

# **2020 Estimated Water Use**

*in the*

**Northwest Florida Water Management District**

# **SUMMARY REPORT**



**March 2022**

**TRS-22-2**

# 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) water supply assessments, regional water supply plans, groundwater models and 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. Agricultural,
4. Recreational Irrigation (golf course, landscape),
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 million gallons per day (mgd) of water use or 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. With numerous small towns and rural areas in NFWFMD, in an average year about 30 percent of IWUPs 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.).

<sup>2</sup> Additional water use estimates include IWUPs and other small-scale recreational wells with General Water Use Permits (GWUPs) with no reporting requirements.

Public supply data include estimates of water production, transfers, and demand; as well as estimates of populations served and per capita water use rates. Domestic self-supply is estimated based on population and a per capita rate. Agricultural water use is reported, but the total estimate is based on the Florida Department of Agriculture and Consumer Services (FDACS) Florida Statewide Agricultural Irrigation Demand (FSAID) estimates. Recreational irrigation estimates are a combination of reported pumpage and additional estimated use.<sup>2</sup> Industrial-commercial-institutional (ICI) and power generation water use are estimated from reported pumpage and adjusted for returns. 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, which include migrant workers, are estimated to affect public supply and DSS water use in all sixteen counties. Therefore, population estimates for public supply, DSS, and by county include seasonal resident adjustments.

This report summarizes the District’s reported and estimated water use in calendar year 2020. An overview of District land use and water supply planning regions is illustrated in Figure 1, below.

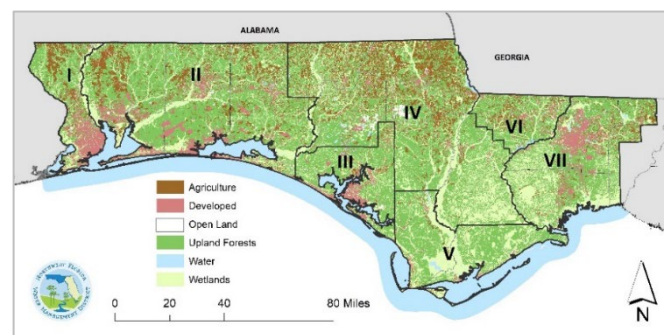


Figure 1. NFWFMD Land Use and Planning Regions (I - VII)

# 2020 Water Use Summary

As illustrated 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. Holmes, Washington, 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 2020 totaled more than 340 mgd and is summarized by region and water use category in Table 1 and Figure 2.

Escambia County (Region I) accounted for 24 percent of all District estimated water use in 2020, nearly 83 mgd. Region II was the second largest user with 76 mgd or 22 percent. Bay County was the third largest in water use, followed by regions IV and VII.

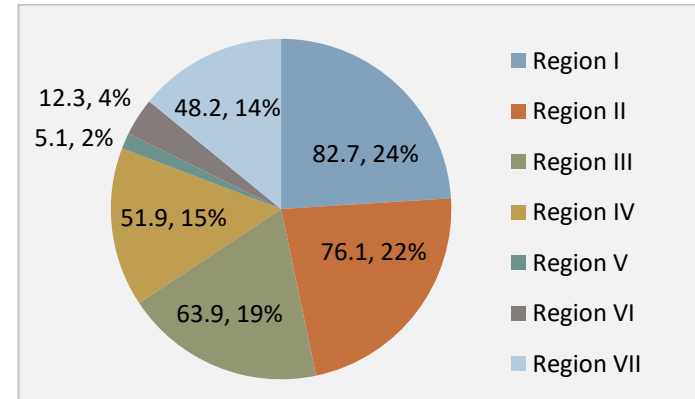


Figure 2. Estimated Water Use by Planning Region (mgd)

In 2020, public supply accounted for more than half of all Districtwide water use (172 mgd), followed by ICI at 66 mgd, and then agriculture (49 mgd). Recreation, DSS and power generation range from four to six percent of total water use (Table 1 and Figure 4).

Public supply has consistently been the largest water use category Districtwide since 1995 (see Appendix, page A.20). Public supply water use is concentrated in urbanized portions of regions I, II, III, and VII (Table 1 and Figure 2). Region IV, predominately rural and agricultural, had 37 percent of all DSS and 71 percent of all agricultural water use.

Region II had 57 percent of all recreational water use. Escambia County had 46 percent of all industrial-commercial-institutional (ICI) self-supplied water use and 39 percent of power generation water use.

Table 1. Estimated Water Use by Category and by Region (mgd)

Planning Region	Public Supply	Domestic Self-Supply	Agriculture	Recreation	ICI	Power Generation	TOTAL WATER USE (mgd)
Region I	40.09	1.85	2.49	2.30	30.53	5.45	82.72
Region II	54.17	2.24	2.75	12.28	4.69	0.00	76.13
Region III	29.36	0.84	0.89	2.05	26.48	4.27	63.89
Region IV	5.88	6.77	34.64	0.92	2.08	1.64	51.92
Region V	3.88	0.37	0.31	0.37	0.18	0.00	5.12
Region VI	4.40	1.40	5.81	0.17	0.47	0.00	12.25
Region VII	33.82	4.66	2.23	3.55	1.25	2.71	48.21
<b>TOTALS</b>	<b>171.60</b>	<b>18.13</b>	<b>49.11</b>	<b>21.64</b>	<b>65.69</b>	<b>14.07</b>	<b>340.24</b>

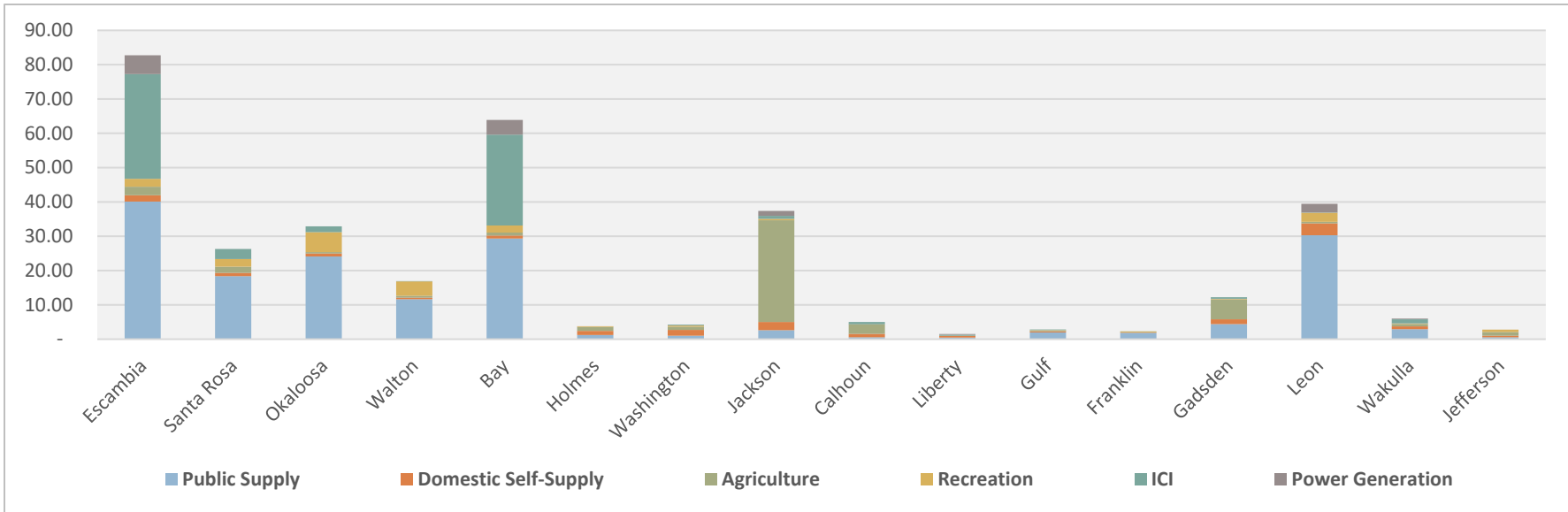


Figure 3. Total Water Use by County and Water Use Category (mgd)

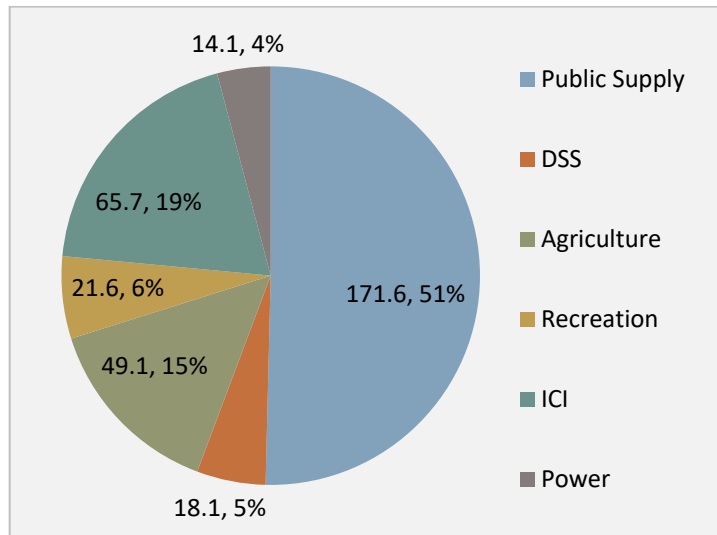


Figure 4. Total Water Use by Category (mgd)

## Population Estimates

The University of Florida, Bureau of Business and Economic Research (BEER), estimated 2020 District population to be 1,492,875 (Table 2).

Table 2. Population Estimates

REGION	BEER Permanent Populations	Seasonal Adjustments	TOTAL <sup>2</sup> Population Estimates
Region I	323,714	10,359	334,073
Region II	463,328	58,663	521,991
Region III	174,410	20,929	195,339
Region IV	114,986	3,564	118,550
Region V	26,588	7,866	34,454
Region VI	46,226	1,109	47,335
Region VII <sup>1</sup>	343,623	3,552	347,175
<b>TOTALS</b>	<b>1,492,875</b>	<b>106,043</b>	<b>1,598,918</b>

<sup>1</sup> Estimated NFWFMD share of Jefferson County only.

<sup>2</sup> Total population estimates, including seasonal adjustments.

The effects of seasonality were estimated to add an equivalent of 106,043 residents for a total adjusted population estimate of 1,598,918. About 87 percent of District residents are estimated to be served by public supply utilities.

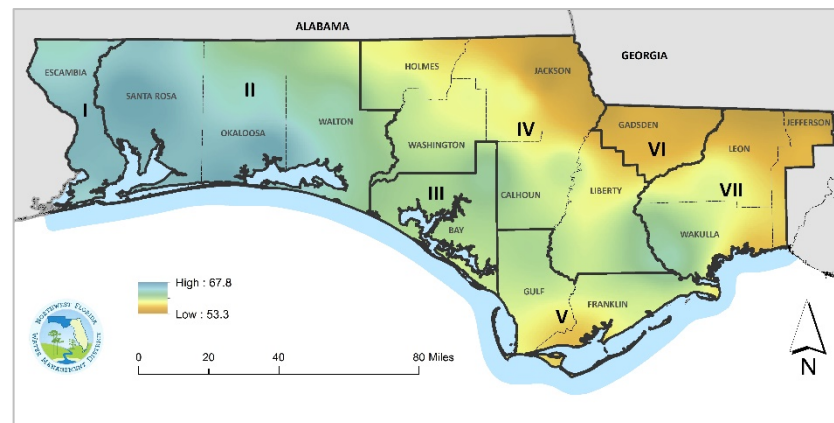
The 2020 BEBR Districtwide population estimate is 27,040 more than 2019, following trends seen before the slight decrease in the 2019 estimate likely due to continued recovery from Hurricane Michael.

**Table 3. BEBR Population Estimates 2019-2020**

	BEBR Population Estimates		2019-2020 Change	
	2020	2019	Population	Percent
Escambia	323,714	321,134	2,580	0.8%
Okaloosa	203,951	201,514	2,437	1.2%
Santa Rosa	184,653	179,054	5,599	3.1%
Walton	74,724	70,071	4,653	6.6%
Bay	174,410	167,283	7,127	4.3%
Calhoun	14,489	14,067	422	3.0%
Holmes	20,001	20,049	(48)	-0.2%
Jackson	46,587	46,969	(382)	-0.8%
Liberty	8,575	8,772	(197)	-2.2%
Washington	25,334	25,387	(53)	-0.2%
Franklin	11,864	12,273	(409)	-3.3%
Gulf	14,724	13,082	1,642	12.6%
Gadsden	46,226	46,277	(51)	-0.1%
Jefferson <sup>(NWF Only)</sup>	10,158	10,428	(270)	-2.6%
Leon	299,484	296,499	2,985	1.0%
Wakulla	33,981	32,976	1,005	3.0%
<b>TOTALS</b>	<b>1,492,875</b>	<b>1,465,835</b>	<b>27,040</b>	<b>1.8%</b>

## Rainfall and Drought

Precipitation varies regionally with more rain naturally occurring in the western panhandle and lower rainfall levels typical in north-eastern parts of the District (Figure 5). The 2020 annual average rainfall Districtwide at nearly 65.9 inches was above the normal annual average of 60.7 inches (Figure 5).



