

TECHNICAL FACT SHEET SJ2005-FS2

**ANNUAL WATER USE DATA
2001**



**St. Johns River Water Management District
2001 Annual Water Use Data**

Latest update: January 13, 2005

Introduction: The following information reports 2001 annual water use data by category for the St. Johns River Water Management District (SJRWMD).

Disclaimer: Water use data is subject to change as updated information becomes available. Changes in methodologies may make year-to-year comparisons inappropriate.

Contact: For additional information, please contact: Lisa Parks, Division of Water Supply Management, (386) 312-2371.

Term	Definition	Data Source/Methodology
mgd	Water use expressed in million gallons per day.	N/A
Freshwater	Water with 1,000mg/L or less of total dissolved solids (TDS). Freshwater may be withdrawn from either ground or surface water sources.	N/A
Saline water	Water with more than 1,000mg/L of TDS. All reported saline water is withdrawn from surface water sources.	N/A
Groundwater	Water from sources located below the earth's surface, such as the Floridan aquifer. Groundwater withdrawals reported here contain 1,000mg/L or less of TDS and are, therefore, considered freshwater.	N/A
Surface water	Water sources located on the earth's surface, like rivers or lakes. Surface water may be withdrawn from either fresh or saline water sources.	N/A
Florida population	The estimated number of permanent residents living within the state of Florida.	University of Florida Bureau of Economic Business and Research, Florida Estimates of Population, April 1, 2001.

Term	Definition	Data Source/Methodology
Water use category	Classifications based on six types of water use: public supply, domestic self-supply, commercial/industrial self-supply, agricultural self-supply, recreational self-supply and thermoelectric power generation self-supply.	N/A
Public supply	Water supplied to homes and industries by privately and publicly owned public water supply utilities. Includes both residential and nonresidential uses by utilities that withdraw more than 0.01 mgd from ground or surface water sources. Estimated to the nearest 0.01 mgd.	Data from public supply utility water use records, extracted from either monthly operating reports submitted to the Florida Department of Environmental Protection, or data submitted to SJRWMD on EN-50 reports.
Domestic self-supply	Water withdrawn from privately owned residential wells.	This water use is not inventoried, so data is estimated from residential population and per capita water use figures. Residential water use for each public supplier is calculated by multiplying the total public supply water use by the percent of the total water use that is allocated to residential use as reported in consumptive use permits. The resulting water use values for each public supplier are then summed to the county level and divided by the county total permanent residential public supply population to obtain the residential per capita value. The per capita value is multiplied by the domestic self-supply population, resulting in the estimated water use for this category. The domestic self-supply population is obtained by subtracting the number of people served by public supply utilities from the total permanent residential population of the county.

Term	Definition	Data Source/Methodology
Commercial/ Industrial self- supply	Commercial and industrial users not served by public supply utilities, which withdraw more than 0.01 mgd. The commercial category includes businesses and institutions such as government facilities, military installations, schools, prisons, and hospitals. The industrial category includes mining, processing, and manufacturing facilities.	Data obtained from Florida Department of Environmental Protection monthly operating reports or SJRWMD survey.
Agricultural Irrigation self- supply	Water withdrawals from ground and surface water sources that are used for supplemental crop irrigation.	Water use for irrigation is assessed by crop, because crops have specific consumptive use requirements. Estimates of varying irrigation necessary for each crop are based on the modified Blaney-Criddle model and Benchmark Farms Program data, supplemented by USDA-SCS and NOAA data.
Recreational Irrigation self- supply	Water withdrawals from ground and surface water sources that are used to irrigate turf grass for golf courses.	Estimates based on actual water use data collected directly from golf course operators.
Thermoelectric power generation self- supply	Water withdrawals from ground and surface water sources that are used by power plants, primarily for cooling.	Estimates based on actual water use data collected directly from thermoelectric power generation plant operators.
Gross public supply water use per capita	The average daily water use for all public supply customers. Expressed in gallons per day (gpd).	For a given county, the average daily public supply water use is divided by the total public supply population.
Residential public supply water use per capita	The average daily water use for each residential public supply customer. Expressed in gallons per day (gpd).	For a given county, the percentage of public supply residential customers is multiplied by the total public supply water use. Residential public supply customer data is provided by public supply utilities as part of consumptive use permitting process.
Domestic self- supply water use per capita	The average daily water use for each person using a domestic self-supply water source. Expressed in gallons per day (gpd).	For a given county, the total average domestic self-supply water use is divided by the total domestic self-supply population.

