

# **2017 Estimated Water Use**

*in the*

**Northwest Florida Water Management District**

# **SUMMARY REPORT**



**November 2018**

**TRS-19-4**

# Background and Methods

Pursuant to Florida Statutes,<sup>1</sup> quantifying existing legal uses of water or estimating water use is foundational data for Northwest Florida Water Management District (NFWFMD or District) strategic water management plans, water supply assessments, and regional water supply planning; and is needed in groundwater modeling, MFL technical assessments, and consumptive use permitting. Existing water use is the baseline data to develop water demand projections and future reasonable-beneficial water use needs.

As noted in rule (62-40.540(6), F.A.C.), “*The Districts shall implement a strategy for measuring, estimating, and reporting withdrawal and use of water by permitted and exempted users. ... The Districts are encouraged to summarize and analyze water use in the District at least annually.*” Also by rule (62-40.531, F.A.C.), water use estimates and projections are to be provided for the following use classes:

1. Public Supply,
2. Domestic Self-Supply (DSS),
3. Agriculture,
4. Recreational Irrigation,
5. Industrial-Commercial-Institutional (ICI), and
6. Thermoelectric (Power Generation).

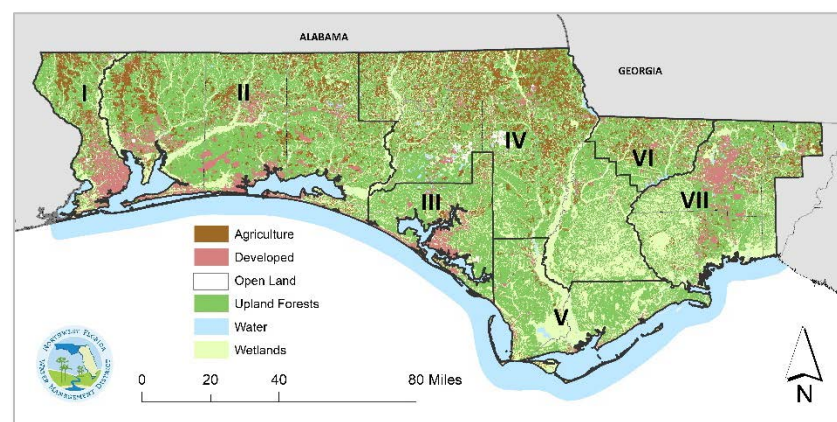
Estimates are based on best available data, and primarily rely on audited reports from permittees with Individual Water Use Permits (IWUPs) that have an average daily rate equal to or greater than 0.1 mgd of water use or of permitted allocation, or that have permit conditions requiring annual water use reporting, for example, due to being within a Water Resource Caution Area or Area of Resource Concern. About 30 percent of IWUPs in NFWFMD are less than 0.1 mgd. Estimates include water withdrawals from six different groundwater aquifer systems and from surface water sources.

<sup>1</sup> Sections 373.036 and 373.709, Florida Statutes (F.S.).

Public supply estimates include water production, water transfers, and water demand; and estimates of populations served and per capita water use rates. Domestic self-supply (DSS) is estimated with population and per capita rates. Agriculture estimates are a combination of reported use and the Florida Department of Agriculture and Consumer Services (DACS) Florida Statewide Agricultural Irrigation Demand (FSAID) estimates. Recreational irrigation estimates are also a combination of reported pumpage and additional estimating methods. Industrial-commercial-institutional (ICI) and power generation water use is estimated from reported pumpage and adjusted for recirculation. Power and ICI water that is withdrawn for cooling purposes and returned to the source is not, for planning or estimating purposes, considered consumptive use.

Public supply reported pumpage and other supporting data include, by default, seasonal water use. Seasonal residents include migrant workers and are estimated to affect both public supply and DSS water use in all sixteen counties. Therefore, population estimates for public supply, county, and DSS include seasonal resident adjustments.

This report summarizes the District’s reported and estimated water use in calendar year 2017. An overview of District land use and water supply planning regions (I – VII) are illustrated in Figure 1, below.



**Figure 1. Land Use Overview and Planning Regions**

# 2017 Water Use Summary

As illustrated on the previous page in Figure 1, the District's sixteen counties are organized into seven water supply planning regions:

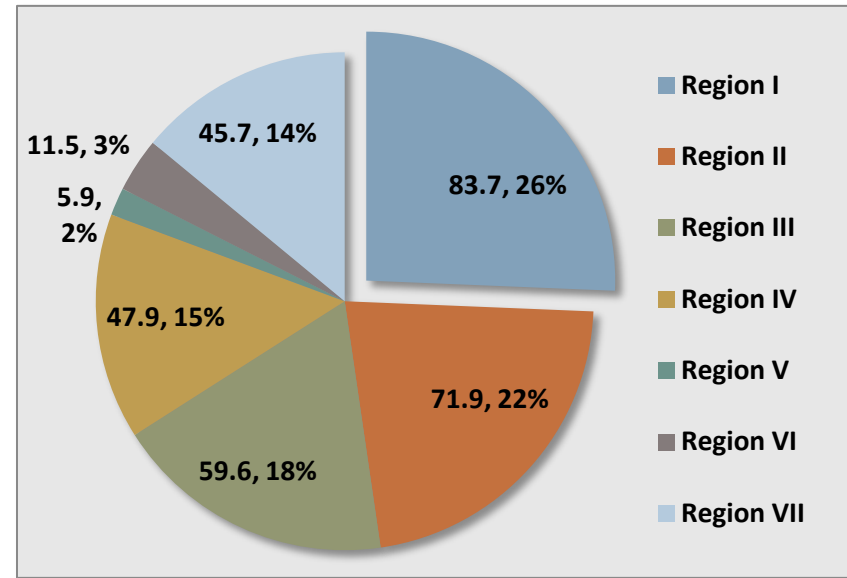
- I. Escambia County
- II. Santa Rosa, Okaloosa, and Walton counties
- III. Bay County
- IV. Washington, Holmes, Jackson, Calhoun, and Liberty counties
- V. Gulf and Franklin counties
- VI. Gadsden County
- VII. Leon, Wakulla, and (NWF portion of) Jefferson counties

District water use in 2017 totaled about 326 mgd and is summarized by region and by water use category in Table 1 and Figure 2.

Escambia County, Region I, is estimated to have used over one-fourth of all District water in 2017 (about 84 mgd). Rapidly growing Region II follows with 72 mgd or 22 percent. Bay County, Region III, was third largest in water use, and regions IV and VII are closely tied for fourth.

Public supply is concentrated in urbanized and developed regions I, II, III, and VII. Region IV, predominately rural and agricultural, had 35 percent of all DSS and over two-thirds of all agricultural water use. Region II had over half of all recreational water use. Industrial-

commercial-institutional (ICI) water use appears to be heavily weighted in regions I and III, however, this is self-supply only and does not reflect water distributed to ICI users from public supply utilities. Fifty-five percent of power water use was in Region I.



**Figure 2. Estimated Water Use 2017 by Planning Region**

Public supply has consistently been the largest water use category in NWFWMMD since 1995. In 2017, public supply was close to half of all water use Districtwide, followed by 19 percent in ICI. Agriculture is the third largest water use category. Recreation, DSS and power are each around six percent of total water use (Figure 3, next page).

**Table 1. NWFWMMD 2017 Estimated Water Use**

Planning Region	1. Public Supply	2. Domestic Self-Supply	3. Agriculture	4. Recreation	5. ICI	6. Power Generation	TOTAL WATER USE (mgd)
Region I	35.951	0.997	3.196	2.405	30.026	11.078	<b>83.653</b>
Region II	49.534	3.160	2.783	11.734	4.666	0.000	<b>71.878</b>
Region III	26.806	1.697	0.648	2.493	23.629	4.340	<b>59.614</b>
Region IV	5.665	7.759	29.643	0.895	2.039	1.917	<b>47.916</b>
Region V	3.785	0.814	0.471	0.369	0.422	0.000	<b>5.862</b>
Region VI	4.029	1.661	5.123	0.142	0.545	0.000	<b>11.501</b>
Region VII	32.947	4.161	1.602	2.994	1.120	2.871	<b>45.695</b>
<b>TOTALS</b>	<b>158.717</b>	<b>20.249</b>	<b>43.466</b>	<b>21.032</b>	<b>62.448</b>	<b>20.206</b>	<b>326.118</b>

More detailed water use data is in the Appendix. Contents of the appendix are available [here](#). Click [here](#) for 2017 water use by source.

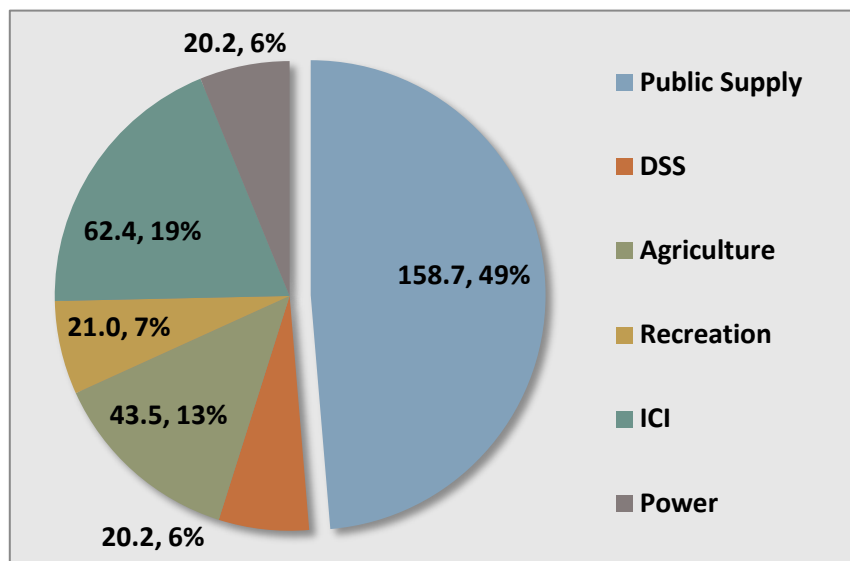


Figure 3. Estimated Water Use 2017 by Category (mgd)

## Population Estimates

In 2017 the University of Florida, Bureau of Business and Economic Research (BEBR), estimated District population<sup>2</sup> to be 1,449,998.

Table 2. NFWFMD 2017 Population Estimates

REGION	BEBR <sup>(2)</sup> Permanent Populations	Seasonal Adjustments	TOTAL Population Estimates	% Public Supply	% DSS
Region I	313,381	10,028	323,409	97%	3%
Region II	431,624	56,918	488,542	93%	7%
Region III	178,820	21,458	200,278	90%	10%
Region IV	119,333	3,699	123,032	29%	71%
Region V	28,458	8,328	36,786	75%	25%
Region VI	48,263	1,158	49,421	62%	38%
Region VII	330,119	3,396	333,515	86%	14%
<b>TOTALS</b>	<b>1,449,998</b>	<b>104,986</b>	<b>1,554,984</b>	<b>85%</b>	<b>15%</b>

<sup>2</sup> In Region VII, estimated NFWFMD share of Jefferson County only.

Permanent and total 2017 population estimates with seasonal adjustments are summarized in Table 2. The effects of seasonality are estimated to add an equivalent of 104,986 residents for a total adjusted 2017 population estimate of 1,554,984. About 85 percent of District residents are estimated to be served by public supply.

## Rainfall and Drought

Precipitation varies regionally with more rain naturally occurring in the western panhandle and lower rainfall levels typically occur in northeastern parts of the District, as illustrated in Figure 4, below.

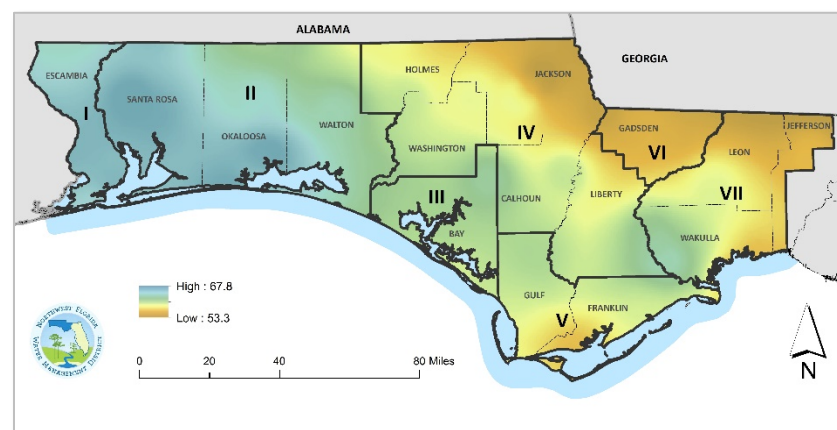


Figure 4. Normal Average Annual Precipitation (1981-2010) In/Yr<sup>3</sup>

Agriculture and recreation are the two water use categories most affected by rainfall and drought. Dry to average year ratios estimated by FSAID range from 1.17-1.72. More precipitation information is in the [Agriculture and Recreational Irrigation](#) section that follows.

