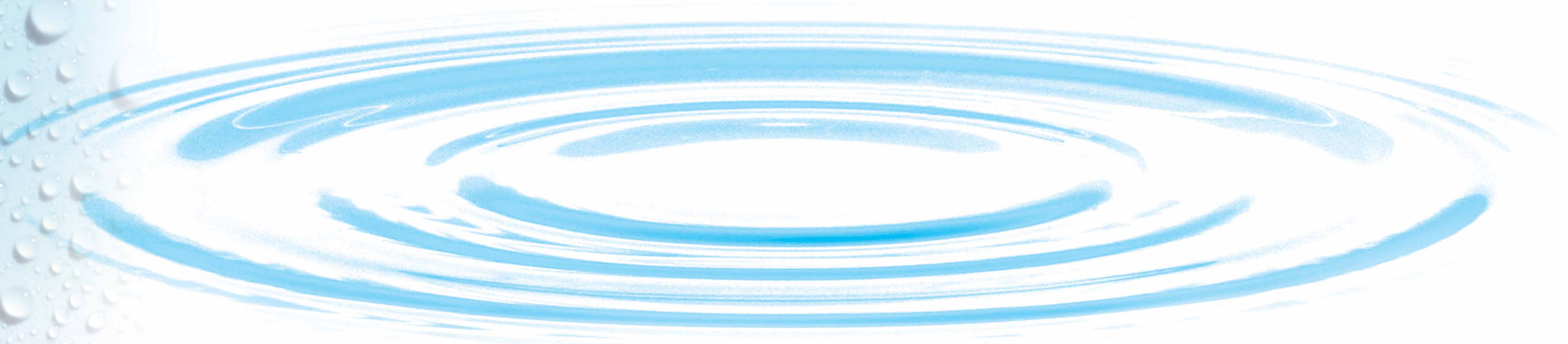
- Projects
- Regulatory
- Financing
- Monitoring



Guiding Principles

(simplified)

1. Identify **groundwater** resources
2. Develop **strategies** to meet water demands
 - Optimize existing groundwater (withdrawn and recharge)
 - Identifying viable demand management activities
 - Identifying alternative water supplies
 - Identifying any areas that may require recovery
 - Identify areas where consistency in rules may be needed
3. Establish **consistent rules**



Central Florida Water Initiative

CFWI Total Population Projections

County / City	Population Projections						2010–2035 Change	2010–2035 Percent Change
	2010	2015	2020	2025	2030	2035		
City of Cocoa	173,445	183,644	194,956	205,230	215,019	224,781	51,336	30%
Lake	143,715	165,864	189,511	214,325	239,722	262,394	118,679	83%
Orange	1,145,956	1,252,000	1,377,600	1,498,600	1,612,600	1,717,700	571,744	50%
Osceola	268,685	310,400	357,800	404,000	448,000	489,000	220,315	82%
Polk	602,095	654,600	713,900	772,300	828,500	881,700	279,605	46%
Seminole	422,718	445,300	472,200	498,200	522,300	544,000	121,282	29%
Total	2,756,614	3,011,808	3,305,967	3,592,655	3,866,141	4,119,575	1,362,961	49%

CFWI Public Supply Population Projections

County / City	Population Projections						2010–2035 Change	2010–2035 Percent Change
	2010	2015	2020	2025	2030	2035		
City of Cocoa	173,445	183,644	194,956	205,230	215,019	224,781	51,336	30%
Lake	130,229	149,914	171,722	193,880	216,532	237,314	107,085	82%
Orange	1,127,098	1,235,208	1,362,603	1,485,046	1,600,443	1,707,286	580,188	51%
Osceola	202,198	253,108	303,718	354,661	405,938	453,751	251,553	124%
Polk	547,344	592,082	644,124	695,952	744,727	789,760	242,416	44%
Seminole	410,787	432,451	457,116	473,558	485,070	493,333	82,546	20%
Total	2,591,101	2,846,407	3,134,239	3,408,327	3,667,729	3,906,225	1,315,124	51%

CFWI Domestic Self-Supply Population Projections

County	Population Projections						2010–2035 Change	2010–2035 Percent Change
	2010	2015	2020	2025	2030	2035		
Lake	13,486	15,950	17,789	20,445	23,190	25,080	11,594	86%
Orange	18,858	16,792	14,997	13,554	12,157	10,414	-8,444	-45%
Osceola	66,487	57,292	54,082	49,339	42,062	35,249	-31,238	-47%
Polk	54,751	62,518	69,776	76,348	83,773	91,940	37,189	68%
Seminole	11,931	12,849	15,084	24,642	37,230	50,667	38,736	325%
Total	165,513	165,401	171,728	184,328	198,412	213,350	47,837	29%

