

**TECHNICAL FACT SHEET SJ2005-FS4**

**ANNUAL WATER USE DATA  
2003**



**St. Johns River Water Management District  
2003 Annual Water Use Data**

**Latest update:** January 11, 2006 (revision of July 2005 report)

**Introduction:** The following information reports 2003 water use 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 Penni Hauck, Division of Water Supply Management, 386-329-4873.

<b>Term</b>	<b>Definition</b>	<b>Data Source/Methodology</b>
mgd	Million gallons per day. All water use is expressed in million gallons per (mgd) day unless otherwise noted.	N/A
Freshwater	Water with 1,000 mg/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 Freshwater may be withdrawn from either ground or surface water sources.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 1,000 mg/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 All reported saline water is withdrawn from surface water sources.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 1,000 mg/L or less of TDS and are, therefore, considered freshwater.	N/A
Surface water	Water from sources such as rivers or lakes, located on the earth's surface.. Surface water may be either fresh or saline.	N/A
Reuse/reclaimed water	Treated wastewater distributed for nonpotable uses such as residential and recreational irrigation.	Reclaimed water use data obtained directly from wastewater treatment facility operators and reclaimed water users by EN-50 reports and surveys.
Florida population	The estimated number of permanent residents living within the state of Florida.	University of Florida Bureau of Economic Business and Research, <i>Florida Estimates of Population</i> , April 1, 2003.
Water use category	Classifications based on the following six types of water use: public supply, domestic self-supply, agricultural self-supply, recreational self-supply and thermoelectric power generation self-supply.	N/A

Term	Definition	Data Source/Methodology
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.	Water use data obtained from District hydrologic conditions and EN-50 reports and from Florida Department of Environmental Protection (FDEP) monthly operating reports (MORs).
Domestic self-supply	Water withdrawn from privately owned residential wells.	Water use is not inventoried. Data is estimated from residential population and per capita water use. 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 total county, 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.
Commercial/ industrial/ institutional self-supply	Commercial, industrial and institutional users not served by public supply utilities that withdraw more than 0.01 mgd. This category includes businesses, government facilities, military installations, schools, prisons, hospitals and industrial users, such as mining, processing and manufacturing facilities.	Water use data obtained from District EN-50 reports and surveys and from FDEP MORs.

Term	Definition	Data Source/Methodology
Agricultural irrigation self-supply	Water withdrawals from ground and surface water sources that are used for supplemental crop irrigation.	Irrigational water use is assessed by crop due to specific consumption requirements. Corresponding estimates are based on the modified Blaney-Criddle model and Benchmark Farms Program data that is supplemented by USDA-SCS and NOAA data. Crop type and acreage data are provided through a survey of county agricultural extension agents
Recreational irrigation self-supply	Water withdrawals from ground and surface water sources that are used for recreational water uses, such as golf course irrigation.	Water use data obtained from District EN-50 reports and surveys.
Thermoelectric power generation self-supply	Water withdrawals from ground and surface water sources that are used by power plants. This does not include water used for one-through cooling, which is considered nonconsumptive.	Water use data obtained from District EN-50 reports and surveys.

Table 1

**St. Johns River Water Management District  
2003 Population by County**

County	County Population	Percentage of County Population in SJRWMD	SJRWMD Population	Public Supply Population	Domestic Self-Supply Population
Alachua	231,296	76.8%	177,635	170,667	6,968
Baker	23,383	92.9%	21,723	4,491	17,232
Bradford	26,972	4.7%	1,268	309	959
Brevard	507,810	100.0%	507,810	487,308	20,502
Clay	156,011	100.0%	156,011	113,027	42,984
Duval	826,279	100.0%	826,279	774,083	52,196
Flagler	61,541	100.0%	61,541	55,780	5,761
Indian River	121,174	100.0%	121,174	102,879	18,295
Lake	240,716	99.5%	239,512	196,978	42,534
Marion	281,966	72.5%	204,425	129,247	75,178
Nassau	63,062	100.0%	63,062	28,252	34,810
Okeechobee	37,236	2.0%	745	0	745
Orange	983,165	77.5%	761,953	665,529	96,424
Osceola	210,438	1.0%	2,104	0	2,104
Putnam	71,971	100.0%	71,971	24,192	47,779
St. Johns	139,849	100.0%	139,849	122,637	17,212
Seminole	394,900	100.0%	394,900	365,286	29,614
Volusia	470,770	100.0%	470,770	444,679	26,091
<b>Total</b>	<b>4,848,539</b>		<b>4,222,732</b>	<b>3,685,344</b>	<b>537,388</b>