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

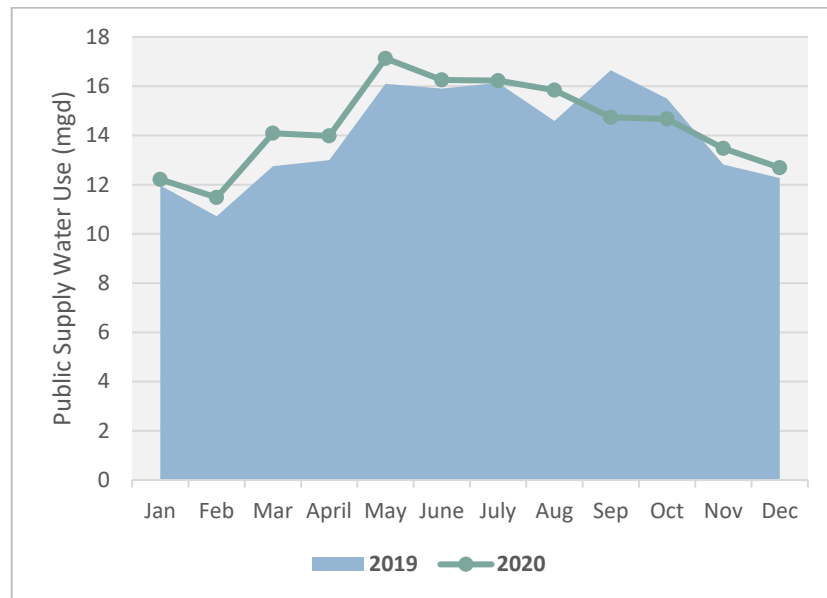
Agriculture and recreation are the two water use categories most affected by rainfall and drought. More precipitation information is in the Agricultural and Recreational Irrigation section.

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 2020 was estimated to be 171.6 mgd, half of all water use Districtwide. With seasonal adjustments, estimated public supply populations served totaled 1.39 million. Approximately 58 percent of all public supply water use was in the District's three most urbanized counties: Escambia, Bay, and Leon; and nearly 92 percent was in regions I, II, III and VII.



**Figure 4. Monthly Average Public Supply Water Use (mgd)**

Districtwide monthly average public supply water use during 2019 and 2020 is illustrated in Figure 6. Lowest water use generally occurs during winter months. Higher water consumption from May through October is likely due to landscape irrigation needs or the impacts from seasonal residents in some communities, or both.

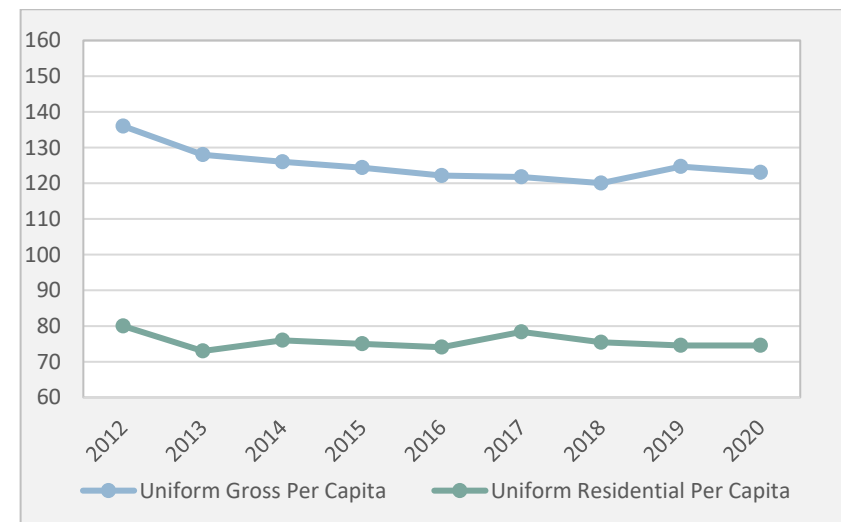
<sup>4</sup> Gallons per capita per day (gpcd).

The estimated 2020 DSS population was 204,423. With a domestic per capita water use rate of 88.67 gpcd<sup>4</sup> (USGS, 2014), the estimated domestic self-supply (DSS) water use was about 18.1 mgd.

Together, public supply and DSS comprised approximately 56 percent of all water use Districtwide in 2020.

## Per Capita Water Use Rates

The 2020 Districtwide public supply per capita water use rates were 123.05 gpcd gross and 74.56 gpcd residential. Gross per capita rates have been in a general downward trend and residential rates relatively constant (Figure 7). See Appendix, page A.19, for more information.



**Figure 5. Trends in Per Capita Water Use Rates 2012-2020 (gpcd)**

Five-year average per capita rates over the period 2016-2020 are:

- Average Uniform Gross Per Capita: 122.33 gpcd
- Average Uniform Residential Per Capita: 75.40 gpcd

# Agricultural and Recreational Irrigation

The Districtwide annual average rainfall in 2020 was above average (Figure 8). From 2011 to 2020, the data appears to indicate that reported agricultural water use generally has an inverse relationship to annual average precipitation though this is dependent on the time of year that precipitation occurs.

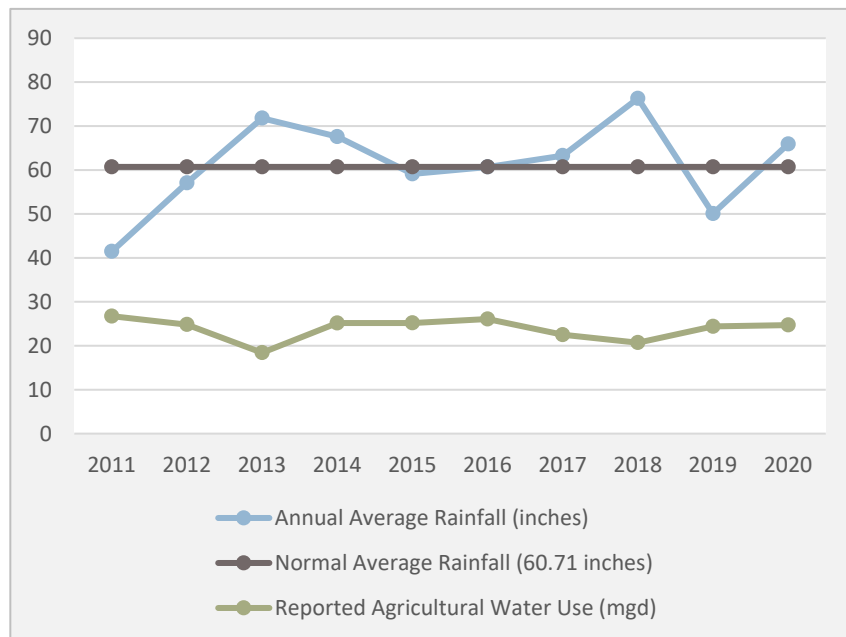


Figure 6. Rainfall and Agricultural Reported Water Use 2011-2020

The reported agricultural water use in 2020 was 24.7 mgd, about 50 percent of the most recent FSAID total agricultural estimate of 49.1 mgd (2019 data). Ninety-four percent of reported agricultural water withdrawals are from groundwater. Ninety percent of the reported surface water withdrawals were in Gadsden County.

Monthly average reported agricultural water use during calendar years 2018, 2019, and 2020 is illustrated in Figure 9.

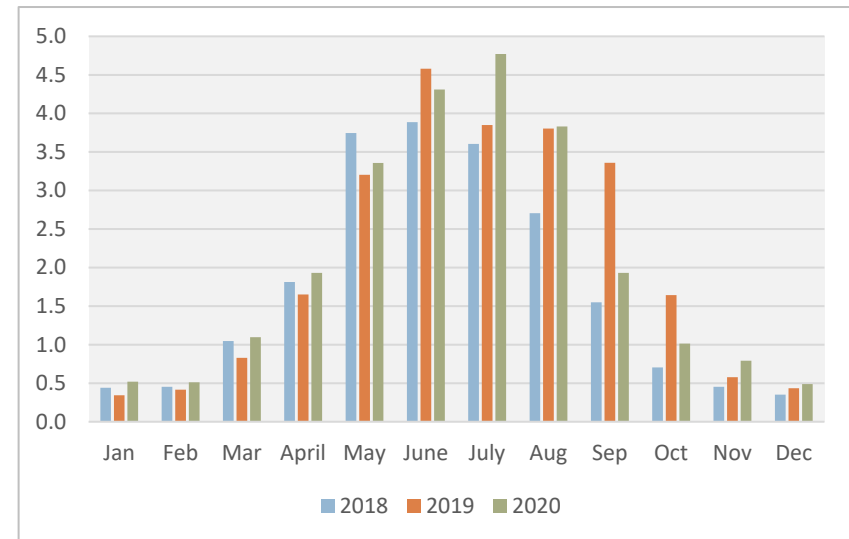


Figure 7. Reported Agricultural Water Use by Month (mgd)

Recreational water uses include golf course and landscape irrigation, and water-based recreation. About 70 percent of small-scale irrigation GWUP wells in NFWMD are estimated to be in Region II. Also, Region II had 60 percent of the reported and 57 percent of the total estimated recreational water use Districtwide.

The total estimated recreational water use in 2020 was 21.6 mgd. Reported recreational water use was 13.2 mgd or about 61 percent of the total. The sources of reported recreational water use are about 60-40 ground to surface water. Other sources of water may include reuse of reclaimed water or co-mingling of surface, ground, and reuse waters, which were not analyzed at the time of this report.

Collectively, agricultural and recreational irrigation were estimated to comprise about 21 percent of all water use Districtwide in 2020.



## Power Generation and ICI

Thermoelectric power generation and ICI self-supplied water use estimates in 2020, adjusted for recirculation, were about 14.1 mgd and 65.7 mgd respectively. Power generation and ICI together were about 23 percent of all 2020 water use Districtwide.

Eighty-seven percent of ICI self-supply water use was in Escambia and Bay counties, 7 percent in Region II, and 6 percent in the remaining District counties. Additional ICI water users are served by public supply utilities. Of the total ICI self-supplied water use, 60 percent was groundwater and 40 percent surface waters.

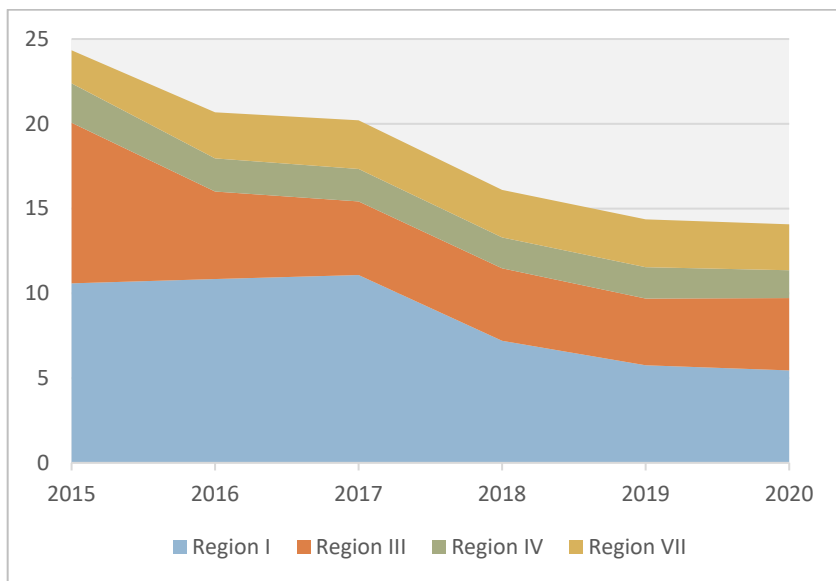


Figure 8. Trends in Power Water Use 2015-2020 (mgd)

Figure 10 illustrates total power water use from 2015 to 2020 in regions that have thermoelectric power generation facilities. Factors contributing to declining water use trends may include conservation, system efficiencies, and fuel conversions.

## Water Withdrawals by Water Source

Primary groundwater resources 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 65 percent of water withdrawals in 2020 were from groundwater, 20 percent from surface waters, and 15 percent “Other Water” – which are unknown or uncertain sources of water attributed to DSS and to additional agricultural and recreational water use estimates (Figure 11). Withdrawals from the Floridan aquifer accounted for an estimated 35 percent of all water use and over half of all groundwater withdrawals. Approximately 28% of groundwater withdrawals were from the sand-and-gravel aquifer. Less than one percent of groundwater pumped was from other aquifers, including the intermediate, Claiborne, and surficial aquifer systems.