Central Florida Water Initiative

CFWI Agricultural Acreage Projections

County	Total Acres Projected						2010–2035 Change	2010–2035 Percent Change
	2010	2015	2020	2025	2030	2035		
Lake	17,275	16,776	16,276	15,776	15,278	14,782	-2,493	-14%
Orange	12,748	10,501	9,218	8,043	7,306	5,895	-6,853	-54%
Osceola	28,393	52,030	52,543	53,176	54,161	54,773	26,380	93%
Polk	88,614	88,142	88,026	87,910	87,794	87,677	-937	-1%
Seminole	4,591	3,950	3,310	2,669	2,029	1,388	-3,203	-70%
Total	151,621	171,399	169,373	167,574	166,568	164,515	12,894	9%

CFWI Agricultural Water Demand Projections

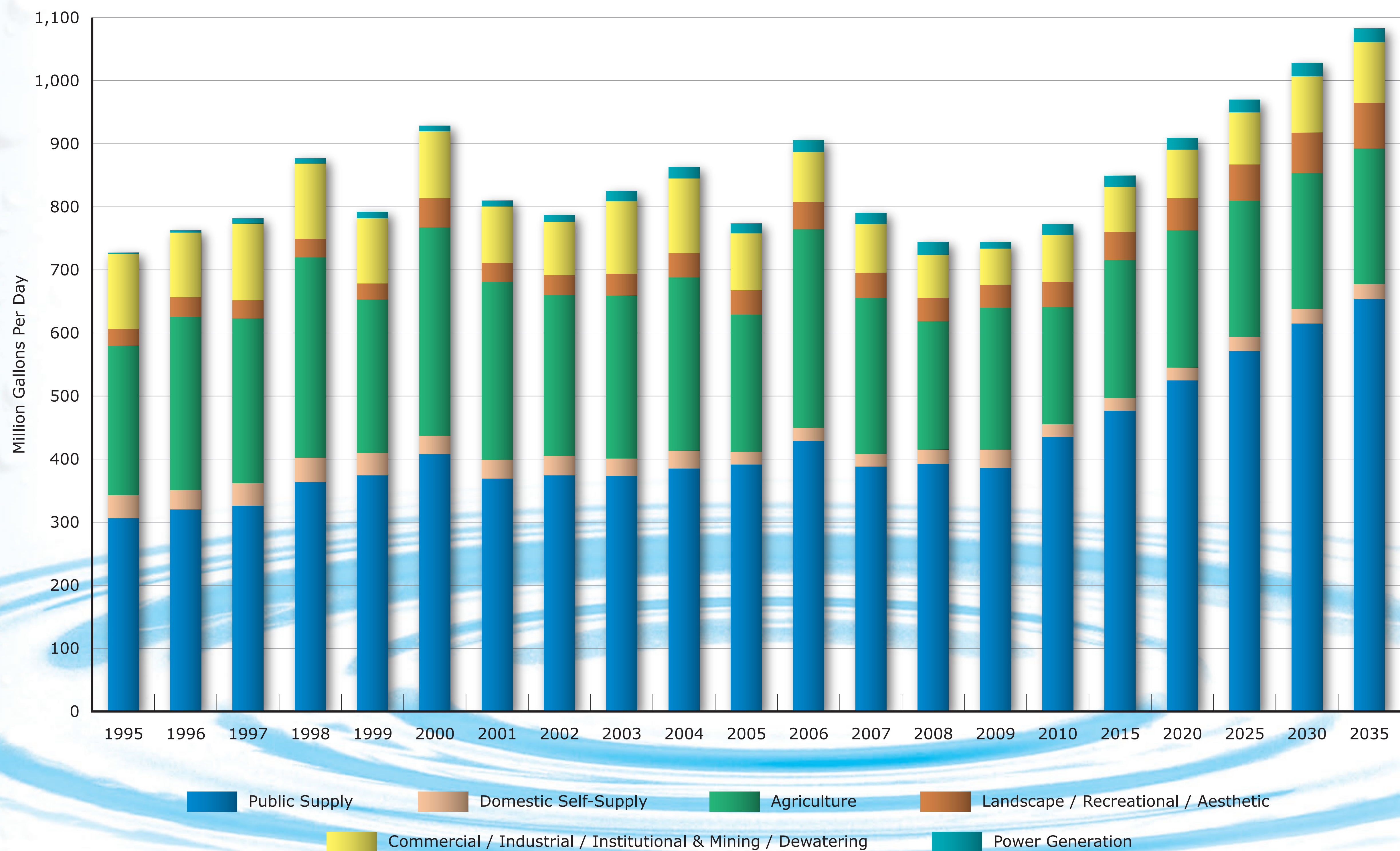
County	Demand Projections						1-in-10 Demand 2035	2010–2035 (5-in-10) Change	2010–2035 (5-in-10) Percent Change
	2010	2015	2020	2025	2030	2035			
Lake	11.17	10.83	10.38	10.04	9.70	9.35	13.62	-1.82	-16%
Orange	17.21	15.44	13.66	11.86	10.09	8.30	13.32	-8.91	-52%
Osceola	53.75	91.03	93.00	95.27	97.87	100.83	160.15	47.08	88%
Polk	95.75	95.14	94.89	94.64	94.38	94.13	130.69	-1.62	-2%
Seminole	7.36	6.34	5.31	4.28	3.26	2.23	3.40	-5.13	-70%
Total	185.24	218.78	217.24	216.09	215.30	214.84	321.18	29.60	16%

