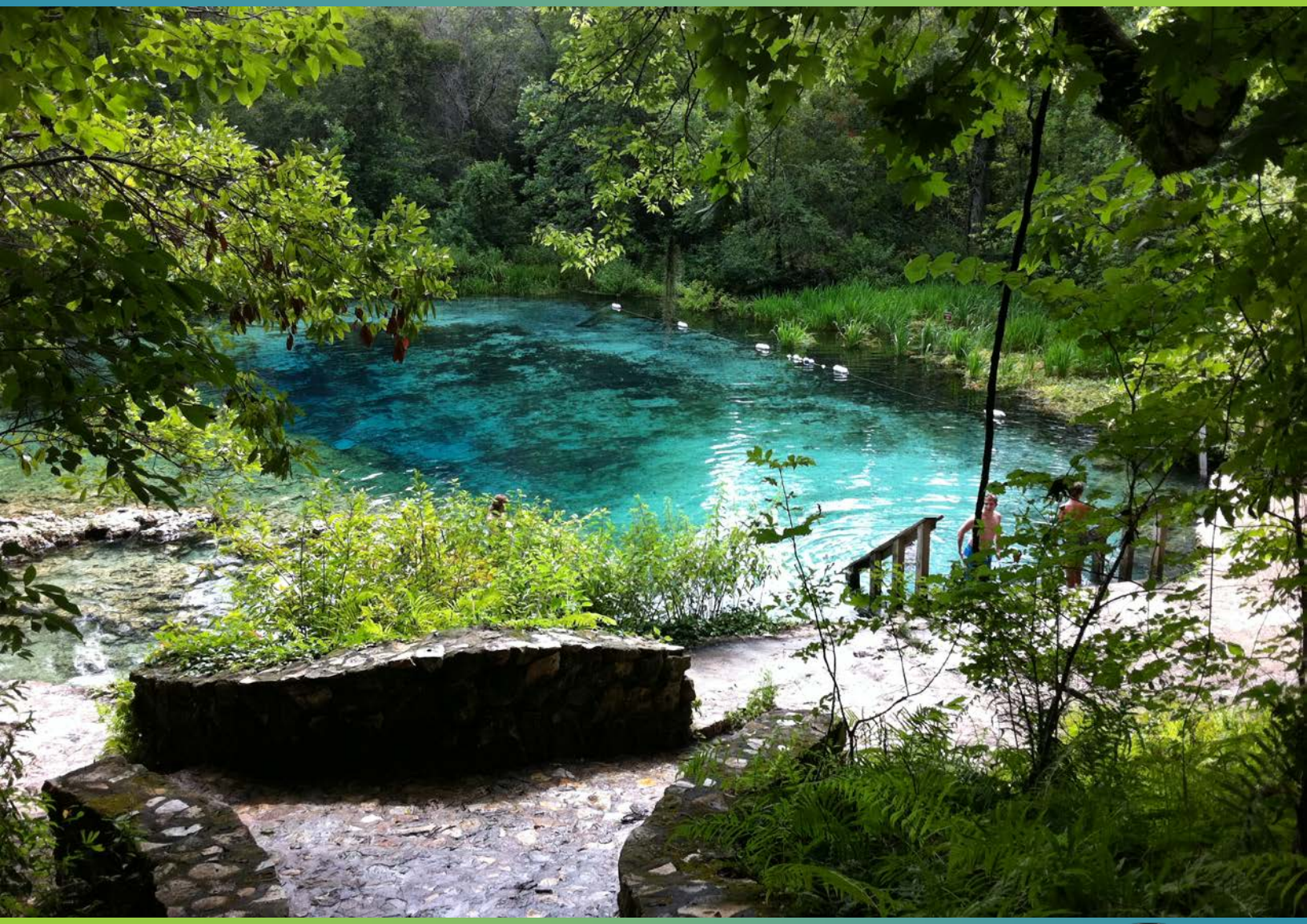
Regional Water Supply Planning



2015 Annual Report

Florida Department of Environmental Protection

Front Photo: Ichetucknee Springs State Park

Courtesy of Kathleen Greenwood

Table of Contents

Executive Summary

Florida's water management system is structured to provide a sustainable water supply for our growing population, as well as protecting our natural resources. This report, prepared by the Florida Department of Environmental Protection (DEP) pursuant to sections 373.709(6) and 373.536(6)(a)(4), Florida Statutes, provides an update on the progress made in planning for the state's future water supply. Specifically, the report summarizes the five water management districts' progress on the following:

- Regional water supply plans, including projected water demands;
- Development of alternative water sources; and
- Five-year water resource development work programs.