**St. Johns River Water Management District
2001 Population by County**

County	County Population	Percentage of County Population in SJRWMD	SJRWMD Population	Public Supply Population	Domestic Self-Supply Population
Alachua	222,935	76.9%	171,348	166,279	5,069
Baker	22,562	92.9%	20,971	4,371	16,600
Bradford	26,080	4.7%	1,235	299	936
Brevard	485,178	100.0%	485,178	466,451	18,727
Clay	142,838	100.0%	142,838	104,867	37,971
Duval	793,898	100.0%	793,898	748,748	45,150
Flagler	53,061	100.0%	53,061	48,377	4,684
Indian River	115,716	100.0%	115,716	97,824	17,892
Lake	220,323	99.5%	219,150	182,414	36,736
Marion	264,277	72.6%	191,811	122,113	69,698
Nassau	59,409	100.0%	59,409	26,198	33,211
Okeechobee	36,147	2.0%	738	0	738
Orange	930,034	77.8%	723,491	631,382	92,109
Osceola	179,534	1.0%	1,795	0	1,795
Polk	496,112	2.8%	13,891	6,753	7,138
Putnam	70,820	100.0%	70,820	23,823	46,997
St. Johns	128,604	100.0%	128,604	111,426	17,178
Seminole	377,960	100.0%	377,960	348,973	28,987
Volusia	452,050	100.0%	452,050	425,816	26,234
Total	5,077,538		4,023,964	3,516,114	507,850

2001 total population for the state of Florida: 16,331,739

Percent of total state population that lives within SJRWMD: 25%

2001 Total Water Use by County (mgd)

County	Freshwater			Saline Water	Total
	Ground	Surface	Total		
Alachua	33.39	0.03	33.42	0.00	33.42
Baker	5.60	1.08	6.68	0.00	6.68
Bradford	0.23	0.01	0.24	0.00	0.24
Brevard [†]	93.53	23.70	117.23	0.00	117.23
Clay	27.48	0.73	28.21	0.00	28.21
Duval	143.06	3.04	146.10	0.00	146.10
Flagler	16.38	0.36	16.74	3.58	20.32
Indian River	67.84	123.80	191.64	0.00	191.64
Lake	84.41	7.21	91.62	0.00	91.62
Marion	36.50	2.87	39.37	0.00	39.37
Nassau	47.69	1.21	48.90	1.20	50.10
Okeechobee	11.80	0.00	11.80	0.00	11.80
Orange [‡]	133.93	3.68	137.61	0.00	137.61
Osceola	20.89	15.05	35.94	0.00	35.94
Polk	7.82	0.68	8.50	0.00	8.50
Putnam	26.50	47.70	74.20	0.00	74.20
St. Johns	38.29	3.10	41.39	0.00	41.39
Seminole	68.42	1.26	69.68	0.00	69.68
Volusia	81.91	10.91	92.82	0.00	92.82
Total	945.67	246.42	1,192.09	4.78	1,196.87

[†]Includes 24.77 mgd withdrawn from Orange County for public supply use in Brevard County.

[‡]Does not include 24.77 mgd withdrawn for use in Brevard County. Does not include 49.39 mgd consumed in the South Florida Water Management District.

**St. Johns River Water Management District
2001 Total Water Use by Category (mgd)**

Category	Freshwater			Saline Water	Total All Water Use
	Ground	Surface	Total		
Public supply	517.64	14.08	531.72	0.00	531.72
Domestic self-supply	66.78	0.00	66.78	0.00	66.78
Commercial/industrial self-supply	71.37	27.24	98.61	4.78	103.39
Agricultural irrigation self-supply	261.37	156.15	417.52	0.00	417.52
Recreational irrigation self-supply	19.68	25.39	45.07	0.00	45.07
Thermoelectric power generation self-supply	8.83	23.56	32.39	0.00	32.39
Total	945.67	246.42	1,192.09	4.78	1,196.87