Note: Demands are shown in million gallons per day

Central Florida Water Initiative

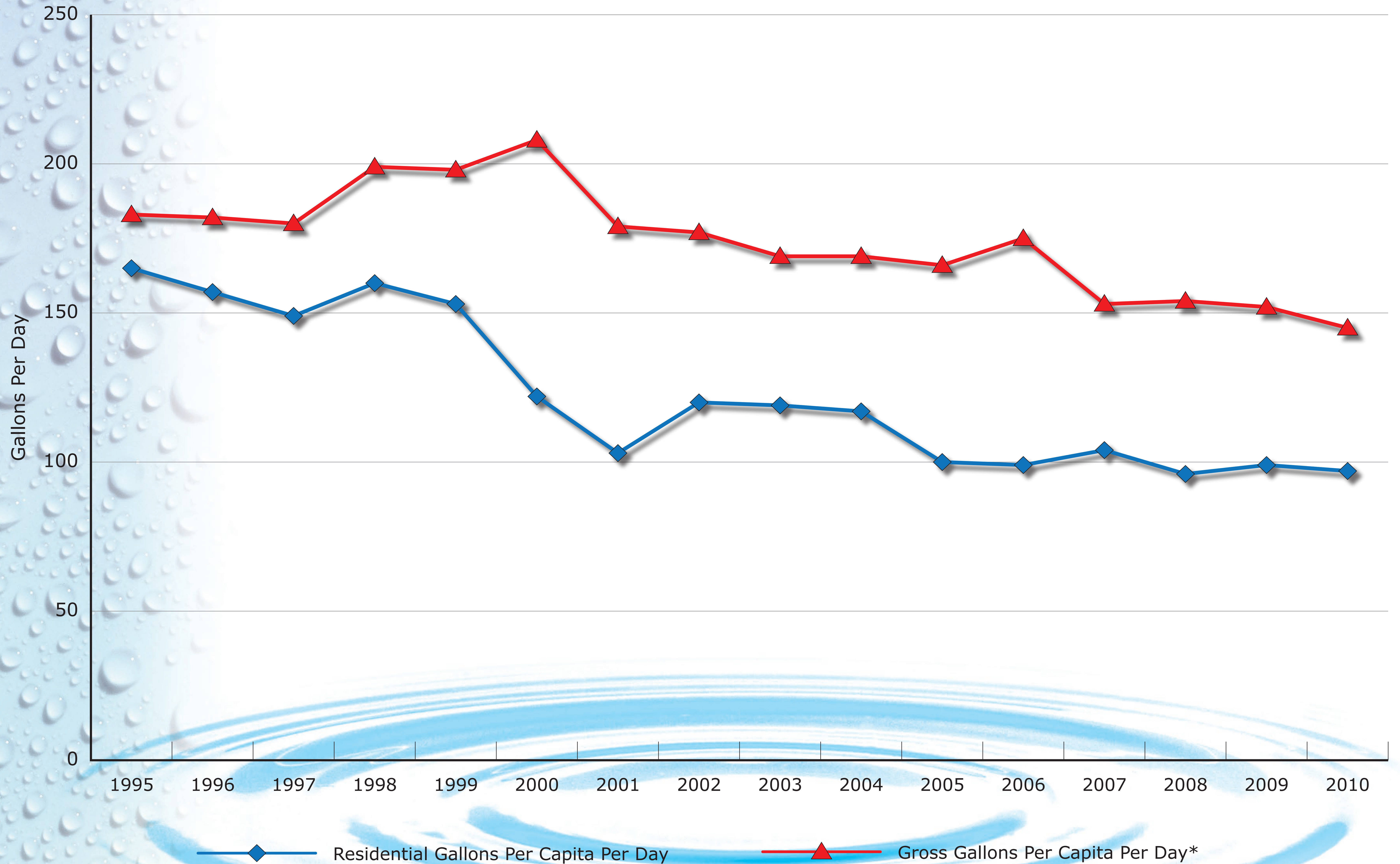
Total Historic and Projected Water Use in the CFWI