Key findings of this report include:

- Between 2015 and 2030, demand for fresh water in Florida is estimated to increase by about 1.0 billion gallons per day (bgd) for a total of 7.4 bgd. By 2035, increased demand likely will surpass 1.1 bgd. Alternative water supplies will need to be identified in order to meet additional demand.
- Diversification of water sources is needed to maintain a reliable water supply. Regional water supply plans, developed by the water management districts, identify traditional and alternative water supply projects that can, if constructed, produce approximately 1.1 bgd of water and conserve approximately 327 million gallons per day (mgd) of water by 2030-2035. This quantity is more than adequate to meet projected needs.
- Funds from the Water Protection and Sustainability Program (WPSP), water management districts, and local water suppliers have been used for the construction of 444 alternative water supply projects. To date, these projects have made almost 449 mgd of additional water available for consumptive use. Completion of all funded projects is expected to make available more than 807 mgd of additional water, or almost 80 percent of the additional projected 2030 needs.
- In addition to the WPSP, water management districts have their own cooperative funding programs that help develop water supply projects involving both traditional and alternative water supplies.
- DEP reviewed the districts' five-year water resource development work programs and found that they are consistent with the regional water supply plans. The proposed expenditures reasonably contribute to meeting the districts' water resource development responsibilities.
- Continued efforts on all regional water supply plan components, including traditional and alternative water source development and water conservation, will be required to ensure that supplies are available to meet 2030-2035 demands.

Regional Water Supply Planning

As Florida's population grows, pressure increases on the water resources of the state. Sustainable water use, while protecting the environment, becomes increasingly important. The Florida Water Resources Act, Chapter 373, Florida Statutes, directs the state's five water management districts (Figure 1) to develop a regional water supply plan (RWSP) for any region where "existing sources of water are not adequate to supply water for all existing and future reasonable-beneficial uses and to sustain the water resources and related natural systems" for the next 20 years (section 373.709, Florida Statutes).

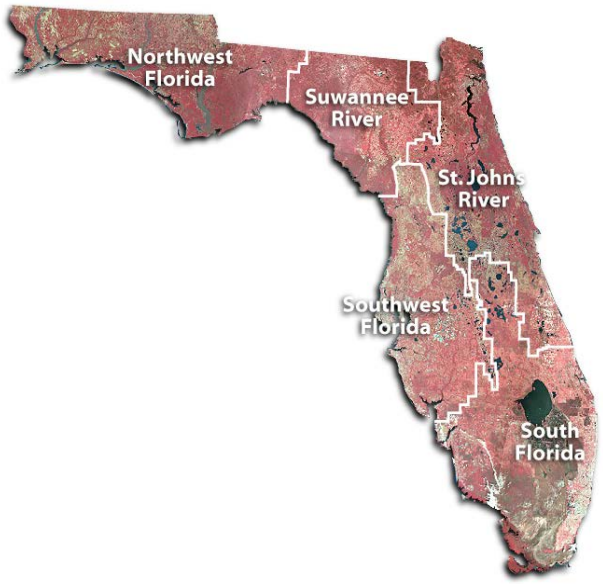


Figure 1. Florida's Water Management Districts

The plans consider all water use sectors, and include public water supply, agricultural irrigation, commercial/industrial/institutional use, power generation, recreational irrigation, and domestic and small public supply. The statute requires the water management districts to update these plans every five years. Some of the key elements of these plans include:

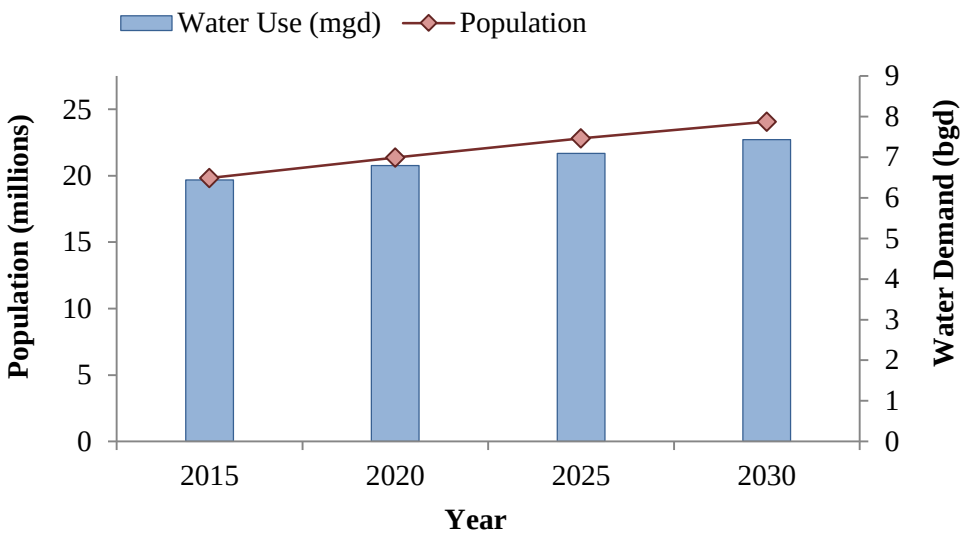
- Quantification of water needs for all projected uses for a 20-year period.
- Traditional and alternative water supply options and projects that exceed projected 20-year demands and may be implemented by local governments or other water suppliers.
- Estimates of the amount of water each project will make available.
- Identification of the entity that should implement each project option and the current status of project implementation.
- Time frame and cost estimates for implementing each project.
- Analysis of funding needs and identification of potential funding sources.
- Identification of minimum flows and minimum water levels (MFLs), MFL recovery or prevention strategies, and any reservations of water adopted by district rule.

Links to more information on district regional water supply plans can be found under *Water Supply Planning* at http://www.dep.state.fl.us/water/waterpolicy/links.htm. Previous versions of DEP's Annual Report on Regional Water Supply Planning can be found under *Regional Water Supply Planning* at http://www.dep.state.fl.us/water/waterpolicy/pubs.htm.

Water Use Projections

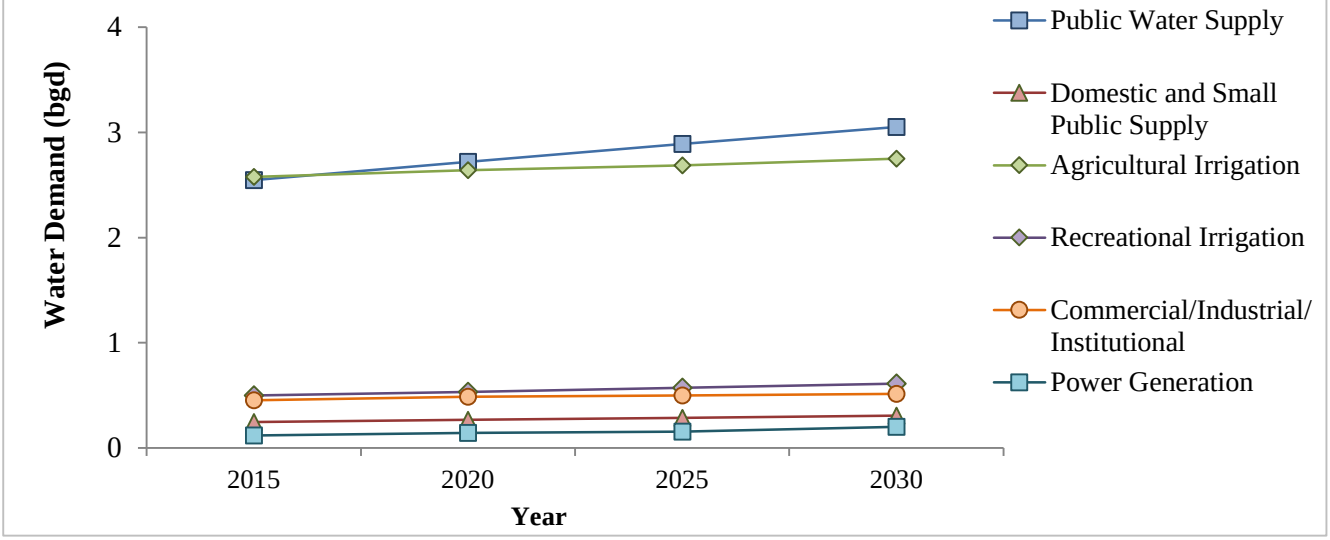
Between 2015 and 2030, estimates are that Floridians will need an additional 1.0 bgd of water, nearly a 16 percent increase compared to 2015 demands, for a total of 7.4 bgd (Figure 2).