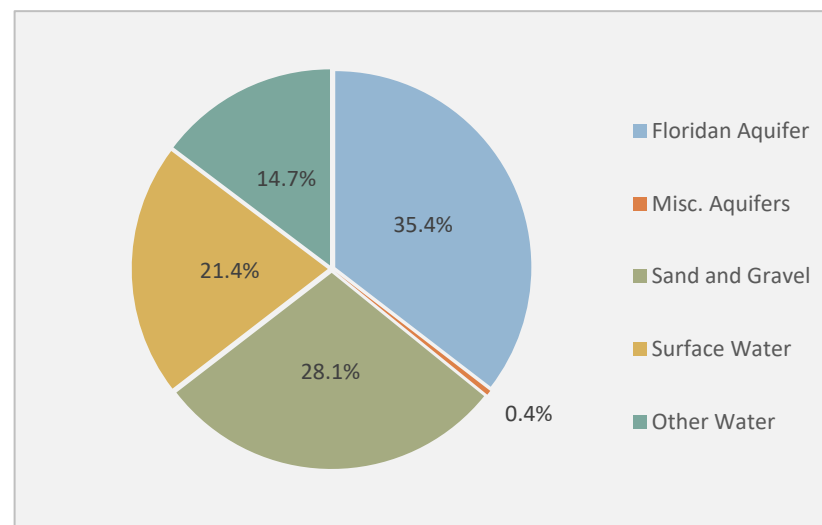


Figure 9. NFWFMD 2020 Water Use by Water Source



# Data Quality and Uncertainty Analysis

In 2020, about 85 percent (290 mgd) of all estimated water use was from reported and audited compliance data submitted by permittees that have an Individual Water Use Permit (IWUP). The remaining water use estimates are generated or affected by the following:

- Domestic Self-Supply (DSS) – 100% estimated from population that is not served by public supply and a domestic per capita water use rate provided by USGS.
- Agriculture – Half of the total FDACS/FSAID<sup>5</sup> estimate is NFWFMD reported and audited pumping reports.
- Recreation – About 61 percent of the recreational estimate was from audited pumping reports. The total includes water use estimated from small-scale irrigation wells.
- Power – Some power generating facilities with DEP Site Certifications do not have an IWUP or have limited IWUP compliance reporting conditions. About 2.7 mgd of power estimates reflect this uncertainty.

Also, changes in regulatory criteria, type and frequency of compliance reports submitted by permittees, and changes in the number of permittees with reporting requirements can all affect the availability and quality of water use and population data.

The District continues refining data and methods to enhance population estimates for public supply and DSS, including how to account for ICI institutional residents and limited public supply populations in overall population analyses.

Inmate populations are included in BEBR estimates. In 2020, BEBR estimated that NFWFMD had close to seven percent of the total state

population and 29 percent of Florida's inmate population. Share of inmate populations by county are in Table 4.

Correctional facility IWUPs often provide water for multiple use categories (e.g., agriculture, heating and cooling, landscape irrigation) and may still be separately dependent on a public supply utility for potable water supplies.

**Table 4. BEBR 2020 Total and Inmate Population Estimates**

COUNTY	Total BEBR Estimate	Inmates Estimate	Net Total (less inmates)	Inmates as a % of Total BEBR	Inmates % of Net Total
<b>LIBERTY</b>	8,575	1,749	6,826	20.4%	25.6%
<b>JACKSON</b>	46,587	5,570	41,017	12.0%	13.6%
<b>CALHOUN</b>	14,489	1,569	12,920	10.8%	12.1%
<b>FRANKLIN</b>	11,864	1,252	10,612	10.6%	11.8%
<b>WAKULLA</b>	33,981	2,971	31,010	8.7%	9.6%
<b>WASHINGTON</b>	25,334	1,969	23,365	7.8%	8.4%
<b>HOLMES</b>	20,001	1,489	18,512	7.4%	8.0%
<b>GULF</b>	14,724	1,088	13,636	7.4%	8.0%
<b>GADSDEN</b>	46,226	3,033	43,193	6.6%	7.0%
<b>SANTA ROSA</b>	184,653	4,968	179,685	2.7%	2.8%
<b>WALTON</b>	74,724	1,478	73,246	2.0%	2.0%
<b>ESCAMBIA</b>	323,714	2,353	321,361	0.7%	0.7%
<b>BAY</b>	174,410	1,110	173,300	0.6%	0.6%
<b>OKALOOSA</b>	203,951	1,295	202,656	0.6%	0.6%
<b>LEON</b>	299,484	1,210	298,274	0.4%	0.4%
<b>JEFFERSON<sup>(NWF)</sup></b>	10,158	-	10,158	0.0%	0.0%
<b>TOTALS</b>	<b>1,492,875</b>	<b>33,104</b>	<b>1,459,771</b>	<b>2.20%</b>	<b>2.30%</b>

<sup>5</sup> The FDACS/FSAID agriculture estimates are typically completed by June following water management district annual estimates, in this case, FSAID VIII released in June

2021 was prepared with 2019 water use data. The water demand estimates are modeled based on average hypothetical rainfall.

## Acronyms

---

BEBR	Bureau of Business and Economic Research
DSS	Domestic Self-Supply
F.A.C.	Florida Administrative Code
FDACS	Florida Department of Agriculture and Consumer Services
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
MFLs	Minimum Flows and Minimum Water Levels
USGS	United States Geological Survey

## References and Additional Information

---

- Bureau of Business and Economic Research (BEBR). 2021. *Florida Estimates of Population 2020*. 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 (FDACS) and The Balmoral Group (TBG). June 30, 2021. *Florida Statewide Agricultural Irrigation Demand 2019-2045 Agricultural Water Demands* (FSAID VII). <https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Water-Supply-Planning>
- Northwest Florida Water Management District (NFWMD). December 2018. *2018 Water Supply Assessment Update*. WRA 18-01. <https://www.nfwwater.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.

## APPENDIX CONTENTS

## Page(s)

### Districtwide Water Use and Population Estimates:

NWFWMD 2020 Total Estimated Water Use by Category (mgd).....	A.01
NWFWMD 2020 Total Estimated Water Withdrawals by Source (mgd).....	A.02
NWFWMD 2020 Population Estimates - County, Public Supply Utility, and Domestic Self-Supply.....	A.03

### Summary 2020 Data Tables by Water Use Category:

#### **1. Public Supply**

1.1 Public Supply Water Demand, Populations Served, and Per Capita Water Use.....	A.04
1.2 Public Supply Water Withdrawals by Source (mgd).....	A.05
1.3 Public Supply Water Demand, Populations Served, and Per Capita Water Use - by Utility.....	A.06 – A.10

#### **2. Domestic Self-Supply**

2.1 Domestic Self-Supply Population and Water Use Estimates (mgd).....	A.11
2.2 Domestic Self-Supply Population Estimates Over Time.....	A.12

#### **3. Agriculture**

3.1 Agriculture Water Use - Reported and Total Estimates (mgd).....	A.13
3.2 Agriculture Reported Water Use by Source (mgd).....	A.14

#### **4. Recreational Irrigation**

4.1 Recreational Irrigation Water Use - Reported and Total Estimates (mgd).....	A.15
4.2 Recreational Irrigation Reported Water Use by Source (mgd).....	A.16

#### **5. Industrial-Commercial-Institutional**

5.1 Industrial-Commercial-Institutional Reported Water Use by Source (mgd).....	A.17
---	------

#### **6. Thermoelectric Power Generation**

6.1 Thermoelectric Power Generation Reported Water Use by Source (mgd).....	A.18
---	------

### Water Use Trends:

NWFWMD 1995-2020 Public Supply Per Capita Water Use Over Time (gpcd).....	A.19
NWFWMD 1995-2020 Trends in Share of and Total Water Use Estimates, by Water Use Category (mgd).....	A.20

## NFWWMD 2020 Total Estimated Water Use by Category (mgd)

Planning Region	County / Region	Public Supply	Domestic Self-Supply	Agriculture <sup>(1)</sup>	Recreation <sup>(2)</sup>	ICI	Power Generation	TOTAL ESTIMATED WATER USE (mgd)
I	Escambia	40.091	1.853	2.487	2.303	30.530	5.453	82.716
	<b>Region I Total</b>	<b>40.091</b>	<b>1.853</b>	<b>2.487</b>	<b>2.303</b>	<b>30.530</b>	<b>5.453</b>	<b>82.716</b>
II	Okaloosa	24.103	0.888	0.409	5.806	1.671	-	32.877
	Santa Rosa	18.391	0.928	1.808	2.257	2.925	-	26.309
	Walton	11.675	0.425	0.534	4.217	0.094	-	16.943
	<b>Region II Total</b>	<b>54.169</b>	<b>2.241</b>	<b>2.751</b>	<b>12.279</b>	<b>4.690</b>	-	<b>76.130</b>
III	Bay	29.359	0.842	0.888	2.050	26.480	4.271	63.891
	<b>Region III Total</b>	<b>29.359</b>	<b>0.842</b>	<b>0.888</b>	<b>2.050</b>	<b>26.480</b>	<b>4.271</b>	<b>63.891</b>
IV	Calhoun	0.546	0.993	2.831	0.005	0.646	-	5.020
	Holmes	1.222	1.216	1.116	0.215	-	-	3.769
	Jackson	2.613	2.407	29.648	0.386	0.898	1.431	37.383
	Liberty	0.482	0.452	0.096	0.002	0.259	0.206	1.496
	Washington	1.013	1.698	0.949	0.311	0.282	-	4.253
	<b>Region IV Total</b>	<b>5.876</b>	<b>6.767</b>	<b>34.639</b>	<b>0.918</b>	<b>2.085</b>	<b>1.637</b>	<b>51.922</b>
V	Franklin	1.903	0.066	0.006	0.284	0.017	-	2.276
	Gulf	1.980	0.304	0.299	0.090	0.166	-	2.839
	<b>Region V Total</b>	<b>3.883</b>	<b>0.370</b>	<b>0.305</b>	<b>0.373</b>	<b>0.183</b>	-	<b>5.115</b>
VI	Gadsden	4.395	1.397	5.812	0.174	0.472	-	12.251
	<b>Region VI Total</b>	<b>4.395</b>	<b>1.397</b>	<b>5.812</b>	<b>0.174</b>	<b>0.472</b>	-	<b>12.251</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.580	0.422	1.096	0.674	-	-	2.772
	Leon	30.309	3.446	0.437	2.666	0.084	2.500	39.442
	Wakulla	2.934	0.789	0.698	0.205	1.166	0.207	5.999
	<b>Region VII Total</b>	<b>33.823</b>	<b>4.656</b>	<b>2.231</b>	<b>3.545</b>	<b>1.250</b>	<b>2.707</b>	<b>48.213</b>
	<b>TOTALS</b>	<b>171.597</b>	<b>18.127</b>	<b>49.112</b>	<b>21.643</b>	<b>65.691</b>	<b>14.068</b>	<b>340.237</b>
	<b>Percent of Total Water Use:</b>	<b>50.4%</b>	<b>5.3%</b>	<b>14.4%</b>	<b>6.4%</b>	<b>19.3%</b>	<b>4.1%</b>	<b>100%</b>

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

(1) FSAID VIII - 2019 estimated water use based on average hypothetical precipitation.

(2) Estimate of 2020 reported recreational water use and additional estimating methods and data used in the 2018 WSA.

## NFWWMD 2020 Total Estimated Water Withdrawals by Source (mgd)

Planning Region	County / Region	Coastal Floridan	Inland Floridan	Inter-mediate	Claiborne	Sand and Gravel	Surficial	Total Ground-water	Total Other Water <sup>(1)</sup>	Total Surface Water	TOTAL ESTIMATED WATER USE
I	Escambia	-	-	-	-	71.285	0.075	71.360	5.435	5.921	82.716
	<b>Region Totals</b>	-	-	-	-	<b>71.285</b>	<b>0.075</b>	<b>71.360</b>	<b>5.435</b>	<b>5.921</b>	<b>82.716</b>
II	Okaloosa	12.883	9.472	-	-	1.973	-	24.327	3.041	2.138	29.506
	Santa Rosa	0.948	0.422	-	-	20.839	-	22.209	3.612	0.489	26.309
	Walton	1.257	14.379	0.157	-	1.547	0.158	17.497	1.506	1.311	20.314
	<b>Region Totals</b>	<b>15.088</b>	<b>24.273</b>	<b>0.157</b>	-	<b>24.358</b>	<b>0.158</b>	<b>64.034</b>	<b>8.158</b>	<b>3.938</b>	<b>76.130</b>
III	Bay	0.204	3.637	-	-	0.015	0.430	4.285	2.107	57.498	63.891
	<b>Region Totals</b>	<b>0.204</b>	<b>3.637</b>	-	-	<b>0.015</b>	<b>0.430</b>	<b>4.285</b>	<b>2.107</b>	<b>57.498</b>	<b>63.891</b>
IV	Calhoun	-	2.621	-	-	-	-	2.621	2.353	0.046	5.020
	Holmes	-	0.934	-	0.252	-	-	1.186	2.547	-	3.733
	Jackson	-	20.893	-	0.172	-	-	21.065	14.971	1.347	37.383
	Liberty	-	0.901	-	-	-	0.044	0.945	0.550	0.001	1.496
	Washington	-	1.662	-	-	-	-	1.662	2.578	0.050	4.289
	<b>Region Totals</b>	-	<b>27.012</b>	-	<b>0.424</b>	-	<b>0.044</b>	<b>27.479</b>	<b>22.999</b>	<b>1.444</b>	<b>51.922</b>
V	Franklin	1.920	-	-	-	-	-	1.920	0.130	0.226	2.276
	Gulf	0.417	0.581	0.024	-	-	0.023	1.045	0.361	1.433	2.839
	<b>Region Totals</b>	<b>2.337</b>	<b>0.581</b>	<b>0.024</b>	-	-	<b>0.023</b>	<b>2.966</b>	<b>0.491</b>	<b>1.659</b>	<b>5.115</b>
VI	Gadsden	-	6.938	-	-	-	-	6.938	3.998	1.315	12.250
	<b>Region Totals</b>	-	<b>6.938</b>	-	-	-	-	<b>6.938</b>	<b>3.998</b>	<b>1.315</b>	<b>12.250</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	2.031	-	-	-	-	2.031	0.741	-	2.772
	Leon	-	34.659	-	-	-	-	34.659	4.513	0.771	39.943
	Wakulla	-	3.600	-	-	-	-	3.600	1.691	0.207	5.498
	<b>Region Totals</b>	-	<b>40.289</b>	-	-	-	-	<b>40.289</b>	<b>6.945</b>	<b>0.979</b>	<b>48.213</b>
<b>DISTRICT TOTALS</b>		<b>17.629</b>	<b>102.729</b>	<b>0.181</b>	<b>0.424</b>	<b>95.658</b>	<b>0.730</b>	<b>217.350</b>	<b>50.132</b>	<b>72.754</b>	<b>340.237</b>
<b>Percentages</b>		<b>8.1%</b>	<b>47.3%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>44.0%</b>	<b>0.3%</b>	<b>63.9%</b>	<b>14.7%</b>	<b>21.4%</b>	<b>100%</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: groundwater withdrawn from domestic or limited public supply wells is assumed but no specific water source or aquifer is identified. Additional estimating methods for Agriculture and Recreational Irrigation also have uncertain water sources. Gadsden County agricultural water use is on average 50-50 surface and groundwater. Recreational water use is often a complex water flow system of both ground and surface waters and at times co-mingled with reclaimed water.