Water use in [Public Supply and Domestic Self-Supply](#) typically increases by an estimated seven percent in dry years. [Power Generation and ICI](#) drought year demands are not anticipated to differ from water demands during an average rainfall year.

<sup>3</sup> Source: PRISM Climate Group, Oregon State University, <http://prism.oregonstate.edu>. Data created July 10, 2012.

# Public Supply and Domestic Self-Supply

Public supply water use in 2017 was estimated to be 158.7 mgd, close to half of all water use districtwide. About 59 percent of all public supply water use was in the District's three most urbanized counties: Escambia (Region I), Bay (Region III), and Leon; and over ninety-one percent of public supply water use was in regions I, II, III and VII. With seasonal adjustments, estimated public supply populations served totaled 1.3 million in 2017. Larger utilities and regional wholesalers in northwest Florida, by county, include:

- Escambia: Emerald Coast Utilities Authority (ECUA),
- Santa Rosa: Fairpoint Regional Utility System (FRUS),
- Walton: Florida Community Services Corp. of Walton County, dba "Regional Utilities" and South Walton Utility Company (SWUC),
- Bay: Bay County Board of County Commissioners, and,
- Leon: City of Tallahassee.



Photo: City of Port St. Joe Water Treatment Plant, by District staff (2009).

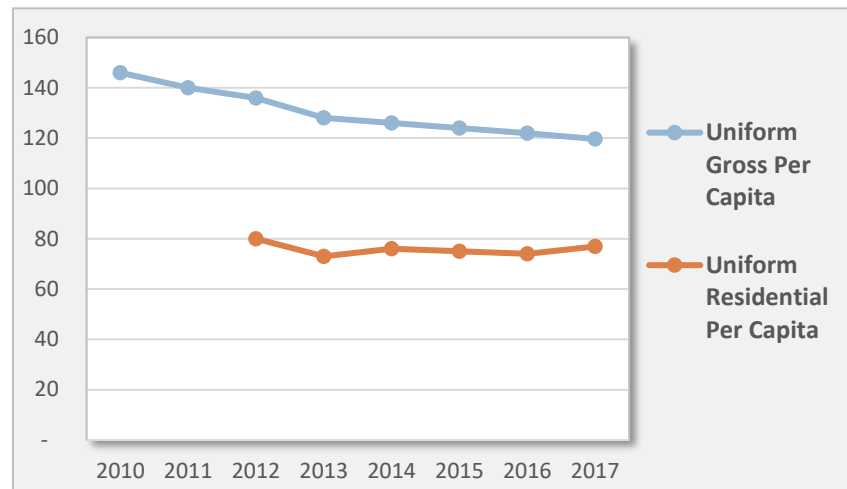
Over 83 percent of public supply withdrawals were from groundwater aquifers. Potable surface water sources are the Deer Point Lake Reservoir in Bay County, and the Chipola River via a fresh water canal serving the City of Port St. Joe in Gulf County.

The 2017 total estimated DSS population was 228,357, with about 38 percent of this estimate in Region IV and 14 percent in Leon County. There are over 80,000 domestic wells across NFWFMD. With a domestic per capita water use rate of 88.67 gpcd (USGS, 2014), the estimated domestic self-supply (DSS) water use was about 20.2 mgd.

Together, public supply and DSS comprised approximately 55 percent of all water use Districtwide in 2017.

## Per Capita Water Use Rates

The 2017 Districtwide public supply per capita water use rates were 119.64 gpcd<sup>4</sup> gross and 76.99 gpcd residential. Gross per capita rates have been in a general downward trend and residential rates relatively constant, as illustrated in Figure 5, below.



**Figure 5. Trends in Per Capita Water Use Rates 2010-2017 (gpcd)**

Five-year average per capita rates over the period 2013-2017 are:

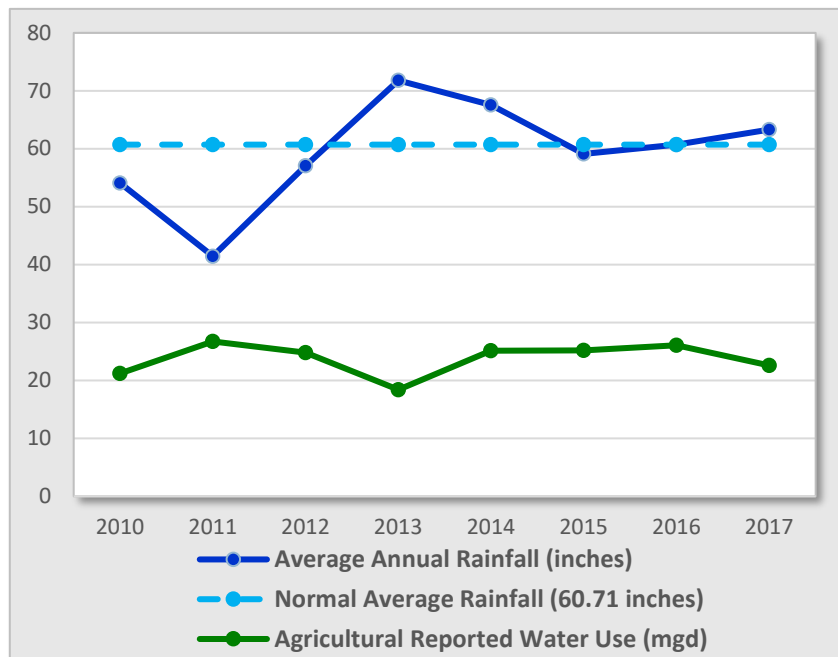
- Average Uniform Gross Per Capita – 123.93 gpcd
- Average Uniform Residential Per Capita - 75.00 gpcd

<sup>4</sup> Gallons per capita per day (gpcd).



# Agriculture and Recreational Irrigation

The Districtwide annual average rainfall 2015-2017 has been near normal average levels (Figure 6). The most recent drought year is 2011 and rainfall above normal levels was recorded in 2013 and 2014. Figure 6 also illustrates a comparison of this rainfall and reported agricultural water use from 2010-2017.



**Figure 6. Rainfall and Agricultural Reported Water Use 2010-2017**

The reported agricultural water use in 2017 was 22.5 mgd, about 52 percent of the most recent FSAID total agricultural estimate of 43.5 mgd (2016 data). About 72 percent of reported water use was during the five months of May through September. Ninety percent of reported agricultural water withdrawals are from groundwater. Most

of the reported surface water withdrawals were in Gadsden County, where surface water was over half of all agricultural water use. Jackson County continues to be the dominate agricultural producer, representing 72 percent of reported and 56 percent of the FSAID total estimated agricultural water use Districtwide. Seventy-four percent of the reported and two-thirds of the total estimate was in Region IV.



Photo: A recreational fishing lake in Gadsden County, by District staff (2015).

Recreational water uses include golf course and landscape irrigation, and water-based recreation. The total estimated recreational water use in 2017 was 21.0 mgd. Reported recreational water use was 12.9 mgd; about 61 percent of the total. Region II had 59 percent of the reported and 55 percent of the total estimated recreational water use Districtwide, with many recreational wells located in the coastal Water Resource Caution Area. The sources of reported recreational water use are about 50-50 ground to surface water. Other sources of water may include reuse of reclaimed water, which was not quantified at the time of this report.

Collectively, agriculture and recreational irrigation were estimated to comprise about 20 percent of all water use districtwide in 2017.

## Power Generation and ICI

Reported and estimated ICI water use in 2017 was 62.4 mgd, about 19 percent of the District total. Reported and estimated thermo-electric power water use was 20.2 mgd. ICI and power generation together comprised one-fourth of all 2017 water use Districtwide.



Image: <http://www.wastetodaymagazine.com/article/gulf-power-contract-bay-county-resource-recovery-facility-approved> (11/9/2017).

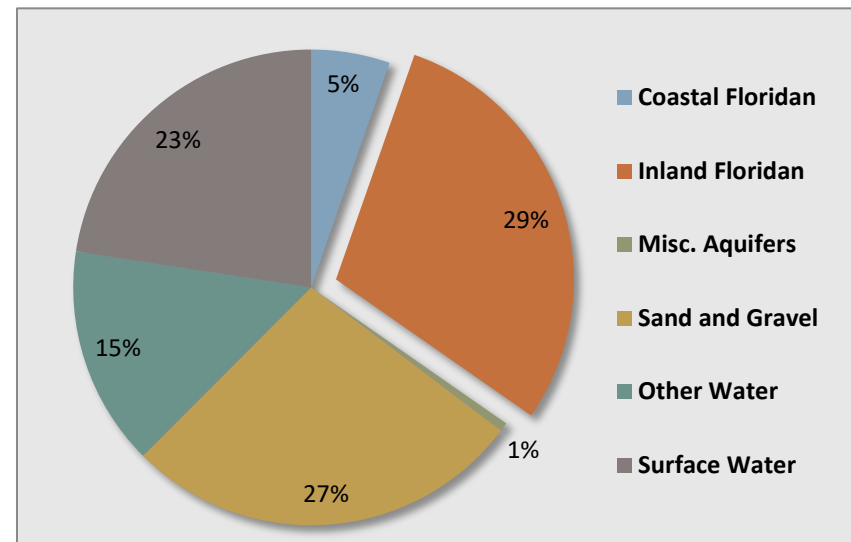
Eighty-six percent of ICI water use reported by self-suppliers is in Escambia and Bay counties. Therefore, over half of all reported ICI water withdrawn was from the sand-and-gravel aquifer and 37 percent from the Deer Point Lake Reservoir.

Thermoelectric power generating facilities are in regions I, III, IV and VII. About 71 percent of reported power generation water use, net adjusted, is from surface water sources. Large facilities include Gulf Power's James F. Crist and Lansing Smith generating plants in Escambia and Bay counties respectively, and the Arvah B. Hopkins Plant in Leon County. The Bay County Resource Recovery Facility converts waste to energy, reducing landfill waste.

## Water Withdrawals by Water Source

Primary groundwater resources in northwest Florida are the Floridan aquifer across much of northwest Florida and the sand-and-gravel aquifer in western parts of the District. A major surface water resource is Deer Point Lake Reservoir in Bay County.

About 62 percent of known water withdrawals in 2017 were from groundwater aquifers, 23 percent from surface waters, and 15 percent "Other Water" - unknown or uncertain sources of water attributed to DSS, and to additional agriculture and recreational water use estimates. Ninety percent of groundwater withdrawals are from the inland Floridan and sand-and-gravel aquifer systems. Water withdrawn from the coastal Floridan was about five percent of total withdrawals, and less than one percent was from miscellaneous aquifers known as the intermediate, Claiborne, and surficial aquifers.



**Figure 7. Water Use 2017 by Water Source**

## Acronyms

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BEBR	Bureau of Business and Economic Research
DACS	Florida Department of Agriculture and Consumer Services
DSS	Domestic Self-Supply
F.A.C.	Florida Administrative Code
F.S.	Florida Statutes
FSAID	Florida Statewide Agricultural Irrigation Demand
gpcd	Gallons per Capita per Day
GWUP	General Water Use Permit
ICI	Industrial-Commercial-Institutional
IWUP	Individual Water Use Permit
mgd	Million Gallons per Day
USGS	United States Geological Survey

## References and Additional Information

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- Bureau of Business and Economic Research (BEBR). 2018. *Florida Estimates of Population 2017*. University of Florida, College of Liberal Arts and Sciences, Population Studies Program. <https://www.bibr.ufl.edu/population>.
- Florida Department of Agriculture and Consumer Services (DACS). June 29, 2018. *Florida Statewide Agricultural Irrigation Demand 2016-2040 Agricultural Water Demands* (FSAID V). <https://www.freshfromflorida.com/Business-Services/Water/Agricultural-Water-Supply-Planning>.
- Northwest Florida Water Management District. 2018. *2018 Water Supply Assessment Draft*. Appendix 1, Methodologies<sup>5</sup>. <https://www.nwfwater.com/Water-Resources/Water-Supply-Planning/Water-Supply-Assessments>.
- U.S. Geological Survey (USGS). 2014. *Water Withdrawals, Use, and Trends in Florida, 2010*. Data supplied by Mr. Rich Marella, USGS Florida Water Science Center, Orlando, Florida.

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<sup>5</sup> Estimating methods.