Figure 2. Statewide Demand and Population Projections



During this same period, demographers predict Florida's population will increase by 21.7 percent, from 19.8 million to approximately 24.1 million.[1] This 2030 demand estimate is less than previous projections because of a slower population growth rate over the last several years. Public supply and agricultural irrigation are, by far, the largest categories of water use (Figure 3). The water management districts predict the public supply sector's projected demand will increase by almost 20 percent between 2015 and 2030 and will account for the majority of the demand increase statewide. In contrast, agricultural irrigation demand is predicted to grow by only 6.8 percent. To meet Florida's water supply demands and resource protection goals, both water use sectors need to continue implementing water conservation programs and improving efficiency. Links to more information on water use in Florida can be found under *Water Use Information* at http://www.dep.state.fl.us/water/waterpolicy/links.htm.

Figure 3. Projected Water Demand by Sector



[1] Florida Demographic Estimating Conference. 2016. Florida Legislature, Office of Economic and Demographic Research. Florida Demographic Estimating Conference, February 2016 and the University of Florida, Bureau of Economic and Business Research, Florida Population Studies, Volume 49, Bulletin 174, January 2016. Available at http://edr.state.fl.us/Content/population-demographics/data/.

Alternative Water Supplies

Diversification of water sources is needed to maintain a reliable water supply. Traditionally, most of Florida has relied on fresh groundwater to meet water demand.[2] Supplies of fresh, inexpensively treated groundwater are increasingly limited in many parts of the state, and these traditional sources will not be able to meet all of the future demand. The development of alternative water supplies, such as reclaimed water, brackish water, seawater, and surface water, is a key component of the districts' regional water supply plans and is essential to meeting future demands.

Between Fiscal Years (FY) 2005-06 and FY 2008-09, the Florida Legislature funded the Water Protection and Sustainability Program (WPSP) to assist with construction costs for alternative water supply projects. While the WPSP has not been funded since 2009, all of the districts continue to provide funds toward the development of alternative water supplies, although not at the levels that were funded between FY 2005-06 and FY 2008-09. Between FY 2005-06 and FY 2014-15, 444 alternative water supply projects have been constructed (Figure 4). Of these, reclaimed water projects have been the most numerous, making up almost 64 percent of the total projects funded. To date, funded projects already have made available approximately 449 mgd of additional water for consumptive use (Figure 5).