## NWFWMD 2020 Population Estimates - County, Public Supply Utility, and Domestic Self-Supply

Planning Region	County / Region	2010-2020 Population Change % <sup>(1)</sup>	BEBR 2020 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-Other Population Estimates <sup>(6)</sup>	% of TOTAL
I	Escambia	8.8%	323,714	3.2%	10,359	334,073	313,170	93.7%	20,903	6.3%
	<b>Total/Average</b>	<b>8.8%</b>	<b>323,714</b>	<b>3.2%</b>	<b>10,359</b>	<b>334,073</b>	<b>313,170</b>	<b>93.7%</b>	<b>20,903</b>	<b>6.3%</b>
II	Okaloosa	12.8%	203,951	9.0%	18,356	222,307	212,297	95.5%	10,010	4.5%
	Santa Rosa	22.0%	184,653	2.0%	3,693	188,346	177,878	94.4%	10,468	5.6%
	Walton	35.8%	74,724	49.0%	36,615	111,339	106,546	95.7%	4,793	4.3%
	<b>Total/Average</b>	<b>19.6%</b>	<b>463,328</b>	<b>20.0%</b>	<b>58,663</b>	<b>521,990</b>	<b>496,721</b>	<b>95.2%</b>	<b>25,270</b>	<b>4.8%</b>
III	Bay	3.3%	174,410	12.0%	20,929	195,339	185,842	95.1%	9,497	4.9%
	<b>Total/Average</b>	<b>3.3%</b>	<b>174,410</b>	<b>12.0%</b>	<b>20,929</b>	<b>195,339</b>	<b>185,842</b>	<b>95.1%</b>	<b>9,497</b>	<b>4.9%</b>
IV	Calhoun	-0.9%	14,489	3.0%	435	14,924	3,723	24.9%	11,201	75.1%
	Holmes	0.4%	20,001	1.0%	200	20,201	6,489	32.1%	13,712	67.9%
	Jackson	-6.4%	46,587	3.0%	1,398	47,985	20,836	43.4%	27,148	56.6%
	Liberty	2.5%	8,575	9.0%	772	9,347	4,246	45.4%	5,101	54.6%
	Washington	1.8%	25,334	3.0%	760	26,094	6,941	26.6%	19,153	73.4%
	<b>Total/Average</b>	<b>-2.2%</b>	<b>114,986</b>	<b>3.8%</b>	<b>3,564</b>	<b>118,550</b>	<b>42,235</b>	<b>35.6%</b>	<b>76,315</b>	<b>64.4%</b>
V	Franklin	2.7%	11,864	39.0%	4,627	16,491	15,749	95.5%	743	4.5%
	Gulf	-7.2%	14,724	22.0%	3,239	17,964	14,533	80.9%	3,431	19.1%
	<b>Total/Average</b>	<b>-3.0%</b>	<b>26,588</b>	<b>30.5%</b>	<b>7,866</b>	<b>34,455</b>	<b>30,281</b>	<b>87.9%</b>	<b>4,174</b>	<b>12.1%</b>
VI	Gadsden	-0.4%	46,226	2.4%	1,109	47,335	31,578	66.7%	15,758	33.3%
	<b>Total/Average</b>	<b>-0.4%</b>	<b>46,226</b>	<b>2.4%</b>	<b>1,109</b>	<b>47,335</b>	<b>31,578</b>	<b>66.7%</b>	<b>15,758</b>	<b>33.3%</b>
VII	Jefferson <sup>(NWF Only)</sup>	-2.5%	10,158	3.5%	356	10,514	5,760	54.8%	4,754	45.2%
	Leon	8.7%	299,484	0.5%	1,497	300,981	262,123	87.1%	38,858	12.9%
	Wakulla	10.4%	33,981	5.0%	1,699	35,680	26,786	75.1%	8,894	24.9%
	<b>Total/Average</b>	<b>8.5%</b>	<b>343,623</b>	<b>3.0%</b>	<b>3,552</b>	<b>347,175</b>	<b>294,669</b>	<b>84.9%</b>	<b>52,505</b>	<b>15.1%</b>
	<b>TOTALS/AVERAGES</b>	<b>9.6%</b>	<b>1,492,875</b>	<b>7.1%</b>	<b>106,043</b>	<b>1,598,918</b>	<b>1,394,496</b>	<b>87.2%</b>	<b>204,423</b>	<b>12.8%</b>

(1) Source: 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. 54, Bulletin 189, April 2021. 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. This estimate includes other miscellaneous populations, e.g., small public systems and correctional facility inmates not otherwise accounted for.

## 1.1 Public Supply 2020 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	40.091	-	-	40.091	313,170	128.02	81.49
	<b>Totals/Average Per Capita</b>	<b>40.091</b>	<b>0.000</b>	<b>0.000</b>	<b>40.091</b>	<b>313,170</b>	<b>128.02</b>	<b>81.49</b>
II	Okaloosa	20.733	3.371	-	24.103	212,297	113.54	85.41
	Santa Rosa	18.391	7.150	7.150	18.391	177,878	103.39	72.06
	Walton	15.045	2.557	5.928	11.675	106,546	109.57	72.24
	<b>Totals/Average Per Capita</b>	<b>54.169</b>	<b>13.078</b>	<b>13.078</b>	<b>54.169</b>	<b>496,721</b>	<b>109.05</b>	<b>77.81</b>
III	Bay	29.359	26.584	26.584	29.359	185,842	152.48	73.76
	<b>Totals/Average Per Capita</b>	<b>29.359</b>	<b>26.584</b>	<b>26.584</b>	<b>29.359</b>	<b>185,842</b>	<b>152.48</b>	<b>73.76</b>
IV	Calhoun	0.546	-	-	0.546	3,722	146.64	75.61
	Holmes	1.186	0.036	-	1.222	6,489	188.35	58.22
	Jackson	2.613	-	-	2.613	20,836	125.41	63.36
	Liberty	0.482	-	-	0.482	4,246	113.43	91.04
	Washington	1.050	-	0.036	1.013	6,941	145.98	87.34
	<b>Totals/Average Per Capita</b>	<b>5.876</b>	<b>0.036</b>	<b>0.036</b>	<b>5.876</b>	<b>42,234</b>	<b>139.13</b>	<b>70.37</b>
V	Franklin	1.903	0.092	0.092	1.903	15,749	120.81	69.40
	Gulf	1.980	-	-	1.980	14,533	136.28	52.32
	<b>Totals/Average Per Capita</b>	<b>3.883</b>	<b>0.092</b>	<b>0.092</b>	<b>3.883</b>	<b>30,281</b>	<b>128.23</b>	<b>61.20</b>
VI	Gadsden	4.395	-	-	4.395	31,578	139.18	82.88
	<b>Totals/Average Per Capita</b>	<b>4.395</b>	<b>0.000</b>	<b>0.000</b>	<b>4.395</b>	<b>31,578</b>	<b>139.18</b>	<b>82.88</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.580	-	-	0.580	5,760	100.66	81.23
	Leon	30.810	-	0.501	30.309	262,123	115.63	61.05
	Wakulla	2.433	0.501	-	2.934	26,786	109.54	81.69
	<b>Totals/Average Per Capita</b>	<b>33.823</b>	<b>0.501</b>	<b>0.501</b>	<b>33.823</b>	<b>294,669</b>	<b>114.78</b>	<b>63.32</b>
	<b>DISTRICT TOTALS/AVERAGE</b>	<b>171.597</b>	<b>40.291</b>	<b>40.291</b>	<b>171.597</b>	<b>1,394,495</b>	<b>123.05</b>	<b>74.56</b>

(1) Populations served include seasonal resident adjustments.



## 1.2 Public Supply 2020 Water Withdrawals by Source (mgd)

Planning Region	County / Region	Coastal Floridan	Inland Floridan	Inter-mediate	Claiborne	Sand and Gravel	Surficial	Total Groundwater	Total Surface Water	TOTAL REPORTED WATER USE
I	Escambia	-	-	-	-	40.091	-	40.091	-	40.091
	<b>Region Totals</b>	-	-	-	-	<b>40.091</b>	-	<b>40.091</b>	-	<b>40.091</b>
II	Okaloosa	12.489	8.244	-	-	-	-	20.733	-	20.733
	Santa Rosa	0.948	0.296	-	-	17.148	-	18.391	-	18.391
	Walton	1.257	13.676	0.112	-	-	-	15.045	-	15.045
	<b>Region Totals</b>	<b>14.693</b>	<b>22.217</b>	<b>0.112</b>	-	<b>17.148</b>	-	<b>54.169</b>	-	<b>54.169</b>
III	Bay <sup>(1)</sup>	-	1.754	-	-	-	-	1.754	27.605	29.359
	<b>Region Totals</b>	-	<b>1.754</b>	-	-	-	-	<b>1.754</b>	<b>27.605</b>	<b>29.359</b>
IV	Calhoun	-	0.546	-	-	-	-	0.546	-	0.546
	Holmes	-	0.934	-	0.252	-	-	1.186	-	1.186
	Jackson	-	2.503	-	0.110	-	-	2.613	-	2.613
	Liberty	-	0.482	-	-	-	-	0.482	-	0.482
	Washington	-	1.050	-	-	-	-	1.050	-	1.050
	<b>Region Totals</b>	-	<b>5.514</b>	-	<b>0.362</b>	-	-	<b>5.876</b>	-	<b>5.876</b>
V	Franklin	1.903	-	-	-	-	-	1.903	-	1.903
	Gulf	0.417	0.130	0.001	-	-	-	0.548	1.433	1.980
	<b>Region Totals</b>	<b>2.320</b>	<b>0.130</b>	<b>0.001</b>	-	-	-	<b>2.451</b>	<b>1.433</b>	<b>3.883</b>
VI	Gadsden	-	4.395	-	-	-	-	4.395	-	4.395
	<b>Region Totals</b>	-	<b>4.395</b>	-	-	-	-	<b>4.395</b>	-	<b>4.395</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.580	-	-	-	-	0.580	-	0.580
	Leon	-	30.810	-	-	-	-	30.810	-	30.810
	Wakulla	-	2.433	-	-	-	-	2.433	-	2.433
	<b>Region Totals</b>	-	<b>33.823</b>	-	-	-	-	<b>33.823</b>	-	<b>33.823</b>
<b>DISTRICT TOTALS</b>		<b>17.013</b>	<b>67.833</b>	<b>0.113</b>	<b>0.362</b>	<b>57.238</b>	-	<b>142.559</b>	<b>29.037</b>	<b>171.597</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.

NOTE: Since 2015, public supply IWUP compliance data has been affected by adjustments in permit and reporting requirements, and by Emergency Executive Orders. As a result, the 2020 estimated public supply water use relies on DEP Monthly Operating Report (MOR) data and/or historical water use for approximately 15 percent of the total public supply utility systems.