Category	Historic Water Use in the CFWI															Projected Demand in the CFWI					
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2015	2020	2025	2030	2035
Public Supply	305.80	319.96	325.85	363.25	373.86	407.33	368.82	373.93	373.21	384.79	391.22	428.99	388.02	392.52	385.58	435.15	476.36	524.56	571.39	614.88	653.27
Domestic Self-Supply	36.74	31.18	35.87	38.73	35.85	29.65	30.05	31.32	27.51	28.46	20.58	20.74	20.32	22.59	29.07	20.36	20.22	20.75	21.92	23.13	24.42
Agriculture	237.17	273.98	261.28	317.74	243.26	330.38	282.14	254.51	258.33	274.71	216.92	314.74	247.31	203.50	224.97	185.24	218.78	217.24	216.09	215.30	214.84
Landscape / Recreational / Aesthetic	26.56	31.60	28.48	29.33	25.38	45.83	29.85	31.92	34.75	38.51	38.82	43.28	39.68	37.01	36.70	40.21	44.78	51.05	57.54	64.31	72.18
Commercial / Industrial / Institutional & Mining / Dewatering	118.86	102.24	121.92	119.35	103.52	106.12	89.78	84.30	114.47	118.42	90.10	78.59	77.16	68.38	57.15	74.05	71.47	76.74	82.82	89.29	95.85
Power Generation	2.34	3.88	8.48	8.45	10.25	9.47	9.38	10.89	17.06	18.02	16.19	19.28	17.98	20.64	10.87	17.20	17.93	18.93	20.00	21.18	22.41
Total Water Use	727.45	762.84	781.88	876.85	792.12	928.78	810.02	786.86	825.32	862.91	773.83	905.62	790.48	744.64	744.34	772.21	849.54	909.27	969.76	1,028.09	1,082.97