State of Florida total population, 2003: 17,071,508

Percent of state of Florida population living within SJRWMD: 25%

Percent of SJRWMD population served by public supply: 87%

Table 2

**St. Johns River Water Management District  
2003 Total Water Use by County in million gallons per day (mgd)**

County	Freshwater			Saline Water	Reuse	All Uses
	Ground	Surface	Total	Surface	Total	Total
Alachua	35.02	0.21	35.23	0.00	4.09	39.32
Baker	8.74	2.69	11.43	0.00	0.00	11.43
Bradford	2.99	0.02	3.01	0.00	0.00	3.01
Brevard	112.48	40.54	153.02	0.00	2.82	155.84
Clay	28.14	0.28	28.42	0.00	0.38	28.80
Duval	146.48	6.13	152.61	0.00	0.69	153.30
Flagler	15.79	0.14	15.93	6.93	2.23	25.09
Indian River	79.27	120.04	199.31	0.00	2.55	201.86
Lake	77.92	38.74	116.66	0.00	4.03	120.69
Marion	39.48	1.91	41.39	0.00	0.80	42.19
Nassau	47.86	2.39	50.25	1.15	0.20	51.60
Okeechobee	4.82	0.00	4.82	0.00	0.00	4.82
Orange	140.96	5.53	146.49	0.00	1.34	147.83
Osceola	20.57	29.91	50.48	0.00	0.00	50.48
Putnam	24.49	44.80	69.29	0.00	0.00	69.29
St. Johns	25.08	3.24	28.32	0.00	1.51	29.83
Seminole	77.58	1.14	78.72	0.00	1.25	79.97
Volusia	86.72	14.63	101.35	0.00	8.31	109.66
<b>Total</b>	<b>974.39</b>	<b>312.34</b>	<b>1,286.73</b>	<b>8.08</b>	<b>30.20</b>	<b>1,325.01</b>

Table 3

**St. Johns River Water Management District  
2003 Total Water Use by Category in mgd**

Category	Freshwater			Saline Water Surface	Reuse Total	All Uses Total
	Ground	Surface	Total			
Public supply	536.58	26.84	563.42	0.00	7.65	571.07
Domestic self-supply	70.57	0.00	70.57	0.00	0.00	70.57
Commercial/industrial self-supply	81.90	62.97	144.87	8.08	3.78	156.73
Agricultural irrigation self-supply	253.63	171.99	425.62	0.00	0.00	425.62
Recreational irrigation self-supply	29.07	27.86	56.93	0.00	18.74	75.67
Thermoelectric power generation self-supply	2.64	22.68	25.32	0.00	0.03	25.35
<b>Total</b>	<b>974.39</b>	<b>312.34</b>	<b>1,286.73</b>	<b>8.08</b>	<b>30.20</b>	<b>1,325.01</b>

Table 4

**St. Johns River Water Management District  
2003 Public Supply and Domestic Self-Supply Water Use in mgd**

County	Public Supply Freshwater			Domestic Self-Supply Freshwater (All Ground)
	Ground	Surface	Total	Total
Alachua	27.04	0.00	27.04	0.67
Baker	0.82	0.00	0.82	2.86
Bradford	0.35	0.00	0.35	0.12
Brevard	43.42	18.36	61.78	1.50
Clay	15.93	0.00	15.93	5.16
Duval	112.52	0.00	112.52	6.94
Flagler	7.27	0.14	7.41	0.50
Indian River	18.70	3.79	22.49	1.68
Lake	41.54	3.38	44.92	5.83
Marion	20.32	0.08	20.40	7.52
Nassau	6.11	0.00	6.11	8.56
Okeechobee	0.00	0.00	0.00	0.09
Orange	115.98	0.04	116.02	12.54
Osceola	0.00	0.00	0.00	0.27
Putnam	3.41	0.00	3.41	7.07
St. Johns	15.29	0.35	15.64	2.00
Seminole	53.21	0.11	53.32	3.79
Volusia	54.67	0.59	55.26	3.47
<b>Total</b>	<b>536.58</b>	<b>26.84</b>	<b>563.42</b>	<b>70.57</b>



Table 5

**St. Johns River Water Management District**  
**2003 Commercial/Industrial/Institutional Self-Supply Water Use in mgd**

County	Freshwater			Saline Water	Reuse	All Uses
	Ground	Surface	Total	Surface	Total	Total
Alachua	0.60	0.00	0.60	0.00	3.34	3.94
Baker	0.60	0.00	0.60	0.00	0.00	0.60
Bradford	1.21	0.00	1.21	0.00	0.00	1.21
Brevard	3.74	6.27	10.01	0.00	0.20	10.21
Clay	2.77	0.00	2.77	0.00	0.00	2.77
Duval	19.53	2.07	21.60	0.00	0.00	21.60
Flagler	0.14	0.00	0.14	6.93	0.00	7.07
Indian River	1.75	0.00	1.75	0.00	0.00	1.75
Lake	9.89	26.08	35.97	0.00	0.00	35.97
Marion	2.82	0.00	2.82	0.00	0.00	2.82
Nassau	29.98	0.01	29.99	1.15	0.00	31.14
Okeechobee	0.05	0.00	0.05	0.00	0.00	0.05
Orange	2.71	2.55	5.26	0.00	0.05	5.31
Osceola	0.00	0.00	0.00	0.00	0.00	0.00
Putnam	4.09	25.32	29.41	0.00	0.00	29.41
St. Johns	0.79	0.63	1.42	0.00	0.00	1.42
Seminole	0.51	0.03	0.54	0.00	0.00	0.54
Volusia	0.72	0.01	0.73	0.00	0.19	0.92
<b>Total</b>	<b>81.90</b>	<b>62.97</b>	<b>144.87</b>	<b>8.08</b>	<b>3.78</b>	<b>156.73</b>