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## NFWWMD 2017 Total Estimated Water Use by Category (mgd)

Planning Region	County / Region	1. Public Supply	2. Domestic Self-Supply	3. Agriculture <sup>(1)</sup>	4. Recreation <sup>(2)</sup>	5. ICI	6. Power Generation	TOTAL ESTIMATED WATER USE (mgd)
I	Escambia	35.951	0.997	3.196	2.405	30.026	11.078	83.653
	<b>Region I Total</b>	<b>35.951</b>	<b>0.997</b>	<b>3.196</b>	<b>2.405</b>	<b>30.026</b>	<b>11.078</b>	<b>83.653</b>
II	Okaloosa	21.609	0.831	0.402	5.179	1.897	-	29.917
	Santa Rosa	16.319	0.919	1.805	1.951	2.738	-	23.733
	Walton	11.606	1.409	0.576	4.604	0.032	-	18.227
	<b>Region II Total</b>	<b>49.534</b>	<b>3.160</b>	<b>2.783</b>	<b>11.734</b>	<b>4.666</b>	-	<b>71.878</b>
III	Bay	26.806	1.697	0.648	2.493	23.629	4.340	59.614
	<b>Region III Total</b>	<b>26.806</b>	<b>1.697</b>	<b>0.648</b>	<b>2.493</b>	<b>23.629</b>	<b>4.340</b>	<b>59.614</b>
IV	Calhoun	0.432	1.037	2.768	0.005	0.205	-	4.447
	Holmes	1.176	1.286	1.131	0.215	-	-	3.809
	Jackson	2.661	3.239	24.892	0.386	0.965	1.427	33.569
	Liberty	0.463	0.486	0.073	0.002	0.374	0.489	1.887
	Washington	0.933	1.710	0.779	0.288	0.495	-	4.205
	<b>Region IV Total</b>	<b>5.665</b>	<b>7.759</b>	<b>29.643</b>	<b>0.895</b>	<b>2.039</b>	<b>1.917</b>	<b>47.916</b>
V	Franklin	1.787	0.325	0.006	0.233	0.014	-	2.365
	Gulf	1.998	0.489	0.465	0.137	0.409	-	3.497
	<b>Region V Total</b>	<b>3.785</b>	<b>0.814</b>	<b>0.471</b>	<b>0.369</b>	<b>0.422</b>	-	<b>5.862</b>
VI	Gadsden	4.029	1.661	5.123	0.142	0.545	-	11.501
	<b>Region VI Total</b>	<b>4.029</b>	<b>1.661</b>	<b>5.123</b>	<b>0.142</b>	<b>0.545</b>	-	<b>11.501</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.674	0.481	0.922	0.758	-	-	2.834
	Leon	29.882	2.892	0.490	2.031	0.117	2.500	37.912
	Wakulla	2.392	0.788	0.190	0.205	1.003	0.371	4.949
	<b>Region VII Total</b>	<b>32.947</b>	<b>4.161</b>	<b>1.602</b>	<b>2.994</b>	<b>1.120</b>	<b>2.871</b>	<b>45.695</b>
	<b>TOTALS</b>	<b>158.717</b>	<b>20.249</b>	<b>43.466</b>	<b>21.032</b>	<b>62.448</b>	<b>20.206</b>	<b>326.118</b>
	<b>Percent of Total Water Use:</b>	<b>48.7%</b>	<b>6.2%</b>	<b>13.3%</b>	<b>6.4%</b>	<b>19.1%</b>	<b>6.2%</b>	<b>100%</b>

Total annual average daily rate (ADR) estimated water use in million gallons per day (mgd).

(1) FSAID V - 2016 estimated water use. To be updated with FSAID VI - 2017 data when available.

(2) Estimate of 2017 reported recreational water use and additional estimating methods and data used in WSA 2018.

## NFWFMD 2017 Population Estimates - County, Public Supply Utility, and Domestic Self-Supply

Planning Region	County / Region	2010-2017 Population Change % <sup>(1)</sup>	BEBR 2017 County Permanent Populations <sup>(2)</sup>	Seasonal Rate % County Average	County Seasonal <sup>(3)</sup> Adjustments	TOTAL <sup>(4)</sup> County Population Estimates	Public Supply Populations Served <sup>(5)</sup>	% of TOTAL	DSS Population Estimates <sup>(6)</sup>	% of TOTAL
I	Escambia	5.3%	313,381	3.2%	10,028	323,409	312,167	96.5%	11,242	3.5%
	<b>Total/Average</b>	<b>5.3%</b>	<b>313,381</b>	<b>3.2%</b>	<b>10,028</b>	<b>323,409</b>	<b>312,167</b>	<b>96.5%</b>	<b>11,242</b>	<b>3.5%</b>
II	Okaloosa	8.1%	195,488	11.0%	21,504	216,992	207,617	95.7%	9,375	4.3%
	Santa Rosa	12.9%	170,835	2.0%	3,417	174,252	163,883	94.0%	10,368	6.0%
	Walton	18.6%	65,301	49.0%	31,997	97,298	81,403	83.7%	15,896	16.3%
	<b>Total/Average</b>	<b>13.2%</b>	<b>431,624</b>	<b>20.7%</b>	<b>56,918</b>	<b>488,541</b>	<b>452,904</b>	<b>92.7%</b>	<b>35,638</b>	<b>7.3%</b>
III	Bay	5.9%	178,820	12.0%	21,458	200,279	181,137	90.4%	19,142	9.6%
	<b>Total/Average</b>	<b>5.9%</b>	<b>178,820</b>	<b>12.0%</b>	<b>21,458</b>	<b>200,279</b>	<b>181,137</b>	<b>90.4%</b>	<b>19,142</b>	<b>9.6%</b>
IV	Calhoun	2.6%	15,001	3.0%	450	15,451	3,752	24.3%	11,699	75.7%
	Holmes	1.4%	20,210	1.0%	202	20,412	5,910	29.0%	14,502	71.0%
	Jackson	1.4%	50,418	3.0%	1,513	51,931	15,403	29.7%	36,528	70.3%
	Liberty	4.2%	8,719	9.0%	785	9,504	4,018	42.3%	5,485	57.7%
	Washington	0.4%	24,985	3.0%	750	25,735	6,449	25.1%	19,285	74.9%
	<b>Total/Average</b>	<b>2.0%</b>	<b>119,333</b>	<b>3.8%</b>	<b>3,699</b>	<b>123,032</b>	<b>35,532</b>	<b>28.9%</b>	<b>87,500</b>	<b>71.1%</b>
V	Franklin	5.3%	12,161	39.0%	4,743	16,904	13,237	78.3%	3,668	21.7%
	Gulf	2.7%	16,297	22.0%	3,585	19,883	14,370	72.3%	5,512	27.7%
	<b>Total/Average</b>	<b>4.0%</b>	<b>28,458</b>	<b>30.5%</b>	<b>8,328</b>	<b>36,787</b>	<b>27,607</b>	<b>75.0%</b>	<b>9,180</b>	<b>25.0%</b>
VI	Gadsden	4.0%	48,263	2.4%	1,158	49,421	30,690	62.1%	18,731	37.9%
	<b>Total/Average</b>	<b>4.0%</b>	<b>48,263</b>	<b>2.4%</b>	<b>1,158</b>	<b>49,421</b>	<b>30,690</b>	<b>62.1%</b>	<b>18,731</b>	<b>37.9%</b>
VII	Jefferson <sup>(NWF Only)</sup>	-1.0%	10,311	3.5%	361	10,672	5,251	49.2%	5,421	50.8%
	Leon	4.5%	287,899	0.5%	1,439	289,339	256,722	88.7%	32,616	11.3%
	Wakulla	3.7%	31,909	5.0%	1,595	33,505	24,619	73.5%	8,886	26.5%
	<b>Total/Average</b>	<b>2.4%</b>	<b>330,119</b>	<b>3.0%</b>	<b>3,396</b>	<b>333,515</b>	<b>286,591</b>	<b>85.9%</b>	<b>46,924</b>	<b>14.1%</b>
	<b>TOTALS/AVERAGES</b>	<b>5.3%</b>	<b>1,449,998</b>	<b>7.2%</b>	<b>104,986</b>	<b>1,554,984</b>	<b>1,326,628</b>	<b>85.3%</b>	<b>228,357</b>	<b>14.7%</b>

(1) University of Florida (UF), Bureau of Economic and Business Research (BEBR), Population Studies Program, <https://www.bebr.ufl.edu/population>.

(2) UF BEBR, Population Studies Program, Vol. 50, Bulletin 177, April 2017. Permanent population estimates only, but includes estimated inmate populations.

(3) Estimated seasonal populations based on county average seasonal rates applied to BEBR population estimates.

(4) Total county populations adjusted by adding the estimated seasonal populations to BEBR estimate.

(5) The population served by each public supply utility service area is estimated from review of all available data, including compliance submissions, and include seasonal population estimates where applicable.

(6) Net Domestic Self-Supply (DSS) population estimates are derived by subtracting public supply utility populations served from adjusted county totals.

## NWFWMD 2017 Total Estimated Water Withdrawals by Source (mgd)

Planning Region	County / Region	a. Coastal Floridan	b. Inland Floridan	c. Intermediate	d. Claiborne	e. Sand and Gravel	f. Surficial	Total Ground-water	Total Other Water <sup>(1)</sup>	Total Surface Water	TOTAL ESTIMATED WATER USE
I	Escambia	-	-	-	-	67.784	0.030	67.814	5.278	10.561	83.653
	<b>Region Totals</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>67.784</b>	<b>0.030</b>	<b>67.814</b>	<b>5.278</b>	<b>10.561</b>	<b>83.653</b>
II	Okaloosa	12.422	8.195	-	-	1.686	-	22.303	2.864	1.869	27.036
	Santa Rosa	1.076	0.397	-	-	18.203	-	19.677	3.567	0.490	23.733
	Walton	1.600	13.171	0.035	-	1.062	0.169	16.037	2.657	2.415	21.109
	<b>Region Totals</b>	<b>15.099</b>	<b>21.763</b>	<b>0.035</b>	<b>-</b>	<b>20.951</b>	<b>0.169</b>	<b>58.017</b>	<b>9.087</b>	<b>4.773</b>	<b>71.878</b>
III	Bay	0.119	3.355	-	-	0.015	0.707	4.196	3.006	52.412	59.614
	<b>Region Totals</b>	<b>0.119</b>	<b>3.355</b>	<b>-</b>	<b>-</b>	<b>0.015</b>	<b>0.707</b>	<b>4.196</b>	<b>3.006</b>	<b>52.412</b>	<b>59.614</b>
IV	Calhoun	-	1.122	-	-	-	-	1.122	3.300	0.025	4.447
	Holmes	-	0.778	-	0.367	-	-	1.145	2.629	0.004	3.778
	Jackson	-	19.350	-	0.548	-	-	19.897	12.344	1.328	33.569
	Liberty	-	1.274	-	-	-	-	1.274	0.561	0.052	1.887
	Washington	-	1.826	-	-	-	-	1.826	2.410	-	4.236
	<b>Region Totals</b>	<b>-</b>	<b>24.350</b>	<b>-</b>	<b>0.915</b>	<b>-</b>	<b>-</b>	<b>25.265</b>	<b>21.244</b>	<b>1.408</b>	<b>47.916</b>
V	Franklin	1.801	-	-	-	-	-	1.801	0.385	0.178	2.365
	Gulf	0.445	0.764	0.053	-	-	0.050	1.311	0.768	1.418	3.497
	<b>Region Totals</b>	<b>2.246</b>	<b>0.764</b>	<b>0.053</b>	<b>-</b>	<b>-</b>	<b>0.050</b>	<b>3.112</b>	<b>1.153</b>	<b>1.596</b>	<b>5.862</b>
VI	Gadsden	-	6.646	-	-	-	-	6.646	2.624	2.230	11.501
	<b>Region Totals</b>	<b>-</b>	<b>6.646</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.646</b>	<b>2.624</b>	<b>2.230</b>	<b>11.501</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	1.833	-	-	-	-	1.833	1.001	-	2.834
	Leon	-	34.089	-	-	-	-	34.089	3.980	0.301	38.370
	Wakulla	-	2.937	-	-	-	-	2.937	1.183	0.371	4.491
	<b>Region Totals</b>	<b>-</b>	<b>38.859</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>38.859</b>	<b>6.163</b>	<b>0.672</b>	<b>45.695</b>
<b>DISTRICT TOTALS</b>		<b>17.463</b>	<b>95.737</b>	<b>0.088</b>	<b>0.915</b>	<b>88.750</b>	<b>0.956</b>	<b>203.909</b>	<b>48.556</b>	<b>73.653</b>	<b>326.118</b>

(1) "Other Water" refers to estimated withdrawals, but source is unknown or uncertain. Domestic Self-Supply (DSS) water use is estimated with population estimates and a per capita water use rate; therefore, groundwater is assumed but no specific water source or aquifer is identified. Additional estimating methods for Agriculture and Recreational Irrigation are also presumed to be primarily groundwater but specific water sources are uncertain. Sources of water are not identified in FSAID data or methodologies. Over half of reported agricultural water withdrawn in Gadsden County is from surface water.