**St. Johns River Water Management District
2001 Public Supply and Domestic Self-Supply Water Use (mgd)**

County	Public Supply Population	Public Supply Water Use	Gross Public Supply Water Use Per Capita	Residential Public Supply Water Use Per Capita	Domestic Self-Supply Population	Domestic Self-Supply Water Use
Alachua	166,279	26.53	160	96	5,069	0.49
Baker	4,371	0.82	188	166	16,600	2.76
Bradford ^a	299	0.11	N/A	94	936	0.09
Brevard ^b	466,451	54.14	116	73	18,727	1.36
Clay	104,867	14.29	136	120	37,971	4.57
Duval	748,748	111.86	149	133	45,150	6.01
Flagler	48,377	6.17	128	87	4,684	0.41
Indian River	97,824	14.60	149	92	17,892	1.65
Lake	182,414	39.67	217	137	36,736	5.02
Marion	122,113	19.21	157	100	69,698	6.93
Nassau	26,198	6.47	247	246	33,211	8.17
Okeechobee ^a	0	0.00	N/A	125	738	0.09
Orange ^c	631,382	109.90	174	130	92,109	12.01
Osceola ^a	0	0.00	N/A	125	1,795	0.22
Polk ^a	6,753	0.56	N/A	125	7,138	0.89
Putnam	23,823	3.04	128	148	46,997	6.94
St. Johns	111,426	13.63	122	116	17,178	1.99
Seminole	348,973	57.28	164	128	28,987	3.70
Volusia	425,816	53.44	126	133	26,234	3.48
Total	3,516,114	531.72	151	125	507,850	66.78
				District average		

Water use data reported in million gallons per day (mgd).

Water use per capita data reported in gallons per day (gpd).

^aGross public supply water use per capita calculation not used if less than 5% of county population is within the District. For these counties, the districtwide average replaced the residential public supply water use per capita calculation.

^bIncludes 24.77 mgd withdrawn in Orange County.

^cDoes not include 24.77 mgd withdrawn in Orange County for use in Brevard County.

**St. Johns River Water Management District
2001 Commercial/Industrial Self-Supply Water Use**

County	Freshwater			Saline Water	Total
	Ground	Surface	Total		
Alachua	1.92	0.00	1.92	0.00	1.92
Baker	0.17	0.00	0.17	0.00	0.17
Bradford	0.01	0.00	0.01	0.00	0.01
Brevard	1.28	0.01	1.29	0.00	1.29
Clay	4.00	0.00	4.00	0.00	4.00
Duval	13.75	0.25	14.00	0.00	14.00
Flagler	0.16	0.07	0.23	3.58	3.81
Indian River	0.15	0.00	0.15	0.00	0.15
Lake	8.62	0.00	8.62	0.00	8.62
Marion	1.52	0.00	1.52	0.00	1.52
Nassau	31.33	0.00	31.33	1.20	32.53
Okeechobee	0.08	0.00	0.08	0.00	0.08
Orange	2.58	0.00	2.58	0.00	2.58
Osceola	0.00	0.00	0.00	0.00	0.00
Polk	0.02	0.00	0.02	0.00	0.02
Putnam	5.25	26.91	32.16	0.00	32.16
St. Johns	0.01	0.00	0.01	0.00	0.01
Seminole	0.07	0.00	0.07	0.00	0.07
Volusia	0.45	0.00	0.45	0.00	0.45
Total	71.37	27.24	98.61	4.78	103.39

**St. Johns River Water Management District
2001 Agricultural Irrigation Self-Supply Water Use (mgd)**

County	Freshwater			Acreage	
	Ground	Surface	Total	Farmed	Irrigated
Alachua	3.84	0.03	3.87	30,547	3,193
Baker	1.76	1.08	2.84	1,245	1,133
Bradford	0.02	0.01	0.03	13	13
Brevard	49.63	6.93	56.56	185,658	75,269
Clay	4.16	0.00	4.16	40,479	2,677
Duval	2.78	0.23	3.01	21,011	1,351
Flagler	9.58	0.00	9.58	33,854	6,100
Indian River	49.05	118.26	167.31	138,929	80,529
Lake	25.96	4.37	30.33	147,778	23,731
Marion	7.64	0.94	8.58	107,179	7,170
Nassau	0.17	0.00	0.17	148	92
Okeechobee	11.63	0.00	11.63	7,199	7,199
Orange	6.33	2.08	8.41	6,002	5,821
Osceola	20.67	15.05	35.72	353,864	18,491
Polk	6.31	0.68	6.99	4,134	4,134
Putnam	10.20	2.90	13.10	9,825	8,788
St. Johns	22.22	0.00	22.22	56,069	21,658
Seminole	6.33	0.03	6.36	87,652	2,935
Volusia	23.09	3.56	26.65	79,768	12,099
Total	261.37	156.15	417.52	1,311,354	282,383