Central Florida Water Initiative

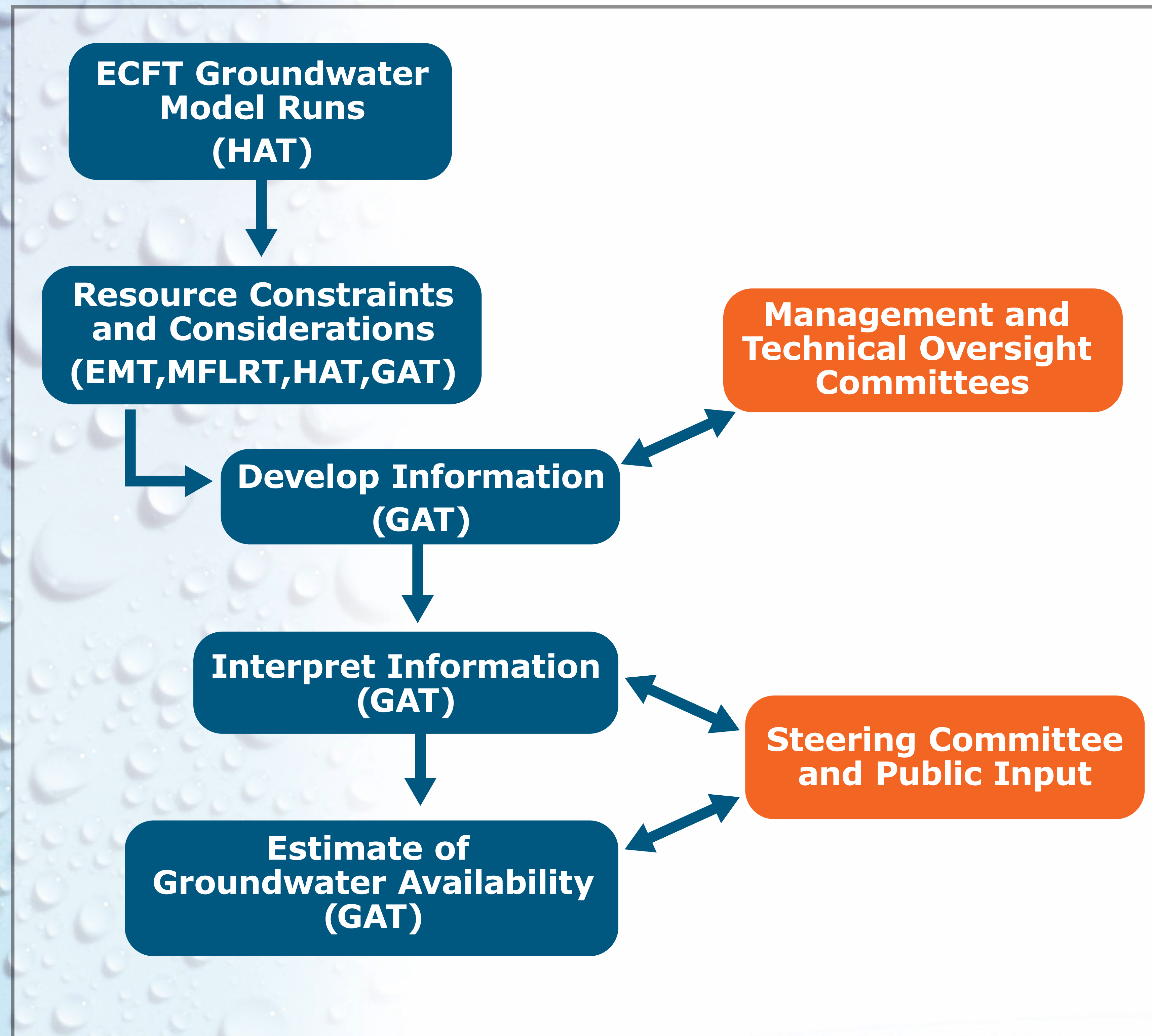
Per Capita Water Use