## 1.1 Public Supply 2017 Water Withdrawn, Demand, Populations Served, and Per Capita Water Use

Planning Region	County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
I	Escambia	35.951	-	-	35.951	312,167	115.16	73.28
	<b>Totals/Average Per Capita</b>	<b>35.951</b>	<b>0.000</b>	<b>0.000</b>	<b>35.951</b>	<b>312,167</b>	<b>115.16</b>	<b>73.28</b>
II	Okaloosa	18.727	4.892	2.010	21.609	207,617	104.08	69.75
	Santa Rosa	16.319	6.505	6.505	16.319	163,883	99.58	67.41
	Walton	14.488	3.034	5.915	11.606	81,403	142.58	89.07
	<b>Totals/Average Per Capita</b>	<b>49.534</b>	<b>14.431</b>	<b>14.431</b>	<b>49.534</b>	<b>452,904</b>	<b>109.37</b>	<b>72.38</b>
III	Bay	26.806	25.031	25.031	26.806	181,137	147.98	80.00
	<b>Totals/Average Per Capita</b>	<b>26.806</b>	<b>25.031</b>	<b>25.031</b>	<b>26.806</b>	<b>181,137</b>	<b>147.98</b>	<b>80.00</b>
IV	Calhoun	0.432	-	-	0.432	3,752	115.10	55.06
	Holmes	1.145	0.031	-	1.176	5,910	199.06	74.50
	Jackson	2.661	-	-	2.661	15,403	172.73	53.18
	Liberty	0.463	-	-	0.463	4,018	115.18	66.78
	Washington	0.964	-	0.031	0.933	6,449	144.67	73.02
	<b>Totals/Average Per Capita</b>	<b>5.665</b>	<b>0.031</b>	<b>0.031</b>	<b>5.665</b>	<b>35,532</b>	<b>159.42</b>	<b>62.06</b>
V	Franklin	1.787	0.081	0.081	1.787	13,237	135.01	85.90
	Gulf	1.998	-	-	1.998	14,370	139.03	80.55
	<b>Totals/Average Per Capita</b>	<b>3.785</b>	<b>0.081</b>	<b>0.081</b>	<b>3.785</b>	<b>27,607</b>	<b>137.10</b>	<b>83.11</b>
VI	Gadsden	4.029	-	-	4.029	30,690	131.29	69.25
	<b>Totals/Average Per Capita</b>	<b>4.029</b>	<b>0.000</b>	<b>0.000</b>	<b>4.029</b>	<b>30,690</b>	<b>131.29</b>	<b>69.25</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.674	-	-	0.674	5,251	128.27	84.27
	Leon	30.340	-	0.458	29.882	256,722	116.40	62.44
	Wakulla	1.934	0.458	-	2.392	24,619	97.14	78.75
	<b>Totals/Average Per Capita</b>	<b>32.947</b>	<b>0.458</b>	<b>0.458</b>	<b>32.947</b>	<b>286,591</b>	<b>114.96</b>	<b>64.24</b>
	<b>DISTRICT TOTALS/AVERAGE</b>	<b>158.717</b>	<b>40.032</b>	<b>40.032</b>	<b>158.717</b>	<b>1,326,628</b>	<b>119.64</b>	<b>76.99</b>

(1) Populations served include seasonal resident adjustments.

**NOTE:** Bay County imports and exports reflect water transferred to multiple service areas. Reported pumpage and finished water demand includes all water transfers, including water stored and transferred through the Southeast Tank.



## 1.2 Public Supply 2017 Water Withdrawals by Source (mgd)

Planning Region	County / Region	a. Coastal Floridan	b. Inland Floridan	c. Intermediate	d. Claiborne	e. Sand and Gravel	f. Surficial	Total Groundwater	Total Surface Water	TOTAL REPORTED WATER USE
I	Escambia	-	-	-	-	35.951	-	35.951	-	35.951
	<b>Region Totals</b>	-	-	-	-	<b>35.951</b>	-	<b>35.951</b>	-	<b>35.951</b>
II	Okaloosa	11.992	6.736	-	-	-	-	18.727	-	18.727
	Santa Rosa	1.076	0.257	-	-	14.986	-	16.319	-	16.319
	Walton	1.600	12.887	-	-	-	-	14.488	-	14.488
	<b>Region Totals</b>	<b>14.668</b>	<b>19.880</b>	-	-	<b>14.986</b>	-	<b>49.534</b>	-	<b>49.534</b>
III	Bay <sup>(1)</sup>	-	1.775	-	-	-	-	1.775	25.031	26.806
	<b>Region Totals</b>	-	<b>1.775</b>	-	-	-	-	<b>1.775</b>	<b>25.031</b>	<b>26.806</b>
IV	Calhoun	-	0.432	-	-	-	-	0.432	-	0.432
	Holmes	-	0.778	-	0.367	-	-	1.145	-	1.145
	Jackson	-	2.409	-	0.252	-	-	2.661	-	2.661
	Liberty	-	0.463	-	-	-	-	0.463	-	0.463
	Washington	-	0.964	-	-	-	-	0.964	-	0.964
	<b>Region Totals</b>	-	<b>5.046</b>	-	<b>0.619</b>	-	-	<b>5.665</b>	-	<b>5.665</b>
V	Franklin	1.787	-	-	-	-	-	1.787	-	1.787
	Gulf	0.445	0.135	-	-	-	-	0.580	1.418	1.998
	<b>Region Totals</b>	<b>2.232</b>	<b>0.135</b>	-	-	-	-	<b>2.367</b>	<b>1.418</b>	<b>3.785</b>
VI	Gadsden	-	4.029	-	-	-	-	4.029	-	4.029
	<b>Region Totals</b>	-	<b>4.029</b>	-	-	-	-	<b>4.029</b>	-	<b>4.029</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.674	-	-	-	-	0.674	-	0.674
	Leon	-	30.340	-	-	-	-	30.340	-	30.340
	Wakulla	-	1.934	-	-	-	-	1.934	-	1.934
	<b>Region Totals</b>	-	<b>32.947</b>	-	-	-	-	<b>32.947</b>	-	<b>32.947</b>
<b>DISTRICT TOTALS</b>		<b>16.900</b>	<b>63.812</b>	-	<b>0.619</b>	<b>50.936</b>	-	<b>132.268</b>	<b>26.449</b>	<b>158.717</b>

(1) Bay County Board of County Commissioners (BCBOCC) surface water withdrawals from Deer Point Lake Reservoir exclude exports to large industrial users, and to Tyndall Air Force Base. See ICI for industrial and institutional water use estimates.

### 1.3 Public Supply 2017 Water Demand, Populations Served, and Per Capita Water Use - by Utility

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
I	<b>Escambia County</b>	<b>35.951</b>	<b>0.000</b>	<b>0.000</b>	<b>35.951</b>	<b>312,167</b>	<b>115.16</b>	<b>73.28</b>
	Bratt-Davisville Water System (EREC)	0.153	-	-	0.153	1,943	78.63	55.17
	Central Water Works, Inc.	0.243	-	-	0.243	2,530	96.13	56.79
	Century, Town of	0.496	-	-	0.496	3,639	136.33	64.14
	Cottage Hill Water Works, Inc.	0.350	-	-	0.350	3,453	101.24	83.57
	Emerald Coast Utilities Authority (ECUA)	30.670	-	-	30.670	253,149	121.15	76.43
	Farm Hill Utilities, Inc.	0.501	-	-	0.501	6,062	82.58	82.01
	Gonzalez Utilities Association, Inc.	0.491	-	-	0.491	6,356	77.23	46.80
	Molino Utilities, Inc.	0.664	-	-	0.664	5,428	122.41	65.57
	People's Water Service Company	2.215	-	-	2.215	27,882	79.44	54.05
	Walnut Hill Water Works (EREC)	0.168	-	-	0.168	1,725	97.45	56.50
	<b>REGION I - Totals/Average Per Capita</b>	<b>35.951</b>	<b>0.000</b>	<b>0.000</b>	<b>35.951</b>	<b>312,167</b>	<b>115.16</b>	<b>73.28</b>
II	<b>Okaloosa County</b>	<b>18.727</b>	<b>4.892</b>	<b>2.010</b>	<b>21.609</b>	<b>207,617</b>	<b>104.08</b>	<b>69.75</b>
	Auburn Water System	1.546	-	-	1.546	16,108	95.99	77.42
	Baker Water System	0.209	-	-	0.209	2,359	88.58	68.76
	Blackman Community Water System, Inc.	0.034	-	-	0.034	585	58.62	52.75
	Crestview, City of	2.294	-	-	2.294	29,103	78.83	77.76
	Destin Water Users	1.513	2.554	-	4.036	26,163	154.28	100.64
	Fort Walton Beach, City of	2.393	-	-	2.393	21,291	112.41	60.49
	Holt Water Works, Inc.	0.154	-	-	0.154	2,058	74.93	12.35
	Laurel Hill, City of	0.108	-	-	0.108	1,415	76.52	66.38
	Mary Esther, City of	0.381	-	-	0.381	4,367	87.28	51.91
	Milligan Water System	0.128	-	-	0.128	1,574	81.65	66.23
	Niceville, City of	2.356	-	-	2.356	19,670	119.80	81.15
	OCW&S - Bluewater (Raintree)	1.158	-	-	1.158	14,581	79.44	58.45
	OCW&S - Main (Garniers) Office Well Plant	3.735	1.285	0.703	5.042	43,853	114.97	53.52
	OCW&S - Mid-County (Crestview) Antioch	2.261	-	1.307	0.954	16,881	56.50	59.91
	SWUC (Okaloosa County portion)	-	0.358	-	0.358	3,454	103.62	94.03
	Valparaiso, City of	0.455	-	-	0.455	4,154	109.48	66.45

Table 1.3, continued

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
II	<b>Santa Rosa County</b>	<b>16.319</b>	<b>6.505</b>	<b>6.505</b>	<b>16.319</b>	<b>163,883</b>	<b>99.58</b>	<b>67.41</b>
	Bagdad-Garcon Point Water System	0.534	-	-	0.534	5,878	90.84	63.25
	Berrydale Water System	0.285	-	-	0.285	2,180	130.61	52.53
	Chumuckla Water System	0.339	-	-	0.339	4,243	79.88	62.48
	East Milton Water System	1.507	-	-	1.507	11,556	130.42	58.37
	Fairpoint Regional Utility System (FRUS)	5.259	-	5.259	-	-	-	-
	Gulf Breeze Water Department (Service Area)	-	1.877	-	0.657	5,838	112.52	95.64
	Holley-Navarre Water System, Inc.	0.750	2.091	-	2.841	38,112	74.54	58.45
	Jay, Town of	0.193	-	-	0.193	1,336	144.77	116.75
	Midway Water System	0.653	0.755	0.026	1.405	15,448	90.93	58.25
	Milton, City of	1.709	-	-	1.709	19,579	87.29	58.95
	Moore Creek-Mt. Carmel Utilities, Inc.	0.234	-	-	0.234	3,142	74.57	59.65
	Pace Water System, Inc.	4.018	-	-	4.018	36,980	108.65	67.45
	Point Baker Water System, Inc.	0.804	-	-	0.804	9,351	85.98	67.37
	Navarre Beach - Santa Rosa BOCC	0.033	0.499	-	0.547	4,244	128.90	59.90
	South Santa Rosa Utilities (Service Area)	-	1.246	-	1.246	5,997	207.78	176.61
II	<b>Walton County</b>	<b>14.488</b>	<b>3.034</b>	<b>5.915</b>	<b>11.606</b>	<b>81,403</b>	<b>142.58</b>	<b>89.07</b>
	Argyle Water System	0.065	-	-	0.065	770	84.60	80.37
	DeFuniak Springs, City of	1.347	-	-	1.347	9,726	138.51	42.56
	FCSWC / Regional Utilities	3.879	0.797	-	4.675	40,026	116.81	79.44
	Freeport, City of	2.425	-	0.797	1.628	8,508	191.35	153.08
	Freeport, City of, North Bay Water System	0.131	-	-	0.131	1,785	73.24	73.24
	Inlet Beach Water System, Inc.	0.160	-	-	0.160	1,875	85.24	71.61
	Mossy Head Water Works, Inc.	0.262	-	-	0.262	3,337	78.66	54.06
	Paxton, City of	0.149	-	-	0.149	1,450	102.38	98.04
	SWUC - Rockhill Inland Well Field	4.761	-	4.761	0.000	-	-	-
	SWUC - Coastal Well Field	1.310	2.237	0.358	3.189	13,926	229.01	122.45
<b>REGION II - Totals/Average Per Capita</b>		<b>49.534</b>	<b>14.431</b>	<b>14.431</b>	<b>49.534</b>	<b>452,904</b>	<b>109.37</b>	<b>72.38</b>