**St. Johns River Water Management District
2001 Recreational irrigation Self-Supply Water Use (mgd)**

County	Freshwater			Acreage	
	Ground	Surface	Total	Total	Irrigated
Alachua	0.44	0.00	0.44	1,376	1,122
Baker	0.09	0.00	0.09	127	61
Bradford*	0.00	0.00	0.00	69	55
Brevard	0.85	2.68	3.53	4,381	3,614
Clay	0.46	0.73	1.19	943	590
Duval	2.43	2.56	4.99	3,822	1,908
Flagler	0.06	0.29	0.35	1,290	1,290
Indian River	2.39	5.54	7.93	3,145	2,469
Lake	5.14	2.84	7.98	3,507	1,799
Marion	1.20	1.93	3.13	1,861	706
Nassau	1.55	1.21	2.76	1,028	906
Okeechobee	0.00	0.00	0.00	0	0
Orange	2.37	1.60	3.97	3,525	2,397
Osceola	0.00	0.00	0.00	0	0
Polk	0.04	0.00	0.04	60	35
Putnam	0.25	0.01	0.26	398	316
St. Johns	0.44	3.10	3.54	2,733	2,323
Seminole	1.04	1.23	2.27	3,011	1,847
Volusia	0.93	1.67	2.60	4,463	2,920
Total	19.68	25.39	45.07	35,739	24,358

**St. Johns River Water Management District
2001 Thermoelectric Power Generation Self-Supply Water Use (mgd)**

County	Freshwater			Saline Water	Total
	Ground	Surface	Total		
Alachua	0.17	0.00	0.17	0.00	0.17
Baker	0.00	0.00	0.00	0.00	0.00
Bradford	0.00	0.00	0.00	0.00	0.00
Brevard	0.35	0.00	0.35	0.00	0.35
Clay	0.00	0.00	0.00	0.00	0.00
Duval	6.23	0.00	6.23	0.00	6.23
Flagler	0.00	0.00	0.00	0.00	0.00
Indian River	0.00	0.00	0.00	0.00	0.00
Lake	0.00	0.00	0.00	0.00	0.00
Marion	0.00	0.00	0.00	0.00	0.00
Nassau	0.00	0.00	0.00	0.00	0.00
Okeechobee	0.00	0.00	0.00	0.00	0.00
Orange	0.74	0.00	0.74	0.00	0.74
Osceola	0.00	0.00	0.00	0.00	0.00
Polk	0.00	0.00	0.00	0.00	0.00
Putnam	0.82	17.88	18.70	0.00	18.70
St. Johns	0.00	0.00	0.00	0.00	0.00
Seminole	0.00	0.00	0.00	0.00	0.00
Volusia	0.52	5.68	6.20	0.00	6.20
Total	8.83	23.56	32.39	0.00	32.39

Water returned to source is non-consumptive use and therefore not reported.

**St. Johns River Water Management District
Crops Included in Estimates of Water Use for Agricultural Irrigation Self-Supply**

Vegetable Crops	Fruit Crops	Field Crops	Ornamentals and Grasses
Cabbage	Blueberries	Cotton	Ferns
Carrots	Citrus	Field corn	Ornamentals (field grown)
Cucumbers	Grapes	Peanuts	Ornamentals (container grown)
Peppers	Peaches	Rice	Improved pasture
Potatoes	Pecans	Sorghum	Sod
Tomatoes	Strawberries	Soybeans	
Sweet corn	Watermelons	Tobacco	
Misc. vegetables	Misc. fruits and nuts	Wheat	
		Misc. field crops	