### 1.3 Public Supply 2020 Water Demand, Populations Served, and Per Capita Water Use - by Utility

Planning Region	Public Supply Utility or Service Area	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>40.091</b>	<b>0.000</b>	<b>0.000</b>	<b>40.091</b>	<b>313,170</b>	<b>128.02</b>	<b>81.49</b>
	Bratt-Davisville Water System (EREC)	0.000	-	-	0.000	-	#DIV/0!	#DIV/0!
	Central Water Works, Inc.	0.413	-	-	0.413	2,480	166.61	63.70
	Century, Town of	0.551	-	-	0.551	4,056	135.73	94.65
	Cottage Hill Water Works, Inc.	0.377	-	-	0.377	3,562	105.88	75.91
	Emerald Coast Utilities Authority (ECUA)	33.835	-	-	33.835	257,211	131.54	83.79
	Farm Hill Utilities, Inc.	0.632	-	-	0.632	5,458	115.80	61.36
	Gonzalez Utilities Association, Inc.	0.549	-	-	0.549	4,854	113.02	71.14
	Molino Utilities, Inc.	0.915	-	-	0.915	5,578	164.04	101.71
	People's Water Service Company	2.472	-	-	2.472	27,074	91.30	62.27
	Walnut Hill Water Works (EREC)	0.348	-	-	0.348	2,897	120.08	76.34
	<b>REGION I - Totals/Average Per Capita</b>	<b>40.091</b>	<b>0.000</b>	<b>0.000</b>	<b>40.091</b>	<b>313,170</b>	<b>128.02</b>	<b>81.49</b>
II	<b>Okaloosa County</b>	<b>20.733</b>	<b>3.371</b>	<b>0.000</b>	<b>24.103</b>	<b>212,297</b>	<b>113.54</b>	<b>85.41</b>
	Auburn Water System	2.303	-	-	2.303	15,895	144.90	97.42
	Baker Water System	0.250	-	-	0.250	2,494	100.39	80.52
	Blackman Community Water System, Inc.	0.035	-	-	0.035	557	62.35	46.77
	Crestview, City of	2.553	-	-	2.553	29,666	86.07	31.82
	Destin Water Users	1.307	2.833	-	4.110	30,457	134.95	89.24
	Fort Walton Beach, City of	2.604	-	-	2.604	21,357	121.94	62.80
	Holt Water Works, Inc.	0.240	-	-	0.240	2,086	114.92	71.25
	Laurel Hill, City of	0.132	-	-	0.132	1,505	87.53	62.50
	Mary Esther, City of	0.412	-	-	0.412	4,013	102.69	55.89
	Milligan Water System	0.145	-	-	0.145	1,680	86.32	53.52
	Niceville, City of	2.615	-	-	2.615	20,321	128.71	89.21
	OCW&S - Bluewater (Raintree)	1.272	-	-	1.272	12,823	99.23	75.38
	OCW&S - Main (Garniers) Office Well Plant	3.803	-	-	3.803	-	103.36	61.98
	<i>Main Garniers</i>					42,898		54.22
	<i>Shalimar</i>					737		73.65
	<i>Okaloosa Island</i>					2,202		34.55
	<i>County West</i>					8,915		51.37
	OCW&S - Mid-County (Crestview) Antioch	2.586	-	-	2.586	7,058	-	93.52
	SWUC (Okaloosa County portion)	-	0.567	-	0.567	3,350	169.33	101.72
	Valparaiso, City of	0.475	-	-	0.475	4,284	110.79	63.53

(1) Populations served include seasonal resident adjustments.

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>18.391</b>	<b>7.150</b>	<b>7.150</b>	<b>18.391</b>	<b>177,878</b>	<b>103.39</b>	<b>72.06</b>
	Bagdad-Garcon Point Water System	0.725	-	-	0.725	5,945	121.98	79.08
	Berrydale Water System	0.281	-	-	0.281	2,630	106.89	48.33
	Chumuckla Water System	0.369	-	-	0.369	4,150	88.94	70.19
	East Milton Water System	1.810	-	-	1.810	13,020	139.05	66.87
	Fairpoint Regional Utility System (FRUS)	6.095	-	6.095	-	-	-	0.00
	Gulf Breeze Water Department (Service Area)	-	2.055	1.011	1.044	5,938	175.78	131.84
	Holley-Navarre Water System, Inc.	0.605	2.607	-	3.212	45,425	70.72	56.92
	Jay, Town of	0.153	-	-	0.153	1,115	137.01	83.81
	Midway Water System	0.635	1.029	0.045	1.619	17,485	92.58	65.75
	Milton, City of	1.858	-	-	1.858	18,520	100.30	71.90
	Moore Creek-Mt. Carmel Utilities, Inc.	0.321	-	-	0.321	3,096	103.79	64.35
	Pace Water System, Inc.	4.634	-	-	4.634	40,366	114.79	76.85
	Point Baker Water System, Inc.	0.893	-	-	0.893	9,400	94.97	78.79
	Navarre Beach - Santa Rosa BOCC	0.013	0.404	-	0.417	5,904	70.65	47.76
	South Santa Rosa Utilities (Service Area)	-	1.056	-	1.056	4,884	216.12	162.09
	<b>Walton County</b>	<b>15.045</b>	<b>2.557</b>	<b>5.928</b>	<b>11.675</b>	<b>106,546</b>	<b>109.57</b>	<b>72.24</b>
	Argyle Water System	0.063	-	-	0.063	767	81.83	61.37
	DeFuniak Springs, City of	1.224	-	-	1.224	12,243	99.96	35.45
II	FCSWC / Regional Utilities	5.579	-	0.010	5.569	56,163	99.15	72.84
	Freeport, City of	1.003	-	-	1.003	9,827	102.10	71.56
	Freeport, City of, North Bay Water System	0.135	-	-	0.135	2,145	62.91	56.79
	Inlet Beach Water System, Inc.	0.236	0.010	-	0.246	2,615	93.92	66.67
	Mossy Head Water Works, Inc.	0.294	-	-	0.294	3,682	79.79	49.47
	Paxton, City of	0.163	-	-	0.163	1,515	107.77	102.22
	SWUC - Rockhill Inland Well Field	5.351	-	5.351	0.000	-	-	-
	SWUC - Coastal Well Field	0.998	2.547	0.567	2.978	17,589	169.33	101.72
	<b>REGION II - Totals/Average Per Capita</b>	<b>54.169</b>	<b>13.078</b>	<b>13.078</b>	<b>54.169</b>	<b>496,721</b>	<b>109.05</b>	<b>77.81</b>

(1) Populations served include seasonal resident adjustments.

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>29.359</b>	<b>26.584</b>	<b>26.584</b>	<b>29.359</b>	<b>185,842</b>	<b>157.98</b>	<b>73.76</b>
	Bay County BOCC (Public Supply ONLY)	27.605	-	-	-	18,771	-	-
	- Cedar Grove (separate BOCC service area)	-	0.568	-	0.568	3,401	-	103.56
	- GCEC (North Bay, Lake Merial)	-	0.671	-	0.671	6,000	-	69.36
	- Bay Co. (excludes North Bay, Lk Merial, SE)	-	1.087	-	1.087	9,370	-	71.95
	Bay County BOCC - Total Exports	-	-	26.584	-	-	-	-
	Callaway	-	1.334	-	1.334	16,790	79.43	49.25
	Lynn Haven, City of	1.754	0.512	-	2.266	19,586	115.69	67.71
	Mexico Beach	-	0.191	-	0.191	2,488	76.77	47.60
	Panama City Water System	-	6.185	-	6.185	40,998	150.86	79.95
	Panama City Beach	-	14.664	-	14.664	56,951	257.49	103.00
	Parker	-	0.328	-	0.328	3,694	88.66	54.97
	Springfield	-	1.044	-	1.044	7,793	133.98	83.07
	<b>REGION III - Totals/Average Per Capita</b>	<b>29.359</b>	<b>26.584</b>	<b>26.584</b>	<b>29.359</b>	<b>185,842</b>	<b>157.98</b>	<b>73.76</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>1.903</b>	<b>0.092</b>	<b>0.092</b>	<b>1.903</b>	<b>15,749</b>	<b>120.81</b>	<b>69.40</b>
	Alligator Point Water Resources District	0.101	-	-	0.101	671	150.51	116.02
	Apalachicola, City of	0.543	-	-	0.543	3,784	144.77	58.04
	Carrabelle, City of	0.418	-	0.092	0.326	3,028	107.70	66.78
	- Carrabelle, City of (Lanark Village)	0.000	0.092	-	0.092	1,625	56.45	35.00
	Eastpoint Water and Sewer District	0.250	-	-	0.250	2,365	105.88	65.65
	St. James Island (Summercamp, FRWA)	0.007	-	-	0.007	56	133.16	64.62
	Water Management (St. George Island)	0.565	-	-	0.565	4,250	133.04	89.24
	<b>Gulf County</b>	<b>1.980</b>	<b>0.000</b>	<b>0.000</b>	<b>1.980</b>	<b>14,533</b>	<b>136.28</b>	<b>52.32</b>
	Gulf County Water System	0.412	-	-	0.412	3,804	108.27	78.46
V	Port St. Joe, City of	1.439	-	-	1.439	8,758	164.26	43.54
	Wewahitchka, City of	0.130	-	-	0.130	1,971	65.96	40.90
	<b>REGION V - Totals/Average Per Capita</b>	<b>3.883</b>	<b>0.092</b>	<b>0.092</b>	<b>3.883</b>	<b>30,281</b>	<b>128.23</b>	<b>61.20</b>

(1) Populations served include seasonal resident adjustments.

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>0.546</b>	<b>0.000</b>	<b>0.000</b>	<b>0.546</b>	<b>3,722</b>	<b>146.64</b>	<b>75.61</b>
	Altha, Town of	0.145	-	-	0.145	692	209.01	129.59
	Blountstown	0.401	-	-	0.401	3,031	132.40	63.29
IV	<b>Holmes County</b>	<b>1.186</b>	<b>0.036</b>	<b>0.000</b>	<b>1.222</b>	<b>6,489</b>	<b>188.35</b>	<b>58.22</b>
	Bonifay, City of	0.988	-	-	0.988	4,148	238.08	69.04
	Caryville, Town of (Holmes County portion)	-	0.036	-	0.036	271	134.59	55.63
	Esto Water Works	0.053	-	-	0.053	395	133.14	82.55
	Joyce E. Snare Waterworks	0.023	-	-	0.023	254	92.14	57.13
	Noma, Town of	0.004	-	-	0.004	237	14.92	9.25
	Ponce de Leon, Town of	0.079	-	-	0.079	850	93.13	3.00
	Westville, Town of	0.039	-	-	0.039	334	118.10	73.22
	<b>Jackson County</b>	<b>2.613</b>	<b>0.000</b>	<b>0.000</b>	<b>2.613</b>	<b>20,836</b>	<b>125.41</b>	<b>63.36</b>
IV	Alford, Town of	0.060	-	-	0.060	588	101.72	40.69
	Campbellton, Town of	0.016	-	-	0.016	281	58.64	23.46
	Cottdale, City of	0.150	-	-	0.150	1,081	138.41	55.36
	Graceville, City of	0.329	-	-	0.329	2,238	147.09	55.19
	Grand Ridge, Town of	0.115	-	-	0.115	907	126.57	50.63
	Greenwood, Town of	0.056	-	-	0.056	659	84.43	33.77
	Jackson Utilities, Plant 1, JCBOCC	0.282	-	-	0.282	3,678	76.61	65.83
	Jacob, City of	0.019	-	-	0.019	318	58.86	23.54
	Malone, Town of	0.064	-	-	0.064	2,070	30.78	12.31
	Marianna, City of	1.295	-	-	1.295	7,095	182.50	94.66
	Sneads, Town of	0.229	-	-	0.229	1,810	126.35	50.54
	<b>Liberty County</b>	<b>0.482</b>	<b>0.000</b>	<b>0.000</b>	<b>0.482</b>	<b>4,246</b>	<b>113.43</b>	<b>91.04</b>
	Bristol, City of	0.229	-	-	0.229	1,954	117.02	117.02
IV	Liberty Co. BOCC, Estifanulga	0.026	-	-	0.026	281	94.15	58.37
	Liberty Co. BOCC, Hosford-Telogia	0.123	-	-	0.123	1,303	94.57	58.63
	Liberty Co. BOCC, Lake Mystic	0.046	-	-	0.046	314	144.94	89.87
	Liberty Co. BOCC, Rock Bluff	0.034	-	-	0.034	166	205.58	127.46
	Liberty Co. BOCC, Sumatra Water System	0.016	-	-	0.016	163	96.21	59.65
	Talquin Electric - Sweetwater System	0.008	-	-	0.008	65	122.94	92.20
	<b>Washington</b>	<b>1.050</b>	<b>0.000</b>	<b>0.036</b>	<b>1.013</b>	<b>6,941</b>	<b>145.98</b>	<b>87.34</b>
IV	Sunny Hills (formerly Aqua Utilities)	0.111	-	-	0.111	1,413	78.54	44.54
	Caryville, Town of	0.122	-	0.036	0.085	421	202.24	143.30
	Chipley, City of	0.661	-	-	0.661	3,885	170.04	98.85
	Vernon, City of	0.089	-	-	0.089	734	120.74	77.42
	Wausau, Town of	0.068	-	-	0.068	488	139.23	86.32
<b>REGION IV - Totals/Average Per Capita</b>		<b>5.876</b>	<b>0.036</b>	<b>0.036</b>	<b>5.876</b>	<b>42,234</b>	<b>139.13</b>	<b>70.37</b>

(1) Populations served include seasonal resident adjustments.  
2020 NWFWM Water Use Summary Report