Table 1.3, continued

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average <sup>(2)</sup> RESIDENTIAL Per Capita Water Use
III	<b>Bay County</b>	<b>26.806</b>	<b>25.031</b>	<b>25.031</b>	<b>26.806</b>	<b>181,137</b>	<b>147.98</b>	<b>80.00</b>
	Bay County BOCC (Public Supply ONLY)	25.031	-	-	-	7,305	-	
	- Cedar Grove (separate BOCC service area)	-	0.478	-	0.478	4,782	99.99	
	- GCEC (North Bay, Lake Merial)	-	0.612	-	0.612	6,237	98.07	
	- Bay Co. (excludes North Bay, Lk Merial, SE)	-	1.518	-	1.518	9,034	-	
	Bay County BOCC - Total Exports	-	-	25.031	-	-	-	
	Callaway	-	1.586	-	1.586	15,737	100.76	
	Lynn Haven, City of	1.775	0.522	-	2.296	20,886	109.94	
	Mexico Beach	-	0.392	-	0.392	2,488	157.53	
	Panama City Water System	-	5.917	-	5.917	36,988	159.98	
	Panama City Beach	-	12.755	-	12.755	63,693	200.26	
	Parker	-	0.395	-	0.395	4,419	89.40	
	Springfield	-	0.857	-	0.857	9,568	89.53	
	<b>REGION III - Totals/Average Per Capita</b>	<b>26.806</b>	<b>25.031</b>	<b>25.031</b>	<b>26.806</b>	<b>181,137</b>	<b>147.98</b>	<b>80.00</b>

**NOTE:** The Bay County Board of County Commissioners (BOCC) water utility serves the majority of service areas (except for parts of the City of Lynn Haven) in Bay County. Water withdrawn and supplied to several large industrial facilities and to Tyndall Air Force Base are excluded from Public Supply and included in ICI.

(2) County-wide average estimate.

Table 1.3, continued

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
V	<b>Franklin County</b>	<b>1.787</b>	<b>0.081</b>	<b>0.081</b>	<b>1.787</b>	<b>13,237</b>	<b>135.01</b>	<b>85.90</b>
	Alligator Point Water Resources District	0.092	-	-	0.092	671	136.69	97.38
	Apalachicola, City of	0.484	-	-	0.484	3,492	139.65	58.44
	Carrabelle, City of	0.409	-	0.081	0.328	2,829	116.11	85.64
	- Carrabelle, City of (Lanark Village)	0.000	0.081	-	0.081	1,625	49.70	37.27
	Eastpoint Water and Sewer District	0.280	-	-	0.280	1,842	151.76	119.44
	St. James Island (Summercamp, FRWA)	0.008	-	-	0.008	25	339.00	145.40
	Water Management (St. George Island)	0.515	-	-	0.515	2,782	184.92	123.20
V	<b>Gulf County</b>	<b>1.998</b>	<b>0.000</b>	<b>0.000</b>	<b>1.998</b>	<b>14,370</b>	<b>139.03</b>	<b>80.55</b>
	Lighthouse Utilities Company, Inc.	0.445	-	-	0.445	3,827	116.29	71.55
	Port St. Joe, City of	1.418	-	-	1.418	8,594	164.99	91.97
	Wewahitchka, City of	0.135	-	-	0.135	1,949	69.25	47.84
	<b>REGION V - Totals/Average Per Capita</b>	<b>3.785</b>	<b>0.081</b>	<b>0.081</b>	<b>3.785</b>	<b>27,607</b>	<b>137.10</b>	<b>83.11</b>

Table 1.3, continued

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
IV	<b>Calhoun County</b>	<b>0.432</b>	<b>0.000</b>	<b>0.000</b>	<b>0.432</b>	<b>3,752</b>	<b>115.10</b>	<b>55.06</b>
	Altha, Town of	0.110	-	-	0.110	640	172.69	73.46
	Blountstown	0.321	-	-	0.321	3,112	103.25	51.28
IV	<b>Holmes County</b>	<b>1.145</b>	<b>0.031</b>	<b>0.000</b>	<b>1.176</b>	<b>5,910</b>	<b>199.06</b>	<b>74.50</b>
	Bonifay, City of	0.931	-	-	0.931	4,048	229.99	53.72
	Caryville, Town of (Holmes County portion)	-	0.031	-	0.031	115	269.51	274.95
	Esto Water Works	0.029	-	-	0.029	384	74.71	88.54
	Joyce E. Snare Waterworks	0.034	-	-	0.034	319	105.39	105.39
	Noma, Town of	0.042	-	-	0.042	186	225.25	202.73
	Ponce de Leon, Town of	0.075	-	-	0.075	560	133.70	93.65
	Westville, Town of	0.035	-	-	0.035	298	118.69	112.42
	<b>Jackson County</b>	<b>2.661</b>	<b>0.000</b>	<b>0.000</b>	<b>2.661</b>	<b>15,403</b>	<b>172.73</b>	<b>53.18</b>
IV	Alford, Town of	0.053	-	-	0.053	500	106.63	49.26
	Campbellton, Town of	0.023	-	-	0.023	218	103.48	93.13
	Cottondale, City of	0.106	-	-	0.106	900	117.82	106.04
	Graceville, City of	0.267	-	-	0.267	2,830	94.30	43.70
	Grand Ridge, Town of	0.087	-	-	0.087	955	90.80	54.48
	Greenwood, Town of	0.062	-	-	0.062	703	88.30	57.92
	Jackson Utilities, Plant 1, JCBOCC	0.241	-	-	0.241	535	450.87	58.00
	Jacob, City of	0.021	-	-	0.021	240	87.55	78.80
	Malone, Town of	0.058	-	-	0.058	538	107.41	35.15
	Marianna, City of	1.455	-	-	1.455	6,063	239.98	46.53
	Sneads, Town of	0.288	-	-	0.288	1,921	149.90	57.95
	<b>Liberty County</b>	<b>0.463</b>	<b>0.000</b>	<b>0.000</b>	<b>0.463</b>	<b>4,018</b>	<b>115.18</b>	<b>66.78</b>
	Bristol, City of	0.218	-	-	0.218	1,724	126.36	21.52
IV	Liberty Co. BOCC, Estiffanulga	0.023	-	-	0.023	281	81.75	80.12
	Liberty Co. BOCC, Hosford-Telogia	0.110	-	-	0.110	1,255	87.74	81.62
	Liberty Co. BOCC, Lake Mystic	0.037	-	-	0.037	314	116.33	114.01
	Liberty Co. BOCC, Rock Bluff	0.054	-	-	0.054	217	250.15	229.71
	Sumatra Water System (Liberty Co. BOCC)	0.014	-	-	0.014	163	87.64	85.89
	Talquin Electric - Sweetwater System	0.007	-	-	0.007	65	106.12	104.00
	<b>Washington</b>	<b>0.964</b>	<b>0.000</b>	<b>0.031</b>	<b>0.933</b>	<b>6,449</b>	<b>144.67</b>	<b>73.02</b>
IV	Sunny Hills (formerly Aqua Utilities)	0.111	-	-	0.111	1,124	98.81	88.00
	Caryville, Town of	0.110	-	0.031	0.080	295	269.51	274.95
	Chipley, City of	0.622	-	-	0.622	3,745	166.20	55.70
	Vernon, City of	0.064	-	-	0.064	735	86.76	43.09
	Wausau, Town of	0.056	-	-	0.056	550	102.12	91.91
	<b>REGION IV - Totals/Average Per Capita</b>	<b>5.665</b>	<b>0.031</b>	<b>0.031</b>	<b>5.665</b>	<b>35,532</b>	<b>159.42</b>	<b>62.06</b>



Table 1.3, continued

Planning Region	Public Supply Utility / County / Region	Withdrawals and Water Demand (mgd)				Populations and Per Capita Water Use (gpcd)		
		Reported Pumpage	Imports	Exports	Finished Water Demand	Public Supply Adjusted <sup>(1)</sup> Population Served	Average GROSS Per Capita Water Use	Average RESIDENTIAL Per Capita Water Use
VI	<b>Gadsden County</b>	<b>4.029</b>	<b>0.000</b>	<b>0.000</b>	<b>4.029</b>	<b>30,690</b>	<b>131.29</b>	<b>69.25</b>
	Chattahoochee, City of	0.402	-	-	0.402	3,209	125.36	58.13
	Greensboro, Town of	0.059	-	-	0.059	613	95.52	66.32
	Gretna, City of	0.316	-	-	0.316	1,699	185.98	59.45
	Havana, Town of	0.418	-	-	0.418	2,880	145.08	88.44
	Quincy, City of	1.226	-	-	1.226	9,292	138.26	66.20
	Talquin Electric - Gadsden County Regional	1.581	-	-	1.581	13,162	120.14	70.65
	Talquin Electric - Hammock Creek	0.005	-	-	0.005	40	135.90	129.11
	Talquin Electric - Jamieson Water	0.014	-	-	0.014	123	115.92	105.85
	Talquin Electric - St. James	0.008	-	-	0.008	98	80.04	76.04
<b>REGION VI - Totals/Average Per Capita</b>		<b>4.029</b>	<b>0.000</b>	<b>0.000</b>	<b>4.029</b>	<b>30,690</b>	<b>131.29</b>	<b>69.25</b>
VII	<b>Jefferson County</b> <sup>(NWF Only)</sup>	<b>0.674</b>	<b>0.000</b>	<b>0.000</b>	<b>0.674</b>	<b>5,251</b>	<b>128.27</b>	<b>84.27</b>
	Jefferson Communities Water System, Inc.	0.320	-	-	0.320	1,763	181.84	76.22
	Monticello, City of	0.353	-	-	0.353	3,488	101.20	88.34
	<b>Leon County</b>	<b>30.340</b>	<b>0.000</b>	<b>0.458</b>	<b>29.882</b>	<b>256,722</b>	<b>116.40</b>	<b>62.44</b>
	Seminole Waterworks (total all service areas)	0.126	-	-	0.126	1,721	73.34	58.67
	Tallahassee, City of	26.825	-	0.458	26.367	221,204	119.20	58.81
	Talquin Electric Coop (total all service areas)	3.174	-	0.458	3.174	31,982	99.24	85.24
	Miscellaneous Small Public Systems (total)	0.215	-	-	0.215	1,815	118.57	106.71
	<b>Wakulla County</b>	<b>1.934</b>	<b>0.458</b>	<b>0.000</b>	<b>2.392</b>	<b>24,619</b>	<b>97.14</b>	<b>78.75</b>
	Panacea Area Water System, Inc.	0.207	-	-	0.207	2,828	73.25	57.47
	Sopchoppy, City of	0.852	-	-	0.852	9,397	90.72	89.44
	St. Marks, City of, Water Sys. (COT Booster Plant)	-	0.094	-	0.094	643	145.98	145.98
	Tallahassee, City of (Wakulla County portion)	-	0.364	-	0.364	2,956	123.05	67.02
	TEC, Wakulla Regional (Gulf Coast / Spring Creek)	0.847	-	-	0.847	8,449	100.23	74.46
	Wakulla County, River Sink Subdivision	0.028	-	-	0.028	346	79.52	42.83
<b>REGION VII - Totals/Average Per Capita</b>		<b>32.947</b>	<b>0.458</b>	<b>0.458</b>	<b>32.947</b>	<b>286,591</b>	<b>114.96</b>	<b>64.24</b>
<b>NFWFMD Districtwide TOTALS / Averages -</b>		<b>158.717</b>	<b>40.032</b>	<b>40.032</b>	<b>158.717</b>	<b>1,326,628</b>	<b>119.64</b>	<b>76.99</b>