Table 6

**St. Johns River Water Management District  
2003 Agricultural Irrigation Self-Supply Water Use in mgd**

County	Freshwater			Acreage	
	Ground	Surface	Total	Farmed	Irrigated
Alachua	6.01	0.03	6.04	35,109	5,091
Baker	4.39	2.69	7.08	1,414	1,252
Bradford	0.10	0.02	0.12	156	156
Brevard	61.32	12.54	73.86	119,509	29,509
Clay	3.57	0.00	3.57	40,479	2,227
Duval	3.00	0.21	3.21	21,127	1,467
Flagler	7.68	0.00	7.68	32,399	4,645
Indian River	54.95	109.87	164.82	138,529	79,312
Lake	16.39	4.47	20.86	148,698	21,833
Marion	4.44	0.11	4.55	6,511	6,483
Nassau	0.16	0.00	0.16	142	106
Okeechobee	4.68	0.00	4.68	7,199	2,799
Orange	6.72	2.19	8.91	7,057	7,057
Osceola	20.30	29.91	50.21	144,727	6,438
Putnam	9.32	5.27	14.59	9,073	8,119
St. Johns	6.16	0.03	6.19	25,539	25,339
Seminole	18.86	0.00	18.86	7,307	3,046
Volusia	25.58	4.65	30.23	79,220	11,551
<b>Total</b>	<b>253.63</b>	<b>171.99</b>	<b>425.62</b>	<b>824,195</b>	<b>216,430</b>

Table 7

**St. Johns River Water Management District  
2003 Recreational irrigation Self-Supply Water Use in mgd**

County	Freshwater			Reuse Total	All Uses Total
	Ground	Surface	Total		
Alachua	0.49	0.18	0.67	0.75	1.42
Baker	0.07	0.00	0.07	0.00	0.07
Bradford	1.21	0.00	1.21	0.00	1.21
Brevard	2.19	3.37	5.56	2.36	7.92
Clay	0.71	0.28	0.99	0.38	1.37
Duval	3.94	3.85	7.79	0.69	8.48
Flagler	0.20	0.00	0.20	0.88	1.08
Indian River	2.19	6.38	8.57	2.02	10.59
Lake	4.27	4.81	9.08	1.63	10.71
Marion	4.38	1.72	6.10	0.72	6.82
Nassau	3.05	2.38	5.43	0.20	5.63
Okeechobee	0.00	0.00	0.00	0.00	0.00
Orange	2.19	0.75	2.94	1.26	4.20
Osceola	0.00	0.00	0.00	0.00	0.00
Putnam	0.34	0.07	0.41	0.00	0.41
St. Johns	0.84	2.23	3.07	1.51	4.58
Seminole	1.21	1.00	2.21	1.25	3.46
Volusia	1.79	0.84	2.63	5.09	7.72
<b>Total</b>	<b>29.07</b>	<b>27.86</b>	<b>56.93</b>	<b>18.74</b>	<b>75.67</b>

Table 8

**St. Johns River Water Management District  
2003 Thermoelectric Power Generation Self-Supply Water Use in mgd**

County	Freshwater			Reuse Total	All Uses Total
	Ground	Surface	Total		
Alachua	0.21	0.00	0.21	0.00	0.21
Baker	0.00	0.00	0.00	0.00	0.00
Bradford	0.00	0.00	0.00	0.00	0.00
Brevard	0.31	0.00	0.31	0.03	0.34
Clay	0.00	0.00	0.00	0.00	0.00
Duval	0.55	0.00	0.55	0.00	0.55
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	0.82	0.00	0.82	0.00	0.82
Osceola	0.00	0.00	0.00	0.00	0.00
Putnam	0.26	14.14	14.40	0.00	14.40
St. Johns	0.00	0.00	0.00	0.00	0.00
Seminole	0.00	0.00	0.00	0.00	0.00
Volusia	0.49	8.54	9.03	0.00	9.03
<b>Total</b>	<b>2.64</b>	<b>22.68</b>	<b>25.32</b>	<b>0.03</b>	<b>25.35</b>

Water returned to source is nonconsumptive use and, therefore, not reported

Table 9

**St. Johns River Water Management District  
2003 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	