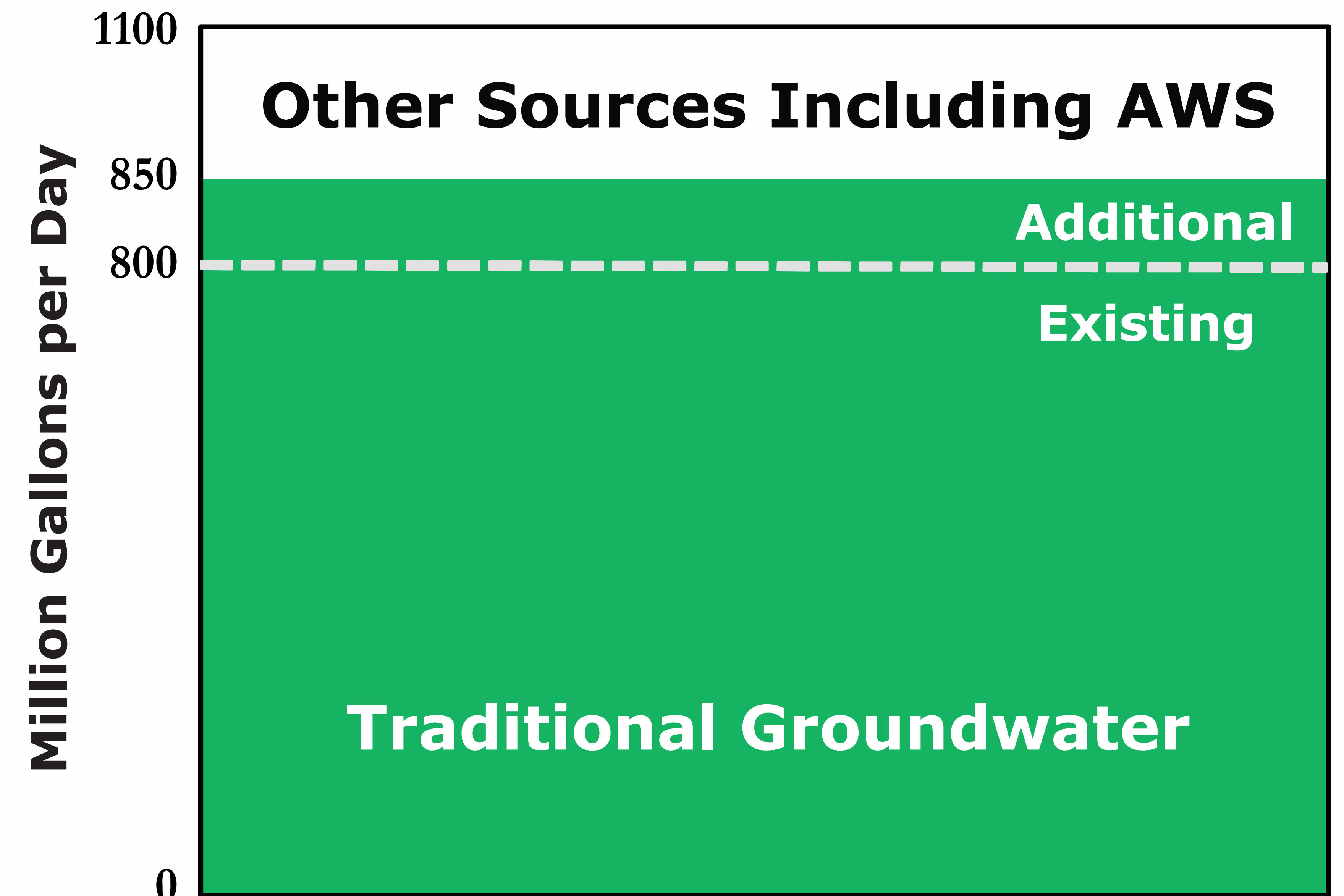
*Gross gallons per capita = Total water use divided by population