## 2.1 Domestic Self-Supply 2017 Population, Water Use Estimates, and DSS Wells Estimates

Planning Region	County / Region	DSS <sup>(1)</sup> Population Estimate	Estimated DSS Water Use <sup>(2)</sup> (mgd)	GROSS DSS <sup>(3)</sup> Well Count	BEBR 2017 PPH <sup>(4)</sup>	Estimated Persons Per Well	Estimated Water Use <sup>(5)</sup> (mgd)
I	Escambia	11,242	0.997	1,645	2.38	6.83	0.347
	<b>Total/Average</b>	<b>11,242</b>	<b>0.997</b>	<b>1,645</b>	<b>2.38</b>	<b>6.83</b>	<b>0.347</b>
II	Okaloosa	9,375	0.831	3,095	2.41	3.03	0.661
	Santa Rosa	10,368	0.919	3,945	2.55	2.63	0.892
	Walton	15,896	1.409	8,684	2.37	1.83	1.825
	<b>Total/Average</b>	<b>35,638</b>	<b>3.160</b>	<b>15,724</b>	<b>2.44</b>	<b>2.50</b>	<b>3.378</b>
III	Bay	19,141	1.697	15,478	2.39	1.24	3.280
	<b>Total/Average</b>	<b>19,141</b>	<b>1.697</b>	<b>15,478</b>	<b>2.39</b>	<b>1.24</b>	<b>3.280</b>
IV	Calhoun	11,699	1.037	3,960	2.48	2.95	0.871
	Holmes	14,502	1.286	4,877	2.45	2.97	1.060
	Jackson	36,528	3.239	11,582	2.37	3.15	2.434
	Liberty	5,485	0.486	1,430	2.55	3.84	0.323
	Washington	19,285	1.710	8,292	2.49	2.33	1.831
	<b>Total/Average</b>	<b>87,500</b>	<b>7.759</b>	<b>30,141</b>	<b>2.47</b>	<b>3.05</b>	<b>6.518</b>
V	Franklin	3,667	0.325	1,194	2.26	3.07	0.239
	Gulf	5,512	0.489	1,997	2.27	2.76	0.402
	<b>Total/Average</b>	<b>9,179</b>	<b>0.814</b>	<b>3,191</b>	<b>2.27</b>	<b>2.92</b>	<b>0.641</b>
VI	Gadsden	18,731	1.661	4,067	2.52	4.61	0.909
	<b>Total/Average</b>	<b>18,731</b>	<b>1.661</b>	<b>4,067</b>	<b>2.52</b>	<b>4.61</b>	<b>0.909</b>
VII	Jefferson <sup>(NWF Only)</sup>	5,421	0.481	2,387	2.31	2.27	0.489
	Leon	32,616	2.892	10,576	2.33	3.08	2.185
	Wakulla	8,886	0.788	4,293	2.59	2.07	0.986
	<b>Total/Average</b>	<b>46,923</b>	<b>4.161</b>	<b>17,256</b>	<b>2.41</b>	<b>2.47</b>	<b>3.660</b>
<b>TOTALS/AVERAGES</b>		<b>228,356</b>	<b>20.249</b>	<b>87,502</b>	<b>2.41</b>	<b>2.61</b>	<b>18.734</b>

(1) Domestic Self-Supply (DSS) includes small limited public supply systems that are not reported or estimated in the public supply water use category.

(2) Estimated water use based on DSS population estimate times a USGS per capita Districtwide estimated rate of 88.67 gpcd (USGS, 2014).

(3) Estimates of all known DSS (DO) and limited public supply (LP) wells in NFWFMD wells inventory ArcGIS database as of 11/6/2018. May include well abandonments, modifications, repairs, and cancelled well construction permits. Wells constructed without a permit may also exist in NFWFMD.

(4) County-wide average persons per household (PPH) based on UF Bureau of Economic and Business Research (BEBR) 2017 population estimate data.

(5) For information or comparison only: estimated water use, based on number of known wells x BEBR average PPH x USGS per capita water use rate of 88.67 gpcd.

## 2.2 Domestic Self-Supply Population Estimates Over Time

Planning Region	County / Region	WSA 2013	NFWMD Annual Water Use Reports <sup>(1)</sup>							
		2010	2011 <sup>(2)</sup>	2012	2013	2014 <sup>(3)</sup>	2015	2016	2017	2018
I	Escambia	16,606		19,133	17,720	18,809	12,017	11,958	11,242	
	<b>Region I Total</b>	<b>16,606</b>	-	<b>19,133</b>	<b>17,720</b>	<b>18,809</b>	<b>12,017</b>	<b>11,958</b>	<b>11,242</b>	-
II	Okaloosa	12,367		13,885	11,731	12,224	23,940	18,595	9,375	
	Santa Rosa	22,402		11,584	11,772	8,907	2,890	1,794	10,368	
	Walton	4,218		14,117	13,106	16,009	17,616	11,508	15,896	
	<b>Region II Total</b>	<b>38,987</b>	-	<b>39,586</b>	<b>36,609</b>	<b>37,140</b>	<b>44,446</b>	<b>31,897</b>	<b>35,638</b>	-
III	Bay	17,892		18,436	17,930	18,538	17,743	16,364	19,142	
	<b>Region III Total</b>	<b>17,892</b>	-	<b>18,436</b>	<b>17,930</b>	<b>18,538</b>	<b>17,743</b>	<b>16,364</b>	<b>19,142</b>	-
IV	Calhoun	10,423		10,435	10,415	10,311	10,417	11,237	11,699	
	Holmes	13,929		14,275	14,328	14,316	14,554	14,659	14,502	
	Jackson	33,022		34,163	34,666	34,491	35,409	35,244	36,528	
	Liberty	5,092		4,410	4,407	4,584	5,478	5,460	5,485	
	Washington	16,420		17,642	17,255	17,501	18,814	18,765	19,285	
	<b>Region IV Total</b>	<b>78,886</b>	-	<b>80,925</b>	<b>81,071</b>	<b>81,203</b>	<b>84,672</b>	<b>85,366</b>	<b>87,500</b>	-
V	Franklin	1,785		2,967	1,772	1,611	1,821	1,843	3,668	
	Gulf	2,487		2,071	2,005	475	3,629	3,774	5,512	
	<b>Region V Total</b>	<b>4,272</b>	-	<b>5,038</b>	<b>3,777</b>	<b>2,086</b>	<b>5,450</b>	<b>5,617</b>	<b>9,180</b>	-
VI	Gadsden	15,173		16,119	15,095	16,286	17,085	17,155	18,731	
	<b>Region VI Total</b>	<b>15,173</b>	-	<b>16,119</b>	<b>15,095</b>	<b>16,286</b>	<b>17,085</b>	<b>17,155</b>	<b>18,731</b>	-
VII	Jefferson <sup>(NWF Only)</sup>	9,350		5,588	10,237	7,800	5,160	5,216	5,421	
	Leon	59,552		75,085	74,538	57,952	51,884	51,414	32,616	
	Wakulla	24,872		9,110	7,987	8,007	9,591	9,516	8,886	
	<b>Region VII Total</b>	<b>93,774</b>	-	<b>89,783</b>	<b>92,762</b>	<b>73,759</b>	<b>66,635</b>	<b>66,147</b>	<b>46,924</b>	-
<b>TOTALS</b>		<b>265,590</b>	-	<b>269,020</b>	<b>264,964</b>	<b>247,821</b>	<b>248,048</b>	<b>234,504</b>	<b>228,357</b>	-

(1) Population estimates from 2015 to date include seasonal population adjustments. County total BEBR estimates are adjusted with estimated impacts of seasonal residents, and public supply populations served also includes estimates of seasonal residents where applicable. District studies indicate that approximately 10% of seasonal populations are in the domestic self-supply water use category Districtwide, however, there are more estimated seasonal residents in rural counties and in some coastal counties, e.g., Franklin, Gulf, and Wakulla. Therefore, the net county populations not served by public supply, i.e. DSS, also include seasonal resident estimates.

(2) Population estimates for 2011 not compiled at the time of this report.

(3) Year 2014 included seasonal population adjustments, but only in public supply utility populations served and only in Walton and Franklin counties.

### 3.1 Agriculture Water Use - 2017 Reported and Total Estimates (mgd)

#### 2017 Reported Water Use

Planning Region	County / Region	Groundwater	Surface Water	Total REPORTED Water Use <sup>(1)</sup>	Additional FSAID <sup>(2)</sup> Estimated Water Use	FSAID V - 2016 Estimated TOTAL Water Use	FSAID IV - 2015 Estimated TOTAL Water Use
I	Escambia	0.016	-	0.016	3.180	3.196	3.348
	<b>Region I Total</b>	<b>0.016</b>	<b>0.000</b>	<b>0.016</b>	<b>3.180</b>	<b>3.196</b>	<b>3.348</b>
II	Okaloosa	0.065	-	0.065	0.336	0.402	0.393
	Santa Rosa	0.348	0.004	0.352	1.453	1.805	1.801
	Walton	0.019	-	0.019	0.557	0.576	0.604
	<b>Region II Total</b>	<b>0.432</b>	<b>0.004</b>	<b>0.436</b>	<b>2.346</b>	<b>2.783</b>	<b>2.798</b>
III	Bay	0.158	-	0.158	0.491	0.648	0.880
	<b>Region III Total</b>	<b>0.158</b>	<b>0.000</b>	<b>0.158</b>	<b>0.491</b>	<b>0.648</b>	<b>0.880</b>
IV	Calhoun	0.485	0.025	0.510	2.258	2.768	3.008
	Holmes	-	0.004	0.004	1.128	1.131	1.159
	Jackson	16.141	0.032	16.172	8.719	24.892	24.227
	Liberty	-	-	0.000	0.073	0.073	0.072
	Washington	0.092	-	0.092	0.687	0.779	0.717
	<b>Region IV Total</b>	<b>16.718</b>	<b>0.060</b>	<b>16.778</b>	<b>12.864</b>	<b>29.643</b>	<b>29.183</b>
V	Franklin	-	-	0.000	0.006	0.006	0.006
	Gulf	0.223	-	0.223	0.242	0.465	0.223
	<b>Region V Total</b>	<b>0.223</b>	<b>0.000</b>	<b>0.223</b>	<b>0.248</b>	<b>0.471</b>	<b>0.229</b>
VI	Gadsden	2.067	2.203	4.270	0.853	5.123	5.370
	<b>Region VI Total</b>	<b>2.067</b>	<b>2.203</b>	<b>4.270</b>	<b>0.853</b>	<b>5.123</b>	<b>5.370</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.591	-	0.591	0.331	0.922	0.774
	Leon	0.063	-	0.063	0.427	0.490	0.446
	Wakulla	-	-	0.000	0.190	0.190	0.194
	<b>Region VII Total</b>	<b>0.654</b>	<b>0.000</b>	<b>0.654</b>	<b>0.948</b>	<b>1.602</b>	<b>1.413</b>
<b>TOTALS</b>		<b>20.269</b>	<b>2.267</b>	<b>22.535</b>	<b>20.931</b>	<b>43.466</b>	<b>43.222</b>

(1) Agricultural water use in calendar year 2017 reported to NFWFMD.

(2) Florida Statewide Agricultural Irrigation Demand (FSAID), Florida Department of Agriculture and Consumer Services (DACS), Office of Agricultural Water Policy. This column indicates the approximate amount of additional water that is estimated to be used (but not required to be reported) in northwest Florida. This table will be updated with the total 2017 agricultural water use estimates when it becomes available (FSAID VI - 2019).

### 3.2 Agriculture 2017 Reported Water Use by Source (mgd)

Planning Region	County / Region	Water Use by Groundwater Aquifer(s)						Total Ground-water	Total Surface Water	TOTAL 2017 REPORTED WATER USE	TOTAL 2016 <sup>(1)</sup> REPORTED WATER USE
		Coastal Floridan	Inland Florida	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial				
I	Escambia	-	-	-	-	0.016	-	0.016	-	0.016	0.000
	<b>Region I Total</b>	-	-	-	-	<b>0.016</b>	-	<b>0.016</b>	-	<b>0.016</b>	<b>0.000</b>
II	Okaloosa	-	0.065	-	-	-	-	0.065	-	0.065	0.122
	Santa Rosa	-	0.140	-	-	0.208	-	0.348	0.004	0.352	0.290
	Walton	-	0.019	-	-	-	-	0.019	-	0.019	0.022
	<b>Region II Total</b>	-	<b>0.225</b>	-	-	<b>0.208</b>	-	<b>0.432</b>	<b>0.004</b>	<b>0.436</b>	<b>0.434</b>
III	Bay	-	0.158	-	-	-	-	0.158	-	0.158	0.578
	<b>Region III Total</b>	-	<b>0.158</b>	-	-	-	-	<b>0.158</b>	-	<b>0.158</b>	<b>0.578</b>
IV	Calhoun	-	0.485	-	-	-	-	0.485	0.025	0.510	1.432
	Holmes	-	-	-	-	-	-	0.000	0.004	0.004	0.017
	Jackson	-	16.141	-	-	-	-	16.141	0.032	16.172	19.619
	Liberty	-	-	-	-	-	-	-	-	0.000	0.000
	Washington	-	0.092	-	-	-	-	0.092	-	0.092	0.065
	<b>Region IV Total</b>	-	<b>16.718</b>	-	-	-	-	<b>16.718</b>	<b>0.060</b>	<b>16.778</b>	<b>21.134</b>
V	Franklin	-	-	-	-	-	-	-	-	0.000	0.000
	Gulf	-	0.223	-	-	-	-	0.223	-	0.223	0.361
	<b>Region V Total</b>	-	<b>0.223</b>	-	-	-	-	<b>0.223</b>	-	<b>0.223</b>	<b>0.361</b>
VI	Gadsden	-	2.067	-	-	-	-	2.067	2.203	4.270	3.040
	<b>Region VI Total</b>	-	<b>2.067</b>	-	-	-	-	<b>2.067</b>	<b>2.203</b>	<b>4.270</b>	<b>3.040</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.591	-	-	-	-	0.591	-	0.591	0.132
	Leon	-	0.063	-	-	-	-	0.063	0.000	0.063	0.403
	Wakulla	-	-	-	-	-	-	0.000	-	0.000	0.000
	<b>Region VII Total</b>	-	<b>0.654</b>	-	-	-	-	<b>0.654</b>	-	<b>0.654</b>	<b>0.535</b>
<b>TOTALS</b>		-	<b>20.045</b>	-	-	<b>0.224</b>	-	<b>20.269</b>	<b>2.267</b>	<b>22.535</b>	<b>26.081</b>

(1) Reported agricultural water use in calendar year 2016 for information and reference only. Reported water use in 2017 was 13% or about 3.5 mgd less than what was reported in 2016. Most of this difference is in Jackson County, Region IV.