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>4.395</b>	<b>0.000</b>	<b>0.000</b>	<b>4.395</b>	<b>31,578</b>	<b>139.18</b>	<b>82.88</b>
	Chattahoochee, City of	0.503	-	-	0.503	3,090	162.64	56.98
	Greensboro, Town of	0.058	-	-	0.058	640	90.97	63.62
	Gretna, City of	0.345	0.017	-	0.362	1,489	243.17	150.77
	Havana, Town of	0.462	-	-	0.462	3,240	142.72	88.49
	Quincy, City of	1.305	-	0.017	1.288	10,431	128.73	79.81
	Talquin Electric - Gadsden County Regional	1.693	-	-	1.693	12,792	132.38	83.60
	Talquin Electric - Hammock Creek	0.005	-	-	0.005	40	131.25	98.44
	Talquin Electric - Jamieson Water	0.013	-	-	0.013	107	122.66	92.00
	Talquin Electric - St. James	0.010	-	-	0.010	175	57.82	43.37
	<b>REGION VI - Totals/Average Per Capita</b>	<b>4.395</b>	<b>0.000</b>	<b>0.000</b>	<b>4.395</b>	<b>31,578</b>	<b>139.18</b>	<b>82.88</b>
VII	<b>Jefferson County</b> <sup>(NWF Only)</sup>	<b>0.580</b>	<b>0.000</b>	<b>0.000</b>	<b>0.580</b>	<b>5,760</b>	<b>100.66</b>	<b>81.23</b>
	Jefferson Communities Water System, Inc.	0.214	-	-	0.214	1,770	120.97	103.28
	Monticello, City of	0.366	-	-	0.366	3,990	91.65	71.45
	<b>Leon County</b>	<b>30.810</b>	<b>0.000</b>	<b>0.501</b>	<b>30.309</b>	<b>262,123</b>	<b>115.63</b>	<b>61.05</b>
	Seminole-Rowe (total all service areas)	0.126	-	-	0.126	1,601	78.84	58.62
	Tallahassee, City of	26.799	-	0.501	26.298	227,849	115.42	58.62
	Talquin Electric - Bradfordville Regional	1.530	-	-	1.530	11,595	131.96	81.82
	Talquin Electric - Lake Jackson Regional	1.095	-	-	1.095	10,496	104.33	71.04
	Talquin Electric - Leon County East Regional	0.305	-	-	0.305	1,990	153.10	104.78
	Talquin Electric - Leon County West Regional	0.291	-	-	0.291	2,234	130.31	78.58
	Talquin Electric - Meadows Regional	0.482	-	-	0.482	4,053	118.90	83.06
	Talquin Electric Coop Small Systems (total)	0.078	-	-	0.078	1,222	63.92	47.94
	Miscellaneous Small Public Systems (total)	0.104	-	-	0.104	1,083	96.43	72.32
	<b>Wakulla County</b>	<b>2.433</b>	<b>0.501</b>	<b>0.000</b>	<b>2.934</b>	<b>26,786</b>	<b>109.54</b>	<b>81.69</b>
	Panacea Area Water System, Inc.	0.222	-	-	0.222	2,556	86.76	53.79
	Sopchoppy, City of	1.014	-	-	1.014	10,738	94.42	88.51
	St. Marks, City of, Water Sys. (COT Booster Plant)	-	0.140	-	0.140	722	194.10	120.34
	Tallahassee, City of (Wakulla County portion)	-	0.361	-	0.361	3,019	119.45	66.36
	Talquin Electric - Wakulla Regional	1.161	-	-	1.161	9,475	122.51	82.88
	Wakulla County, River Sink Subdivision	0.037	-	-	0.037	276	133.77	100.32
	<b>REGION VII - Totals/Average Per Capita</b>	<b>33.823</b>	<b>0.501</b>	<b>0.501</b>	<b>33.823</b>	<b>294,669</b>	<b>114.78</b>	<b>63.32</b>
<b>NWFWMD Districtwide TOTALS / Averages -</b>		<b>171.597</b>	<b>40.291</b>	<b>40.291</b>	<b>171.597</b>	<b>1,394,495</b>	<b>123.05</b>	<b>74.56</b>

(1) Populations served include seasonal resident adjustments.

## 2.1 Domestic Self-Supply 2020 Population and Water Use Estimates

Planning Region	County / Region	DSS <sup>(1)</sup> Pop Estimate	Estimated DSS Water Use <sup>(2)</sup> (mgd)	Adjusted DSS Populations <sup>(3)</sup>	GROSS DSS <sup>(4)</sup> Well Count	BEBR 2020 PPH <sup>(5)</sup>	Estimated Persons Per Well	Estimated Water Use <sup>(6)</sup> (mgd)
I	Escambia	20,903	1.853	18,550	1,563	2.38	11.87	0.330
	<b>Total/Average</b>	<b>20,903</b>	<b>1.853</b>	<b>18,550</b>	<b>1,563</b>	<b>2.38</b>	<b>11.87</b>	<b>0.330</b>
II	Okaloosa	10,010	0.888	8,715	2,977	2.40	2.93	0.634
	Santa Rosa	10,468	0.928	7,984	4,064	2.54	1.96	0.915
	Walton	4,793	0.425	4,793	8,505	2.36	0.56	1.780
	<b>Total/Average</b>	<b>25,270</b>	<b>2.241</b>	<b>21,491</b>	<b>15,546</b>	<b>2.43</b>	<b>1.82</b>	<b>3.329</b>
III	Bay	9,497	0.842	8,387	14,461	2.38	0.58	3.052
	<b>Total/Average</b>	<b>9,497</b>	<b>0.842</b>	<b>8,387</b>	<b>14,461</b>	<b>2.38</b>	<b>0.58</b>	<b>3.052</b>
IV	Calhoun	11,201	0.993	10,416	3,917	2.48	2.66	0.861
	Holmes	13,712	1.216	12,223	4,782	2.44	2.56	1.035
	Jackson	27,148	2.407	24,363	11,249	2.36	2.17	2.354
	Liberty	5,101	0.452	3,352	1,404	2.54	2.39	0.316
	Washington	19,153	1.698	18,169	8,002	2.49	2.27	1.767
	<b>Total/Average</b>	<b>76,315</b>	<b>6.767</b>	<b>68,523</b>	<b>29,354</b>	<b>2.46</b>	<b>2.41</b>	<b>6.333</b>
V	Franklin	742	0.066	742	1,158	2.26	0.64	0.232
	Gulf	3,431	0.304	4,519	1,951	2.26	2.32	0.391
	<b>Total/Average</b>	<b>4,173</b>	<b>0.370</b>	<b>5,261</b>	<b>3,109</b>	<b>2.26</b>	<b>1.48</b>	<b>0.623</b>
VI	Gadsden	15,758	1.397	12,725	3,977	2.50	3.20	0.882
	<b>Total/Average</b>	<b>15,758</b>	<b>1.397</b>	<b>12,725</b>	<b>3,977</b>	<b>2.50</b>	<b>3.20</b>	<b>0.882</b>
VII	Jefferson <sup>(NWF Only)</sup>	4,754	0.422	4,754	2,397	2.29	1.98	0.487
	Leon	38,858	3.446	37,648	10,047	2.32	3.75	2.067
	Wakulla	8,894	0.789	7,320	4,305	2.58	1.70	0.985
	<b>Total/Average</b>	<b>52,506</b>	<b>4.656</b>	<b>49,722</b>	<b>16,749</b>	<b>2.40</b>	<b>2.48</b>	<b>3.538</b>
	<b>TOTALS/AVERAGES</b>	<b>204,423</b>	<b>18.127</b>	<b>184,660</b>	<b>84,759</b>	<b>2.40</b>	<b>2.41</b>	<b>18.087</b>

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

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

(3) "Adjusted DSS Populations" is an experimental estimate with inmate population refinements not otherwise accounted for.

(4) Estimates of all known DSS (DO) and limited public supply (LP) wells in NFWMD wells inventory ArcGIS database as of 12/31/2020.

(5) County-wide average persons per household (PPH) based on UF Bureau of Economic and Business Research (BEBR) 2020 population estimate data.

(6) 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	NFWFMD Annual Water Use Reports <sup>(1)</sup>									
		2010	2011 <sup>(2)</sup>	2012	2013	2014 <sup>(3)</sup>	2015	2016	2017	2018	2019	2020
I	Escambia	16,606		19,133	17,720	18,809	12,017	11,958	11,242	15,118	17,231	20,903
	<b>Region I Total</b>	<b>16,606</b>	<b>-</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>	<b>15,118</b>	<b>17,231</b>	<b>20,903</b>
II	Okaloosa	12,367		13,885	11,731	12,224	23,940	18,595	9,375	12,916	10,382	10,010
	Santa Rosa	22,402		11,584	11,772	8,907	2,890	1,794	10,368	13,228	11,997	10,468
	Walton	4,218		14,117	13,106	16,009	17,616	11,508	15,896	16,019	10,997	4,793
	<b>Region II Total</b>	<b>38,987</b>	<b>-</b>	<b>39,586</b>	<b>36,609</b>	<b>37,140</b>	<b>44,446</b>	<b>31,897</b>	<b>35,639</b>	<b>42,163</b>	<b>33,377</b>	<b>25,270</b>
III	Bay	17,892		18,436	17,930	18,538	17,743	16,364	19,142	21,767	15,884	9,497
	<b>Region III Total</b>	<b>17,892</b>	<b>-</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>	<b>21,767</b>	<b>15,884</b>	<b>9,497</b>
IV	Calhoun	10,423		10,435	10,415	10,311	10,417	11,237	11,699	11,808	10,752	11,201
	Holmes	13,929		14,275	14,328	14,316	14,554	14,659	14,502	14,436	13,761	13,712
	Jackson	33,022		34,163	34,666	34,491	35,409	35,244	36,528	33,333	29,367	27,148
	Liberty	5,092		4,410	4,407	4,584	5,478	5,460	5,485	5,679	5,361	5,101
	Washington	16,420		17,642	17,255	17,501	18,814	18,765	19,285	19,087	19,015	19,153
	<b>Region IV Total</b>	<b>78,886</b>	<b>-</b>	<b>80,925</b>	<b>81,071</b>	<b>81,203</b>	<b>84,672</b>	<b>85,366</b>	<b>87,499</b>	<b>84,343</b>	<b>78,256</b>	<b>76,315</b>
V	Franklin	1,785		2,967	1,772	1,611	1,821	1,843	3,668	2,034	1,287	742
	Gulf	2,487		2,071	2,005	475	3,629	3,774	5,512	5,182	1,902	3,431
	<b>Region V Total</b>	<b>4,272</b>	<b>-</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>	<b>7,216</b>	<b>3,189</b>	<b>4,173</b>
VI	Gadsden	15,173		16,119	15,095	16,286	17,085	17,155	18,731	18,750	16,958	15,758
	<b>Region VI Total</b>	<b>15,173</b>	<b>-</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>	<b>18,750</b>	<b>16,958</b>	<b>15,758</b>
VII	Jefferson <sup>(NWF Only)</sup>	9,350		5,588	10,237	7,800	5,160	5,216	5,421	5,989	5,116	4,754
	Leon	59,552		75,085	74,538	57,952	51,884	51,414	32,616	38,154	36,527	38,858
	Wakulla	24,872		9,110	7,987	8,007	9,591	9,516	8,886	9,018	10,980	8,894
	<b>Region VII Total</b>	<b>93,774</b>	<b>-</b>	<b>89,783</b>	<b>92,762</b>	<b>73,759</b>	<b>66,635</b>	<b>66,147</b>	<b>46,923</b>	<b>53,161</b>	<b>52,622</b>	<b>52,506</b>
	<b>TOTALS</b>	<b>265,590</b>	<b>-</b>	<b>269,020</b>	<b>264,964</b>	<b>247,821</b>	<b>248,048</b>	<b>234,504</b>	<b>228,356</b>	<b>242,518</b>	<b>217,517</b>	<b>204,423</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. 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 in public supply utility populations served in Walton and Franklin counties.

### 3.1 Agriculture Water Use - 2020 Reported and Total Estimates (mgd)

#### 2020 Reported Water Use

Planning Region	County / Region	Ground Water	Surface Water	Total REPORTED Water Use <sup>(1)</sup>	Percent Reported to Total Estimate	Additional FSAID <sup>(2)</sup> Estimated Water Use	FSAID VIII - 2019 Estimated TOTAL Water Use(3)	FSAID VII - 2018 Estimated TOTAL Water Use(4)	FSAID VI - 2017 Estimated TOTAL Water Use <sup>(4)</sup>
I	Escambia	0.030	-	0.030	1.2%	2.457	2.487	2.554	2.584
	<b>Region I Total</b>	<b>0.030</b>	<b>0.000</b>	<b>0.030</b>	<b>1.2%</b>	<b>2.457</b>	<b>2.487</b>	<b>2.554</b>	<b>2.584</b>
II	Okaloosa	0.000	-	0.000	0.0%	0.409	0.409	0.396	0.419
	Santa Rosa	0.416	-	0.416	23.0%	1.392	1.808	1.648	1.804
	Walton	0.185	-	0.185	34.7%	0.349	0.534	0.566	0.518
	<b>Region II Total</b>	<b>0.601</b>	<b>0.000</b>	<b>0.601</b>	<b>21.9%</b>	<b>2.150</b>	<b>2.751</b>	<b>2.610</b>	<b>2.740</b>
III	Bay	0.468	-	0.468	52.6%	0.421	0.888	0.898	0.342
	<b>Region III Total</b>	<b>0.468</b>	<b>0.000</b>	<b>0.468</b>	<b>52.6%</b>	<b>0.421</b>	<b>0.888</b>	<b>0.898</b>	<b>0.342</b>
IV	Calhoun	1.430	0.046	1.476	52.1%	1.355	2.831	2.832	3.191
	Holmes	-	0.000	0.000	0.0%	1.116	1.116	1.112	1.155
	Jackson	17.422	0.047	17.469	58.9%	12.178	29.648	30.202	29.134
	Liberty	-	-	0.000	0.0%	0.096	0.096	0.098	0.079
	Washington	0.033	0.050	0.083	8.7%	0.866	0.949	0.710	0.794
	<b>Region IV Total</b>	<b>18.885</b>	<b>0.143</b>	<b>19.028</b>	<b>54.9%</b>	<b>15.611</b>	<b>34.639</b>	<b>34.954</b>	<b>34.353</b>
V	Franklin	-	-	0.000	0.0%	0.006	0.006	0.007	0.005
	Gulf	0.285	-	0.285	95.3%	0.014	0.299	0.299	0.366
	<b>Region V Total</b>	<b>0.285</b>	<b>0.000</b>	<b>0.285</b>	<b>93.4%</b>	<b>0.020</b>	<b>0.305</b>	<b>0.306</b>	<b>0.371</b>
VI	Gadsden	2.042	1.281	3.322	57.2%	2.490	5.812	5.975	6.090
	<b>Region VI Total</b>	<b>2.042</b>	<b>1.281</b>	<b>3.322</b>	<b>57.2%</b>	<b>2.490</b>	<b>5.812</b>	<b>5.975</b>	<b>6.090</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.966	-	0.966	88.1%	0.130	1.096	0.937	1.162
	Leon	0.031	-	0.031	7.1%	0.406	0.437	0.443	0.471
	Wakulla	-	-	0.000	0.0%	0.698	0.698	0.202	0.293
	<b>Region VII Total</b>	<b>0.997</b>	<b>0.000</b>	<b>0.997</b>	<b>44.7%</b>	<b>1.234</b>	<b>2.231</b>	<b>1.582</b>	<b>1.926</b>
<b>TOTALS</b>		<b>23.307</b>	<b>1.424</b>	<b>24.731</b>	<b>50.4%</b>	<b>24.381</b>	<b>49.112</b>	<b>48.879</b>	<b>48.406</b>

(1) In 2020, more than 90% of agriculture IWUPs had reported water use and were audited. Where appropriate, the previous year reported use was carried forward.