Groundwater Availability

GAT Process



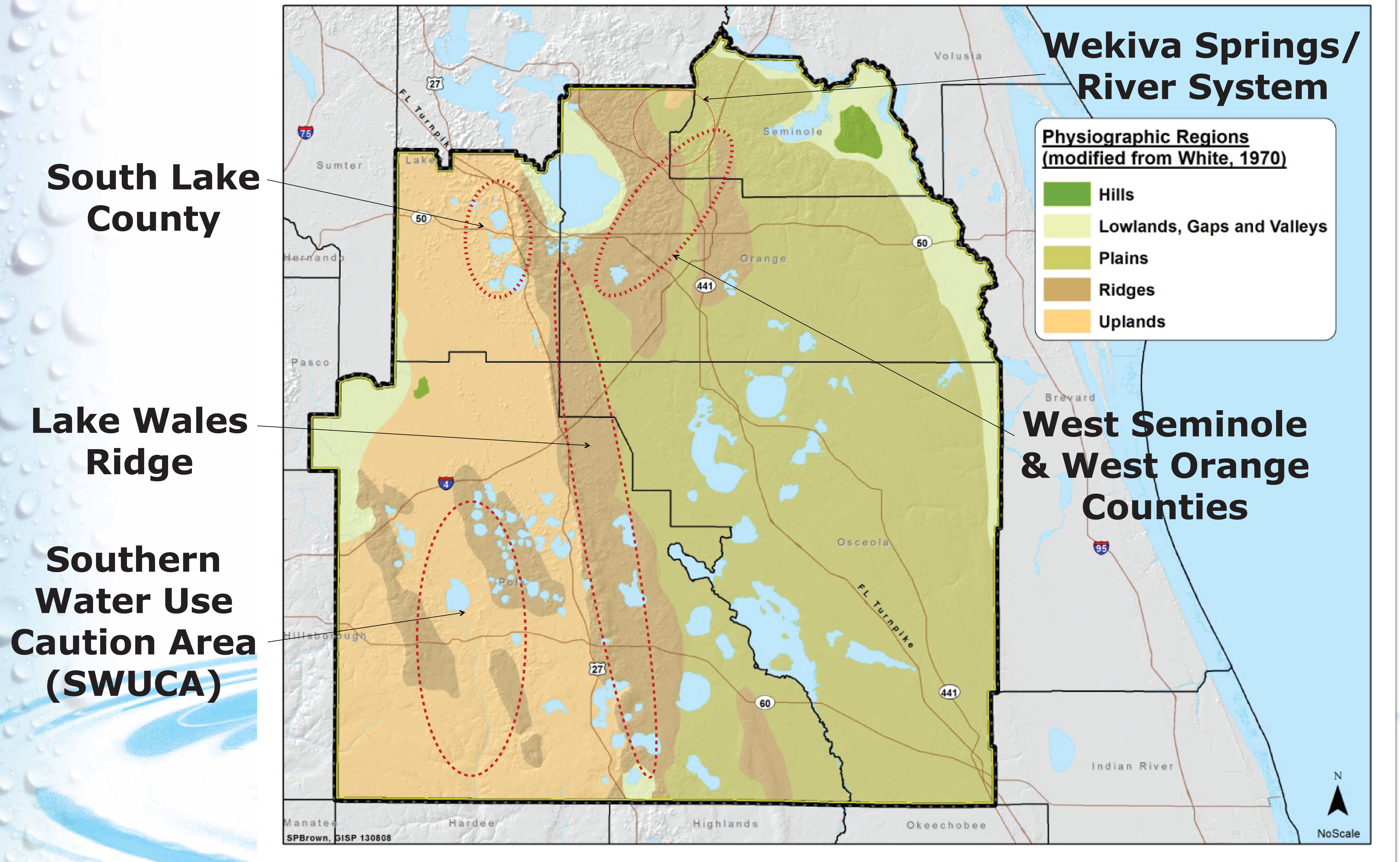
Sources to Meet 2035 Demands



Acronyms Legend

- AWS = Alternative Water Sources
- ECFT = East Central Florida Transient
- EMT = Environmental Measures Team
- GAT = Groundwater Availability Team
- HAT = Hydrologic Analysis Team
- MFLRT = Minimum Flows and Levels and Reservations Team

Primary Areas Susceptible to Groundwater Withdrawals



Central Florida Water Initiative

Agricultural Water Conservation BMP in the CFWI

Irrigation Decision-Making and Management Practices

- Water table observation wells
- Soil moisture sensors
- Weather stations and information
- Irrigation scheduling tools

Irrigation System Maintenance

- Frequent Mobile Irrigation Laboratory (MIL) evaluations for optimum performance
- Manufacturer-recommended repair and maintenance activities
- Record keeping of repair and maintenance activities

For pressurized irrigation systems

- Repair and/or replace leaks and damaged emitters
- Clean and maintain filtration equipment
- Flush irrigation lines to maximize even water distribution

For non-pressurized irrigation systems

- Maintain all ditches and swales, to maximize even water distribution
- Maintain water control structures, to avoid leaks and maximize even water distribution

Special-Case Irrigation Measures

For frost/freeze protection

- Measure wet bulb temperature
- Use tools to know when to shut off irrigation

During drought

- Irrigate at night or during low evaporation periods

Urban Water Conservation Best Management Practices Used In Estimation Of Water Conservation Potential

Plumbing Fixture Retrofits

- Replacement of older, high-volume fixtures with newer, high-efficiency models
- Plumbing fixtures include toilets, showerheads and faucets
- Newer plumbing fixtures use significantly less water than older models

Irrigation System Evaluations

- On-site evaluations of irrigation systems
- Designed to educate urban water users on how to irrigate efficiently
- Provides recommendations on potential efficiency improvements

Irrigation System Controllers

- Designed to override unnecessary scheduled irrigation events
- Rain sensors are typically used, but Smart Irrigation technologies have a greater potential for improving efficiency
- Smart Irrigation technologies include soil moisture sensors, evapotranspiration sensors and weather-based shutoff devices

Commercial/Industrial/Institutional

- Replacements of pre-rinse spray valves, toilets, showerheads, faucets and urinals
- Site-specific water audits for commercial and industrial processes

Central Florida Water Initiative

Water Supply Options

Water Supply Projects Identified

County	Reclaimed Water	Brackish Water	Surface Water	Management Strategies	Total
Orange	52	10	47	0	109
Osceola	28	17	29	0	74
Polk	19	48	15	6	88
Lake (southern)	7	0	5	0	12
Seminole	16	0	92	0	108
Total	122	75	188	6	391

Million gallons per day
Conservation potential = 42 mgd