#### 4.1 Recreational Irrigation Water Use - 2017 Reported and Total Estimates (mgd)

Planning Region	County / Region	2017 Reported Water Use			Additional Water Use Estimates <sup>(1)</sup>			ESTIMATED TOTAL WATER USE		
		Ground-water	Surface Water	Total District REPORTED Water Use	Ground-water	Surface Water	Total Additional Estimates	Ground-water	Surface Water	Estimated TOTAL Water Use
I	Escambia	0.405	0.899	1.304	1.100	0.000	1.100	1.505	0.899	2.405
	<b>Region I Total</b>	<b>0.405</b>	<b>0.899</b>	<b>1.304</b>	<b>1.100</b>	<b>0.000</b>	<b>1.100</b>	<b>1.505</b>	<b>0.899</b>	<b>2.405</b>
II	Okaloosa	1.614	1.869	3.483	1.696	0.000	1.696	3.310	1.869	5.179
	Santa Rosa	0.271	0.111	0.382	1.194	0.375	1.569	1.466	0.486	1.951
	Walton	1.499	2.227	3.726	0.690	0.187	0.878	2.189	2.415	4.604
	<b>Region II Total</b>	<b>3.384</b>	<b>4.207</b>	<b>7.591</b>	<b>3.581</b>	<b>0.562</b>	<b>4.143</b>	<b>6.965</b>	<b>4.769</b>	<b>11.734</b>
III	Bay	0.846	0.829	1.675	0.818	0.000	0.818	1.664	0.829	2.493
	<b>Region III Total</b>	<b>0.846</b>	<b>0.829</b>	<b>1.675</b>	<b>0.818</b>	<b>0.000</b>	<b>0.818</b>	<b>1.664</b>	<b>0.829</b>	<b>2.493</b>
IV	Calhoun	0.000	0.000	0.000	0.005	0.000	0.005	0.005	0.000	0.005
	Holmes	0.000	0.000	0.000	0.215	0.000	0.215	0.215	0.000	0.215
	Jackson	0.000	0.000	0.000	0.386	0.000	0.386	0.386	0.000	0.386
	Liberty	0.000	0.000	0.000	0.002	0.000	0.002	0.002	0.000	0.002
	Washington	0.274	0.000	0.274	0.013	0.000	0.013	0.288	0.000	0.288
	<b>Region IV Total</b>	<b>0.274</b>	<b>0.000</b>	<b>0.274</b>	<b>0.621</b>	<b>0.000</b>	<b>0.621</b>	<b>0.895</b>	<b>0.000</b>	<b>0.895</b>
V	Franklin	0.000	0.178	0.178	0.054	0.000	0.054	0.054	0.178	0.233
	Gulf	0.100	0.000	0.100	0.037	0.000	0.037	0.137	0.000	0.137
	<b>Region V Total</b>	<b>0.100</b>	<b>0.178</b>	<b>0.278</b>	<b>0.091</b>	<b>0.000</b>	<b>0.091</b>	<b>0.191</b>	<b>0.178</b>	<b>0.369</b>
VI	Gadsden	0.006	0.026	0.032	0.110	0.000	0.110	0.117	0.026	0.142
	<b>Region VI Total</b>	<b>0.006</b>	<b>0.026</b>	<b>0.032</b>	<b>0.110</b>	<b>0.000</b>	<b>0.110</b>	<b>0.117</b>	<b>0.026</b>	<b>0.142</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.569	0.000	0.569	0.189	0.000	0.189	0.758	0.000	0.758
	Leon	1.069	0.061	1.130	0.661	0.240	0.901	1.730	0.301	2.031
	Wakulla	0.000	0.000	0.000	0.205	0.000	0.205	0.205	0.000	0.205
	<b>Region VII Total</b>	<b>1.638</b>	<b>0.061</b>	<b>1.699</b>	<b>1.055</b>	<b>0.240</b>	<b>1.295</b>	<b>2.692</b>	<b>0.301</b>	<b>2.994</b>
<b>TOTALS</b>		<b>6.653</b>	<b>6.201</b>	<b>12.854</b>	<b>7.376</b>	<b>0.802</b>	<b>8.179</b>	<b>14.029</b>	<b>7.003</b>	<b>21.032</b>

(1) Additional non-reported estimates include estimates for Individual Water Use Permits (IWUPs) with no reporting requirements, and estimates of water use from residential and other small-scale recreational wells with General Water Use Permits (GWUPs). Estimates developed from 2015 data for the 2018 WSA.

## 4.2 Recreational Irrigation 2017 Reported Water Use by Source (mgd)

Planning Region	County / Region	Water Use by Groundwater Aquifer(s)						Total Groundwater	Net Surface Water <sup>(1)</sup>	TOTAL REPORTED WATER USE <sup>(1)</sup>
		Coastal Floridan	Inland Florida	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia	-	-	-	-	0.377	0.028	0.405	0.899	1.304
	<b>Region I Total</b>	-	-	-	-	<b>0.377</b>	<b>0.028</b>	<b>0.405</b>	<b>0.899</b>	<b>1.304</b>
II	Okaloosa	-	0.028	-	-	1.587	-	1.614	1.869	3.483
	Santa Rosa	-	-	-	-	0.271	-	0.271	0.111	0.382
	Walton	-	0.232	0.035	-	1.062	0.169	1.499	2.227	3.726
	<b>Region II Total</b>	-	<b>0.260</b>	<b>0.035</b>	-	<b>2.920</b>	<b>0.169</b>	<b>3.384</b>	<b>4.207</b>	<b>7.591</b>
III	Bay	0.100	0.024	-	-	0.015	0.707	0.846	0.829	1.675
	<b>Region III Total</b>	<b>0.100</b>	<b>0.024</b>	-	-	<b>0.015</b>	<b>0.707</b>	<b>0.846</b>	<b>0.829</b>	<b>1.675</b>
IV	Calhoun	-	-	-	-	-	-	-	-	-
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson	-	-	-	-	-	-	-	-	-
	Liberty	-	-	-	-	-	-	-	-	-
	Washington	-	0.274	-	-	-	-	0.274	-	0.274
	<b>Region IV Total</b>	-	<b>0.274</b>	-	-	-	-	<b>0.274</b>	-	<b>0.274</b>
V	Franklin	-	-	-	-	-	-	0.000	0.178	0.178
	Gulf	-	-	0.050	-	-	0.050	0.100	-	0.100
	<b>Region V Total</b>	-	-	<b>0.050</b>	-	-	<b>0.050</b>	<b>0.100</b>	<b>0.178</b>	<b>0.278</b>
VI	Gadsden	-	0.006	-	-	-	-	0.006	0.026	0.032
	<b>Region VI Total</b>	-	<b>0.006</b>	-	-	-	-	<b>0.006</b>	<b>0.026</b>	<b>0.032</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.569	-	-	-	-	0.569	-	0.569
	Leon	-	1.069	-	-	-	-	1.069	0.061	1.130
	Wakulla	-	-	-	-	-	-	0.000	-	-
	<b>Region VII Total</b>	-	<b>1.638</b>	-	-	-	-	<b>1.638</b>	<b>0.061</b>	<b>1.699</b>
	<b>TOTALS</b>	<b>0.100</b>	<b>2.202</b>	<b>0.085</b>	-	<b>3.312</b>	<b>0.954</b>	<b>6.653</b>	<b>6.201</b>	<b>12.854</b>

(1) Recreational water use systems are often complex water flows between ground and surface waters. Groundwater withdrawals may only be used to supplement surface water ponds, and at times, may be co-mingled with reclaimed water. Net surface water, and total water use, are adjusted and estimated accordingly.

## 5.1 Industrial-Commercial-Institutional (ICI) 2017 Reported Water Use by Source (mgd)

Planning Region	County / Region	Water Use by Groundwater Aquifer(s)						Total Groundwater	Total Surface Water	TOTAL WATER USE <sup>(1)</sup>
		Coastal Floridan	Inland Florida	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia	-	-	-	-	29.599	0.002	29.601	0.425	30.026
	<b>Region I Total</b>	-	-	-	-	<b>29.599</b>	<b>0.002</b>	<b>29.601</b>	<b>0.425</b>	<b>30.026</b>
II	Okaloosa	0.431	1.367	-	-	0.099	-	1.897	-	1.897
	Santa Rosa	-	-	-	-	2.738	-	2.738	-	2.738
	Walton	-	0.032	-	-	-	-	0.032	-	0.032
	<b>Region II Total</b>	<b>0.431</b>	<b>1.399</b>	-	-	<b>2.837</b>	-	<b>4.666</b>	-	<b>4.666</b>
III	Bay	0.019	0.479	-	-	-	-	0.497	23.132	23.629
	<b>Region III Total</b>	<b>0.019</b>	<b>0.479</b>	-	-	-	-	<b>0.497</b>	<b>23.132</b>	<b>23.629</b>
IV	Calhoun	-	0.205	-	-	-	-	0.205	-	0.205
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson	-	0.669	-	0.296	-	-	0.965	-	0.965
	Liberty	-	0.322	-	-	-	-	0.322	0.052	0.374
	Washington	-	0.495	-	-	-	-	0.495	-	0.495
	<b>Region IV Total</b>	-	<b>1.691</b>	-	<b>0.296</b>	-	-	<b>1.987</b>	<b>0.052</b>	<b>2.039</b>
V	Franklin	0.014	-	-	-	-	-	0.014	-	0.014
	Gulf	-	0.406	0.003	-	-	-	0.409	-	0.409
	<b>Region V Total</b>	<b>0.014</b>	<b>0.406</b>	<b>0.003</b>	-	-	-	<b>0.422</b>	-	<b>0.422</b>
VI	Gadsden	-	0.544	-	-	-	-	0.544	0.002	0.545
	<b>Region VI Total</b>	-	<b>0.544</b>	-	-	-	-	<b>0.544</b>	<b>0.002</b>	<b>0.545</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	-	-	-	-	-	-	-	-
	Leon	-	0.117	-	-	-	-	0.117	-	0.117
	Wakulla	-	1.003	-	-	-	-	1.003	-	1.003
	<b>Region VII Total</b>	-	<b>1.120</b>	-	-	-	-	<b>1.120</b>	-	<b>1.120</b>
	<b>TOTALS</b>	<b>0.463</b>	<b>5.638</b>	<b>0.003</b>	<b>0.296</b>	<b>32.436</b>	<b>0.002</b>	<b>38.838</b>	<b>23.611</b>	<b>62.448</b>

(1) Where applicable, water use that is recirculated and returned to source is, for estimating purposes, not considered to be contributing to total estimated consumptive water use. Total estimated water use is adjusted accordingly.