(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.

(3) FSAID estimate based on average hypothetical rainfall (modeled results).

(4) Previous FSAID estimates for information and reference only.

### 3.2 Agriculture 2020 Reported Water Use by Source (mgd)

Planning Region	County / Region	Water Use by Groundwater Aquifer(s)						Total Ground-water	Total Surface Water	TOTAL 2020 REPORTED WATER USE <sup>(1)</sup>	TOTAL 2019 <sup>(2)</sup> REPORTED WATER USE	TOTAL 2018 <sup>(2)</sup> REPORTED WATER USE
		Coastal Floridan	Inland Floridan	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial					
I	Escambia	-	-	-	-	0.030	-	0.030	-	0.030	0.094	0.032
	<b>Region I Total</b>	-	-	-	-	<b>0.030</b>	-	<b>0.030</b>	-	<b>0.030</b>	<b>0.094</b>	<b>0.032</b>
II	Okaloosa	-	-	-	-	-	-	0.000	-	0.000	0.000	0.000
	Santa Rosa	-	0.126	-	-	0.290	-	0.416	-	0.416	0.408	0.339
	Walton	-	0.185	-	-	-	-	0.185	-	0.185	0.201	0.012
	<b>Region II Total</b>	-	<b>0.311</b>	-	-	<b>0.290</b>	-	<b>0.601</b>	-	<b>0.601</b>	<b>0.609</b>	<b>0.351</b>
III	Bay	-	0.468	-	-	-	-	0.468	-	0.468	0.342	1.197
	<b>Region III Total</b>	-	<b>0.468</b>	-	-	-	-	<b>0.468</b>	-	<b>0.468</b>	<b>0.342</b>	<b>1.197</b>
IV	Calhoun	-	1.430	-	-	-	-	1.430	0.046	1.476	1.020	0.535
	Holmes	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000
	Jackson	-	17.422	-	-	-	-	17.422	0.047	17.469	18.388	15.312
	Liberty	-	-	-	-	-	-	-	-	0.000	0.000	0.000
	Washington	-	0.033	-	-	-	-	0.033	0.050	0.083	0.074	0.005
	<b>Region IV Total</b>	-	<b>18.885</b>	-	-	-	-	<b>18.885</b>	<b>0.143</b>	<b>19.028</b>	<b>19.482</b>	<b>15.852</b>
V	Franklin	-	-	-	-	-	-	-	-	0.000	0.000	0.000
	Gulf	-	0.285	-	-	-	-	0.285	-	0.285	0.210	0.196
	<b>Region V Total</b>	-	<b>0.285</b>	-	-	-	-	<b>0.285</b>	-	<b>0.285</b>	<b>0.210</b>	<b>0.196</b>
VI	Gadsden	-	2.042	-	-	-	-	2.042	1.281	3.322	2.997	2.537
	<b>Region VI Total</b>	-	<b>2.042</b>	-	-	-	-	<b>2.042</b>	<b>1.281</b>	<b>3.322</b>	<b>2.997</b>	<b>2.537</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.966	-	-	-	-	0.966	-	0.966	0.684	0.581
	Leon	-	0.031	-	-	-	-	0.031	0.000	0.031	0.027	0.011
	Wakulla	-	-	-	-	-	-	0.000	-	0.000	0.000	0.000
	<b>Region VII Total</b>	-	<b>0.997</b>	-	-	-	-	<b>0.997</b>	-	<b>0.997</b>	<b>0.711</b>	<b>0.592</b>
	<b>TOTALS</b>	-	<b>22.987</b>	-	-	<b>0.320</b>	-	<b>23.307</b>	<b>1.424</b>	<b>24.731</b>	<b>24.444</b>	<b>20.757</b>

(1) In 2020, more than 90% of agriculture IWUPs had reported water use and were audited. Where appropriate, the previous year reported use was carried forward.

(2) Reported agricultural water use in previous calendar years for information and reference only.

## 4.1 Recreational Irrigation Water Use - 2020 Reported and Total Estimates (mgd)

Planning Region	County / Region	2020 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	0.351	0.826	1.177	1.125	0.000	1.125	1.476	0.826	2.303
	<b>Region I Total</b>	<b>0.351</b>	<b>0.826</b>	<b>1.177</b>	<b>1.125</b>	<b>0.000</b>	<b>1.125</b>	<b>1.476</b>	<b>0.826</b>	<b>2.303</b>
II	Okaloosa	1.924	2.138	4.062	1.744	0.000	1.744	3.668	2.138	5.806
	Santa Rosa	0.476	0.114	0.590	1.292	0.375	1.667	1.768	0.489	2.257
	Walton	2.173	1.123	3.297	0.732	0.187	0.920	2.906	1.311	4.217
	<b>Region II Total</b>	<b>4.573</b>	<b>3.376</b>	<b>7.949</b>	<b>3.768</b>	<b>0.562</b>	<b>4.330</b>	<b>8.341</b>	<b>3.938</b>	<b>12.279</b>
III	Bay	0.646	0.557	1.206	0.844	0.000	0.844	1.490	0.557	2.050
	<b>Region III Total</b>	<b>0.646</b>	<b>0.557</b>	<b>1.206</b>	<b>0.844</b>	<b>0.000</b>	<b>0.844</b>	<b>1.490</b>	<b>0.557</b>	<b>2.050</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	0.297	0.000	0.297	0.014	0.000	0.014	0.311	0.000	0.311
	<b>Region IV Total</b>	<b>0.297</b>	<b>0.000</b>	<b>0.297</b>	<b>0.621</b>	<b>0.000</b>	<b>0.621</b>	<b>0.918</b>	<b>0.000</b>	<b>0.918</b>
V	Franklin	0.000	0.226	0.226	0.058	0.000	0.058	0.058	0.226	0.284
	Gulf	0.047	0.000	0.047	0.043	0.000	0.043	0.090	0.000	0.090
	<b>Region V Total</b>	<b>0.047</b>	<b>0.226</b>	<b>0.273</b>	<b>0.100</b>	<b>0.000</b>	<b>0.100</b>	<b>0.147</b>	<b>0.226</b>	<b>0.373</b>
VI	Gadsden	0.029	0.034	0.063	0.111	0.000	0.111	0.140	0.034	0.174
	<b>Region VI Total</b>	<b>0.029</b>	<b>0.034</b>	<b>0.063</b>	<b>0.111</b>	<b>0.000</b>	<b>0.111</b>	<b>0.140</b>	<b>0.034</b>	<b>0.174</b>
VII	Jefferson <sup>(NWF Only)</sup>	0.485	0.000	0.485	0.189	0.000	0.189	0.674	0.000	0.674
	Leon	1.234	0.531	1.765	0.661	0.240	0.901	1.894	0.771	2.666
	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>1.719</b>	<b>0.531</b>	<b>2.250</b>	<b>1.055</b>	<b>0.240</b>	<b>1.295</b>	<b>2.774</b>	<b>0.771</b>	<b>3.545</b>
	<b>TOTALS</b>	<b>7.662</b>	<b>5.551</b>	<b>13.216</b>	<b>7.624</b>	<b>0.802</b>	<b>8.427</b>	<b>15.286</b>	<b>6.354</b>	<b>21.643</b>

(1) Additional water use estimates include 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 2020 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 Floridan	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia	-	-	-	-	0.330	0.021	0.351	0.826	1.177
	<b>Region I Total</b>	-	-	-	-	<b>0.330</b>	<b>0.021</b>	<b>0.351</b>	<b>0.826</b>	<b>1.177</b>
II	Okaloosa	-	0.028	-	-	1.895	-	1.924	2.138	4.062
	Santa Rosa	-	-	-	-	0.476	-	0.476	0.114	0.590
	Walton	-	0.424	0.045	-	1.547	0.158	2.173	1.123	3.297
	<b>Region II Total</b>	-	<b>0.452</b>	<b>0.045</b>	-	<b>3.918</b>	<b>0.158</b>	<b>4.573</b>	<b>3.376</b>	<b>7.949</b>
III	Bay	0.181	0.024	-	-	0.015	0.430	0.646	0.557	1.206
	<b>Region III Total</b>	<b>0.181</b>	<b>0.024</b>	-	-	<b>0.015</b>	<b>0.430</b>	<b>0.646</b>	<b>0.557</b>	<b>1.206</b>
IV	Calhoun	-	-	-	-	-	-	-	-	-
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson	-	-	-	-	-	-	-	-	-
	Liberty	-	-	-	-	-	-	-	-	-
	Washington	-	0.297	-	-	-	-	0.297	-	0.297
	<b>Region IV Total</b>	-	<b>0.297</b>	-	-	-	-	<b>0.297</b>	-	<b>0.297</b>
V	Franklin	-	-	-	-	-	-	0.000	0.226	0.226
	Gulf	-	-	0.023	-	-	0.023	0.047	-	0.047
	<b>Region V Total</b>	-	-	<b>0.023</b>	-	-	<b>0.023</b>	<b>0.047</b>	<b>0.226</b>	<b>0.273</b>
VI	Gadsden	-	0.029	-	-	-	-	0.029	0.034	0.063
	<b>Region VI Total</b>	-	<b>0.029</b>	-	-	-	-	<b>0.029</b>	<b>0.034</b>	<b>0.063</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	0.485	-	-	-	-	0.485	-	0.485
	Leon	-	1.234	-	-	-	-	1.234	0.531	1.765
	Wakulla	-	-	-	-	-	-	0.000	-	-
	<b>Region VII Total</b>	-	<b>1.719</b>	-	-	-	-	<b>1.719</b>	<b>0.531</b>	<b>2.250</b>
<b>TOTALS</b>		<b>0.181</b>	<b>2.521</b>	<b>0.068</b>	-	<b>4.263</b>	<b>0.632</b>	<b>7.662</b>	<b>5.551</b>	<b>13.216</b>

(1) Recreational water use systems are often complex water flows between ground and surface waters. Groundwater withdrawals sometimes 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.

NOTE: Of the current 92 recreational IWUPs, pumping reports and audits have been completed as of 11/1/2021 for 75 or about 80 percent of Permittees. For IWUPs without pumping audits, where appropriate, the previous year reported use is carried forward as a proxy for 2020 estimated water use. These "proxy estimates" occur in six counties: Bay, Escambia, Leon, Santa Rosa, Okaloosa, and Walton.

## 5.1 Industrial-Commercial-Institutional (ICI) 2020 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 Floridan	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia	-	-	-	-	29.975	0.054	30.029	0.501	30.530
	<b>Region I Total</b>	-	-	-	-	<b>29.975</b>	<b>0.054</b>	<b>30.029</b>	<b>0.501</b>	<b>30.530</b>
II	Okaloosa	0.394	1.199	-	-	0.077	-	1.671	-	1.671
	Santa Rosa	-	-	-	-	2.925	-	2.925	-	2.925
	Walton	-	0.094	-	-	-	-	0.094	-	0.094
	<b>Region II Total</b>	<b>0.394</b>	<b>1.293</b>	-	-	<b>3.003</b>	-	<b>4.690</b>	-	<b>4.690</b>
III	Bay <sup>(2)</sup>	0.023	0.466	-	-	-	-	0.489	25.991	26.480
	<b>Region III Total</b>	<b>0.023</b>	<b>0.466</b>	-	-	-	-	<b>0.489</b>	<b>25.991</b>	<b>26.480</b>
IV	Calhoun	-	0.646	-	-	-	-	0.646	-	0.646
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson	-	0.837	-	0.062	-	-	0.898	-	0.898
	Liberty	-	0.214	-	-	-	0.044	0.258	0.001	0.259
	Washington	-	0.282	-	-	-	-	0.282	-	0.282
	<b>Region IV Total</b>	-	<b>1.978</b>	-	<b>0.062</b>	-	<b>0.044</b>	<b>2.084</b>	<b>0.001</b>	<b>2.085</b>
V	Franklin	0.017	-	-	-	-	-	0.017	-	0.017
	Gulf	-	0.166	-	-	-	-	0.166	-	0.166
	<b>Region V Total</b>	<b>0.017</b>	<b>0.166</b>	-	-	-	-	<b>0.183</b>	-	<b>0.183</b>
VI	Gadsden	-	0.472	-	-	-	-	0.472	0.000	0.472
	<b>Region VI Total</b>	-	<b>0.472</b>	-	-	-	-	<b>0.472</b>	<b>0.000</b>	<b>0.472</b>
VII	Jefferson <sup>(NWF Only)</sup>	-	-	-	-	-	-	-	-	-
	Leon	-	0.084	-	-	-	-	0.084	-	0.084
	Wakulla	-	1.166	-	-	-	-	1.166	-	1.166
	<b>Region VII Total</b>	-	<b>1.250</b>	-	-	-	-	<b>1.250</b>	-	<b>1.250</b>
<b>TOTALS</b>		<b>0.435</b>	<b>5.625</b>	-	<b>0.062</b>	<b>32.978</b>	<b>0.098</b>	<b>39.198</b>	<b>26.493</b>	<b>65.691</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.

(2) Surface water source is the Deer Point Lake Reservoir supplied by Bay County Board of County Commissioners. See Public Supply for more information.

**NOTE:** Since 2015, eleven ICI IWUPs have closed and one new IWUP was issued in 2020. Of these current 56 IWUPs, pumping reports and audits have been completed as of 10/6/2020 for 51 or about 90 percent of Permittees. For IWUPs without pumping audits, the previous year reported use is carried forward as a proxy for 2020 estimated water use. These "proxy estimates" occur in all but one planning region.

## 6.1 Thermoelectric Power Generation 2020 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 Floridan	Inter-mediate	Claiborne	Sand-and-Gravel	Surficial			
I	Escambia - Gulf / Crist	-	-	-	-	0.859	-	0.859	4.594	5.453
	Escambia - North Site	-	-	-	-	-	-	-	-	-
	<b>Region I Total</b>	-	-	-	-	<b>0.859</b>	-	<b>0.859</b>	<b>4.594</b>	<b>5.453</b>
II	Okaloosa	-	-	-	-	-	-	-	-	-
	Santa Rosa	-	-	-	-	-	-	-	-	-
	Walton	-	-	-	-	-	-	-	-	-
	<b>Region II Total</b>	-	-	-	-	-	-	-	-	<b>0.000</b>
III	Bay - BOCC Waste Energy	-	0.139	-	-	-	-	0.139	0.000	0.139
	Bay - Gulf / Lansing Smith	-	0.786	-	-	-	-	0.786	3.345	4.131
	<b>Region III Total</b>	-	<b>0.926</b>	-	-	-	-	<b>0.926</b>	<b>3.345</b>	<b>4.271</b>
IV	Calhoun	-	-	-	-	-	-	-	-	-
	Holmes	-	-	-	-	-	-	-	-	-
	Jackson - Gulf / Scholz	-	0.132	-	-	-	-	0.132	1.300	1.431
	Liberty - Telogia Power	-	0.206	-	-	-	-	0.206	-	0.206
	Washington	-	-	-	-	-	-	-	-	-
	<b>Region IV Total</b>	-	<b>0.337</b>	-	-	-	-	<b>0.337</b>	<b>1.300</b>	<b>1.637</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	-	-	-	-	-	-	-	0.207	0.207
	<b>Region VII Total</b>	-	<b>2.500</b>	-	-	-	-	<b>2.500</b>	<b>0.207</b>	<b>2.707</b>
	<b>TOTALS</b>	-	<b>3.763</b>	-	-	<b>0.859</b>	-	<b>4.622</b>	<b>9.446</b>	<b>14.068</b>

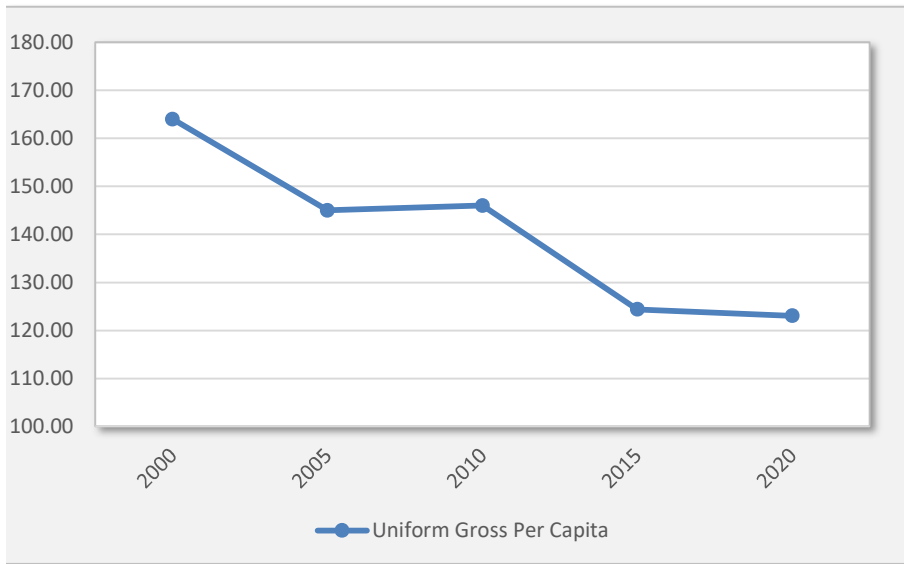
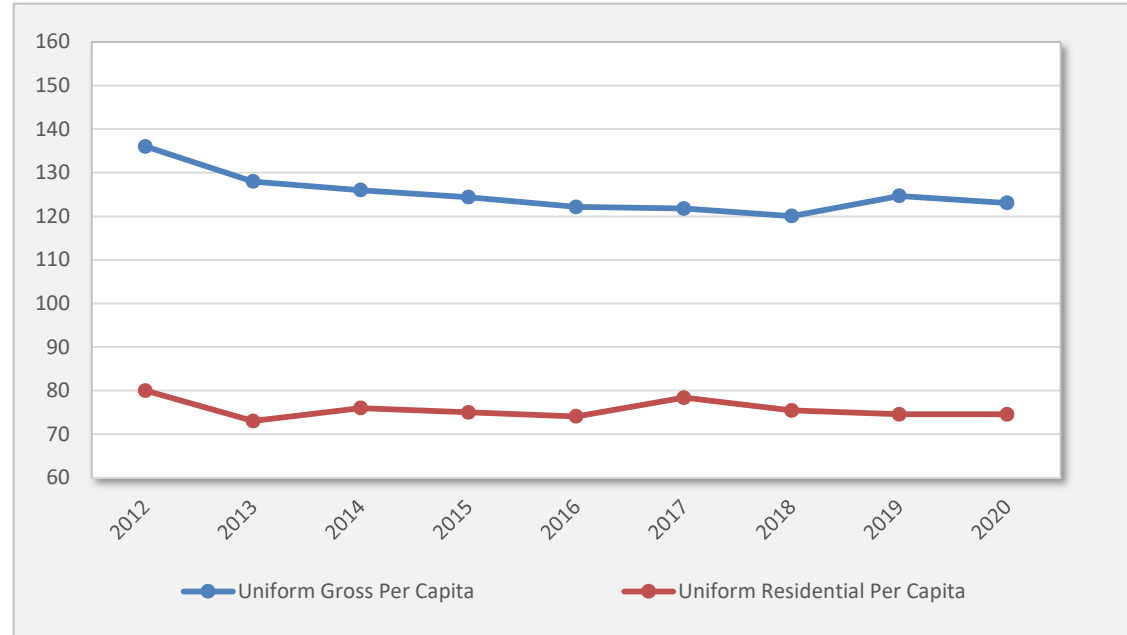
(1) Water withdrawn from surface water sources is typically used for cooling and returned to the source, and is not considered or estimated as consumptive water use.

(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 1995-2020 Public Supply Per Capita Water Use Over Time (gpcd)

Year	Uniform Gross Per Capita	Uniform Residential Per Capita
1995	151.00	
2000	164.00	
2005	145.00	
2010	146.00	
2011	140.00	
2012	136.00	80.00
2013	128.00	73.00
2014	126.00	76.00
2015	124.37	75.01
2016	122.14	74.08
2017	121.77	78.36
2018	120.03	75.44
2019	124.68	74.57
2020	123.05	74.56



### Five-Year Per Capita Averages, 2016-2020

**Uniform Gross Per Capita (gpcd) 122.33**

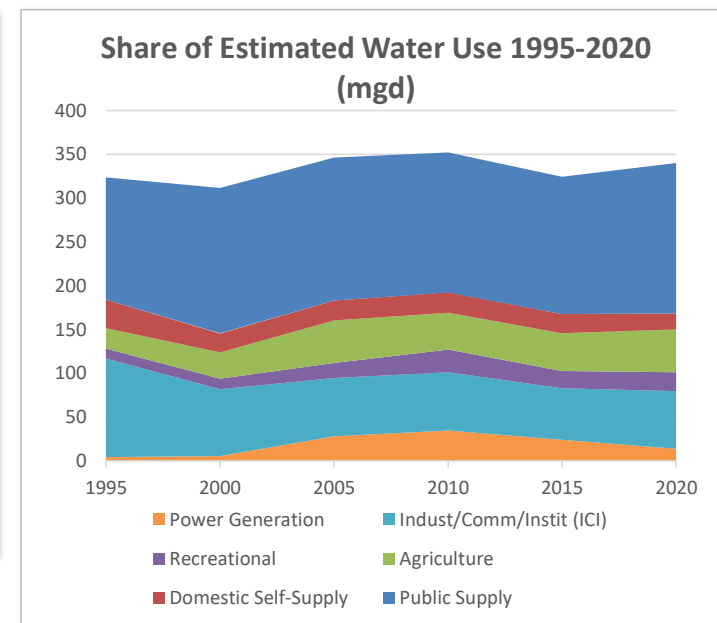
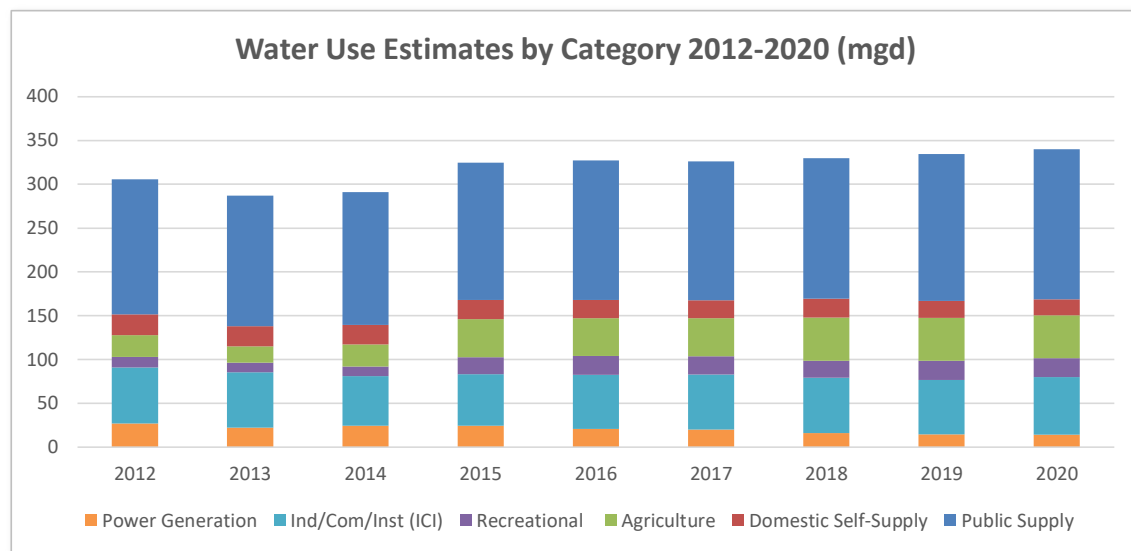
**Uniform Residential Per Capita (gpcd) 75.40**

**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 2015, populations served estimates include seasonal resident adjustments in all counties.

## NFWWMD 1995-2020 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	2018	2019	2020
Public Supply	139.790	166.160	163.481	159.570		154.270	149.088	151.549	156.495	159.084	158.717	160.323	167.565	171.597
Domestic Self-Supply	32.140	21.632	22.386	23.272		23.754	23.361	22.216	22.021	20.794	20.249	21.505	19.288	18.127
Agriculture	23.400	30.100	48.630	42.030		24.817	18.410	25.157	43.240	43.360	43.466	49.261	48.879	49.112
Recreational	11.500	12.060	17.310	25.905		11.777	10.698	10.846	19.595	21.594	21.032	19.521	21.902	21.643
Ind/Com/Inst (ICI)	112.450	76.280	66.160	66.440		64.411	63.238	56.664	58.703	61.581	62.448	63.058	62.409	65.691
Power Generation	4.470	5.650	28.530	34.820		26.708	22.373	24.357	24.335	20.676	20.206	16.095	14.360	14.068
<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>	<b>329.762</b>	<b>334.403</b>	<b>340.238</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 (for WSAs, and 2015-2020). In other years 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).



Northwest Florida Water Management District  
81 Water Management Drive  
Havana, Florida 32333-4712

(850) 539-5999

[www.nwfwater.com](http://www.nwfwater.com)