## 6.1 Thermoelectric Power Generation 2017 Reported Water Use by Source (mgd)

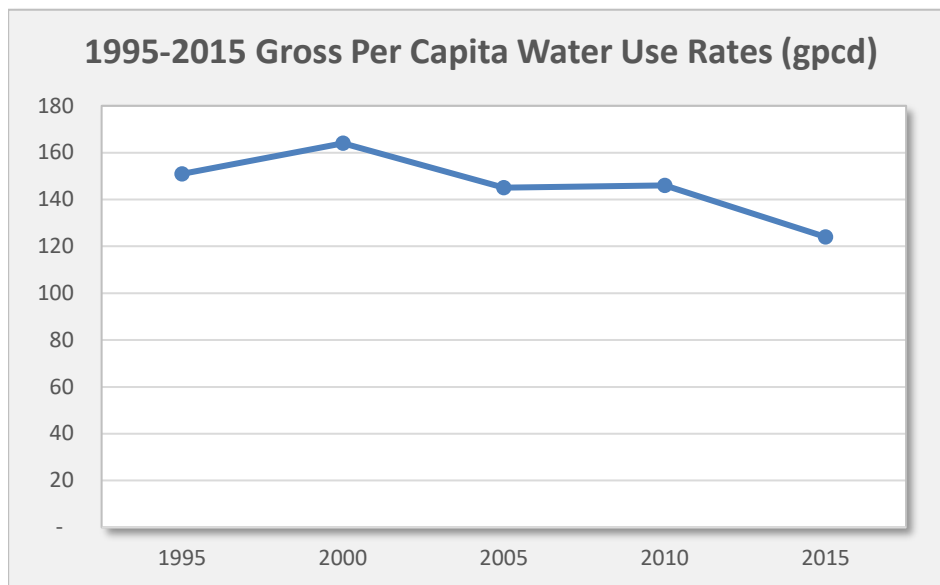
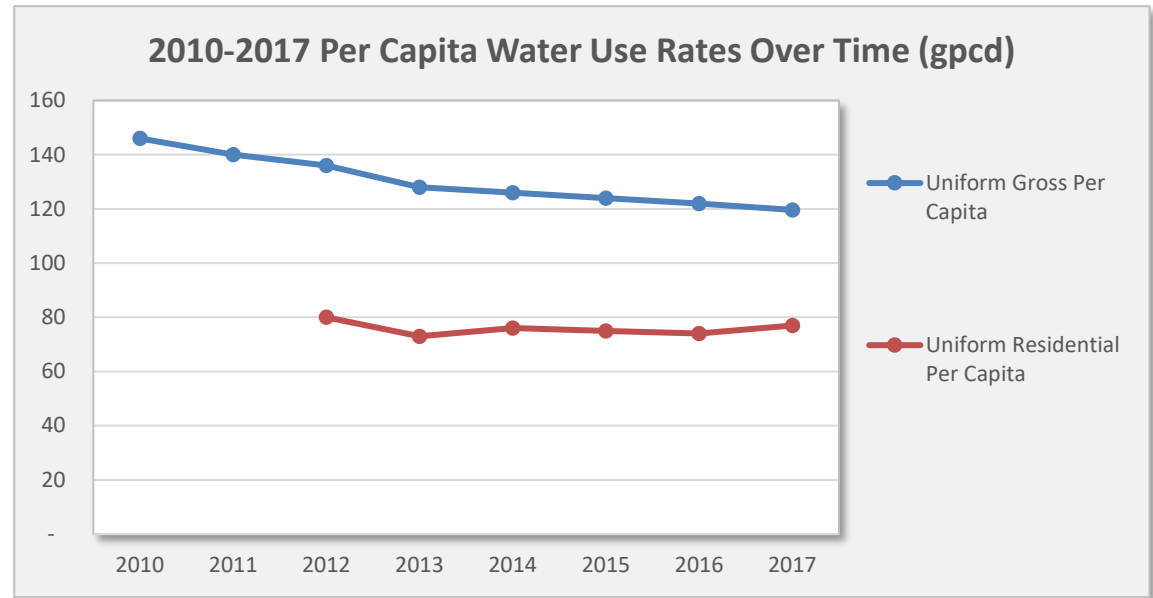
Planning Region	County / Region and Power Facility	Water Use by Groundwater Aquifer(s)						Total Groundwater	Total (Net Adjusted) Surface Water	TOTAL WATER USE <sup>(1)</sup>
		Coastal Floridan	Inland Florida	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia - Gulf / Crist	-	-	-	-	1.841	-	1.841	9.237	11.078
	Escambia - (future new)	-	-	-	-	-	-	-	-	-
	<b>Region I Total</b>	-	-	-	-	<b>1.841</b>	-	<b>1.841</b>	<b>9.237</b>	<b>11.078</b>
II	Okaloosa	-	-	-	-	-	-	-	-	-
	Santa Rosa	-	-	-	-	-	-	-	-	-
	Walton	-	-	-	-	-	-	-	-	-
	<b>Region II Total</b>	-	-	-	-	-	-	-	-	<b>0.000</b>
III	Bay - BOCC Waste Energy	-	0.100	-	-	-	-	0.100	0.000	0.100
	Bay - Gulf / Lansing Smith	-	0.820	-	-	-	-	0.820	3.420	4.240
	<b>Region III Total</b>	-	<b>0.920</b>	-	-	-	-	<b>0.920</b>	<b>3.420</b>	<b>4.340</b>
IV	Calhoun	-	-	-	-	-	-	-	-	-
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson - Gulf / Scholz	-	0.131	-	-	-	-	0.131	1.296	1.427
	Liberty - Telogia Power	-	0.489	-	-	-	-	0.489	-	0.489
	Washington	-	-	-	-	-	-	-	-	-
	<b>Region IV Total</b>	-	<b>0.621</b>	-	-	-	-	<b>0.621</b>	<b>1.296</b>	<b>1.917</b>
V	Franklin	-	-	-	-	-	-	-	-	-
	Gulf	-	-	-	-	-	-	-	-	-
	<b>Region V Total</b>	-	-	-	-	-	-	-	-	<b>0.000</b>
VI	Gadsden	-	-	-	-	-	-	-	-	-
	<b>Region VI Total</b>	-	-	-	-	-	-	-	-	<b>0.000</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	-	-	-	-	-	-	-	-
	Leon - City of Tallahassee <sup>(2)</sup>	-	2.500	-	-	-	-	2.500	-	2.500
	Wakulla - City of Tallahassee	-	-	-	-	-	-	-	0.371	0.371
	<b>Region VII Total</b>	-	<b>2.500</b>	-	-	-	-	<b>2.500</b>	<b>0.371</b>	<b>2.871</b>
<b>TOTALS</b>		-	<b>4.041</b>	-	-	<b>1.841</b>	-	<b>5.882</b>	<b>14.324</b>	<b>20.206</b>

(1) Water withdrawn from surface water sources is typically used for cooling and returned to the source, and is not considered or estimated as consumptive water use.

(2) Arvah B. Hopkins Generating Station, Florida DEP Site Certification #PA 74-03. Provisional amount for estimated use, which was 1.95 mgd in 2015. Water withdrawal projections provided by the City of Tallahassee in March 2017 are 4.93 mgd throughout twenty year planning horizon 2020-2040.

## NWFWMD 1995-2017 Public Supply Per Capita Water Use Over Time (gpcd)

Year	Uniform Gross Per Capita	Uniform Residential Per Capita
<b>1995</b>	151	
<b>2000</b>	164	
<b>2005</b>	145	
<b>2010</b>	146	
2011	140	
2012	136	80
2013	128	73
2014	126	76
<b>2015</b>	124	75
2016	122	74
2017	120	77



### Five-Year Per Capita Averages, 2013-2017

**Uniform Gross Per Capita (gpcd) 123.93**

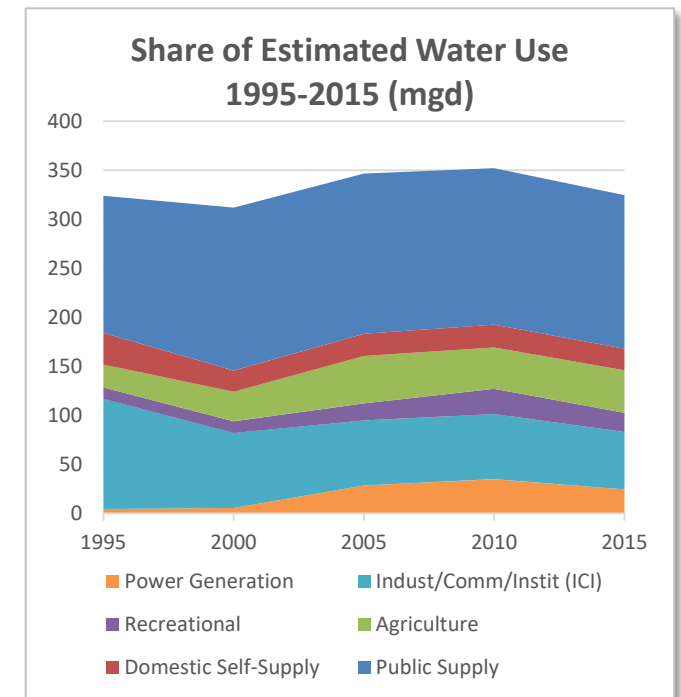
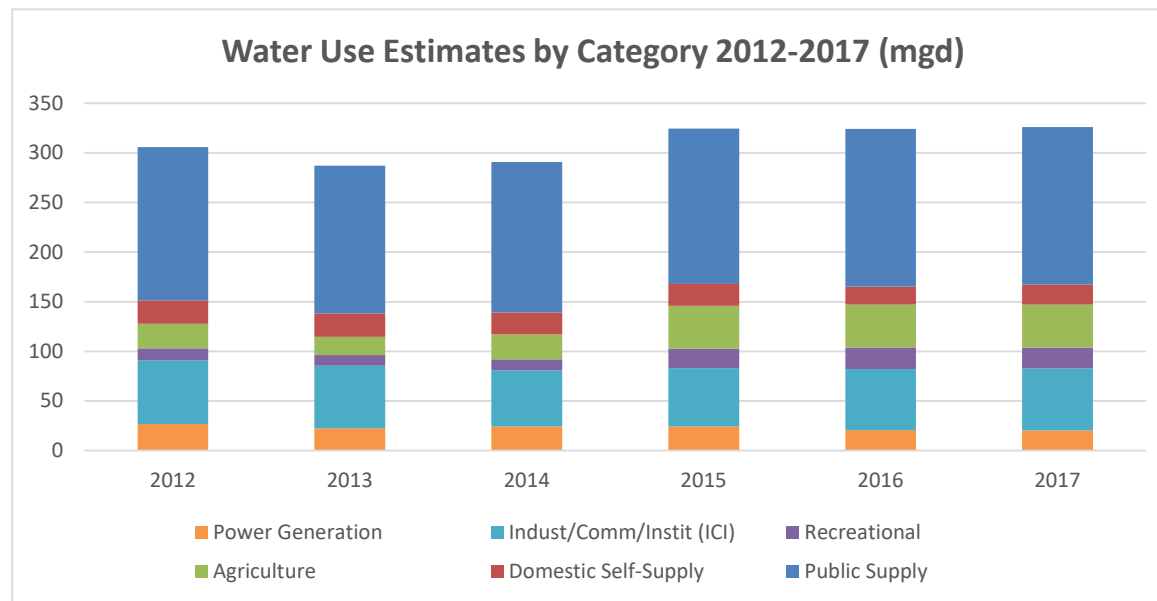
**Uniform Residential Per Capita (gpcd) 75.00**

**NOTES.** Public supply per capita rates, in gallons per capita per day (gpcd), are calculated from public supply water use data and estimates of populations served. The sources of per capita rates are district water supply assessments and, since 2012, annual water use reports. Also since 2012 per capita data has been submitted to DEP in the form of Fourth Quarter Metrics. Since 2015, populations served estimates include seasonal resident adjustments in all counties.

## NWFWMD 1995-2017 Trends in Share of and Total Water Use Estimates, By Water Use Category (mgd)

Districtwide	1995	2000	2005	2010	2011*	2012	2013	2014	2015	2016	2017
Public Supply	139.790	166.160	163.481	159.570		154.270	149.088	151.549	156.495	159.084	158.717
Domestic Self-Supply	32.140	21.632	22.386	23.272		23.754	23.361	22.216	22.021	20.794	20.249
Agriculture	23.400	30.100	48.630	42.030		24.817	18.410	25.157	43.240	43.360	43.466
Recreational	11.500	12.060	17.310	25.905		11.777	10.698	10.846	19.595	21.594	21.032
Indust/Comm/Instit (ICI)	112.450	76.280	66.160	66.440		64.411	63.238	56.664	58.703	61.581	62.448
Power Generation	4.470	5.650	28.530	34.820		26.708	22.373	24.357	24.335	20.676	20.206
<b>Total Water Use</b>	<b>323.750</b>	<b>311.882</b>	<b>346.550</b>	<b>352.030</b>	<b>-</b>	<b>305.737</b>	<b>287.168</b>	<b>290.789</b>	<b>324.389</b>	<b>327.089</b>	<b>326.118</b>

\*2011 water use estimates not compiled at the time of this report.



### NOTES.

1. Agriculture and recreational water use estimates vary over time. In some cases, they are the sum of reported water use plus additional estimating methods (2005, 2010, 2015-2017). In other years (1995, 2000; 2012-2014), agriculture and recreational estimates appear to be from reported use only.
2. In 2010, the agriculture water use estimate of 42.03 mgd reflects the value after corrections made in Gadsden County agricultural water use. Therefore, both the agriculture and total water use estimates do not match the WSA 2013 report data (errata never issued).
3. Differences in water use categories over time may reflect moving permittees from one category to another, for example, an industrial use moved to power generation, or splitting a permittees major uses across two or more water use categories (e.g. a municipality that also serves a correctional facility).



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