Figure 4. Alternative Water Supply Projects Funded Since Fiscal Year 2005-06

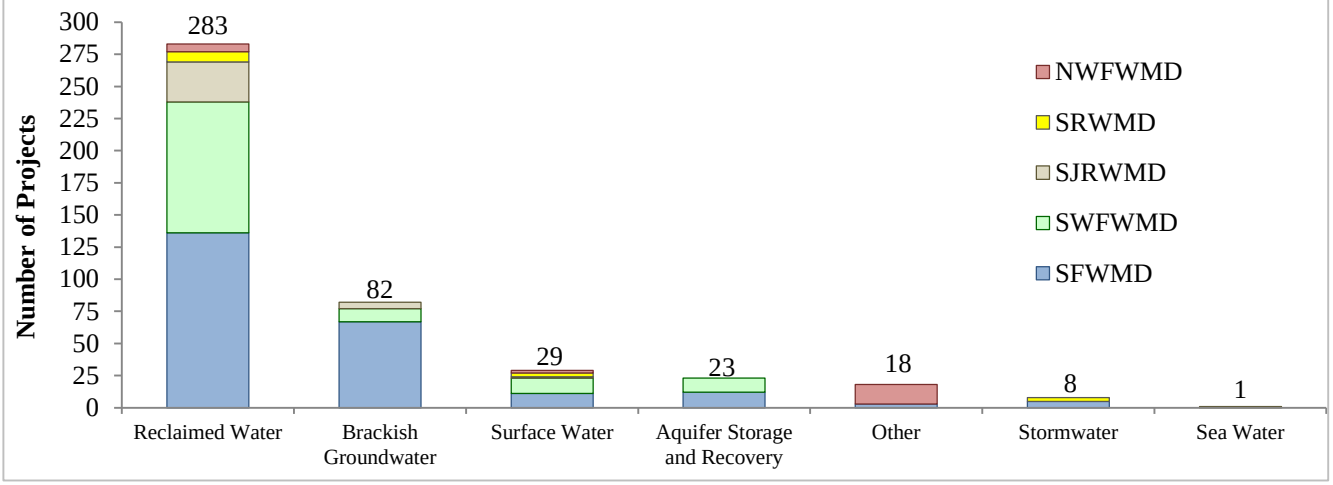
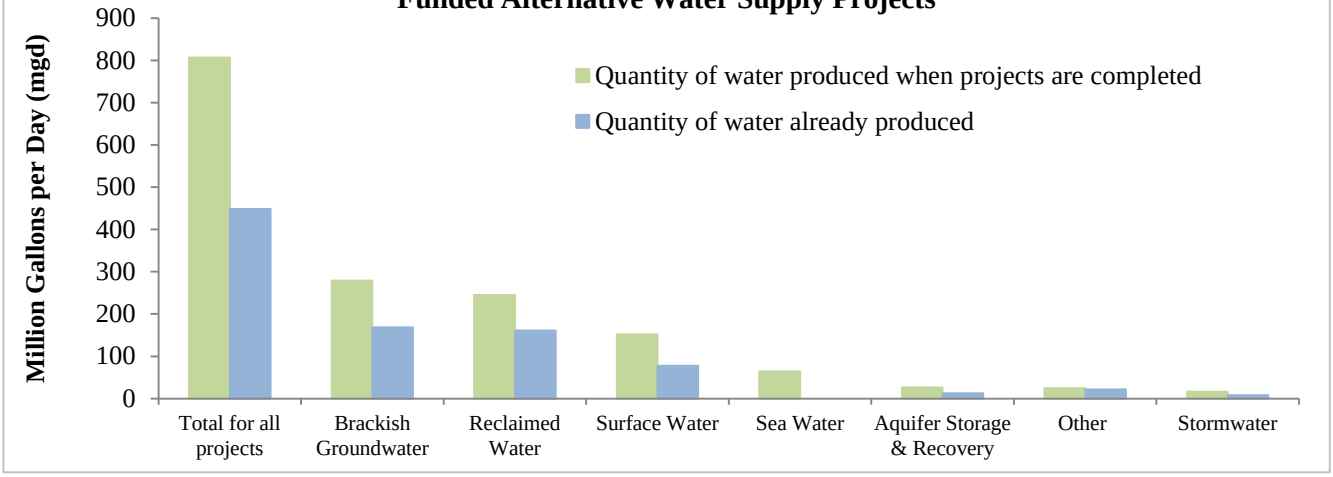


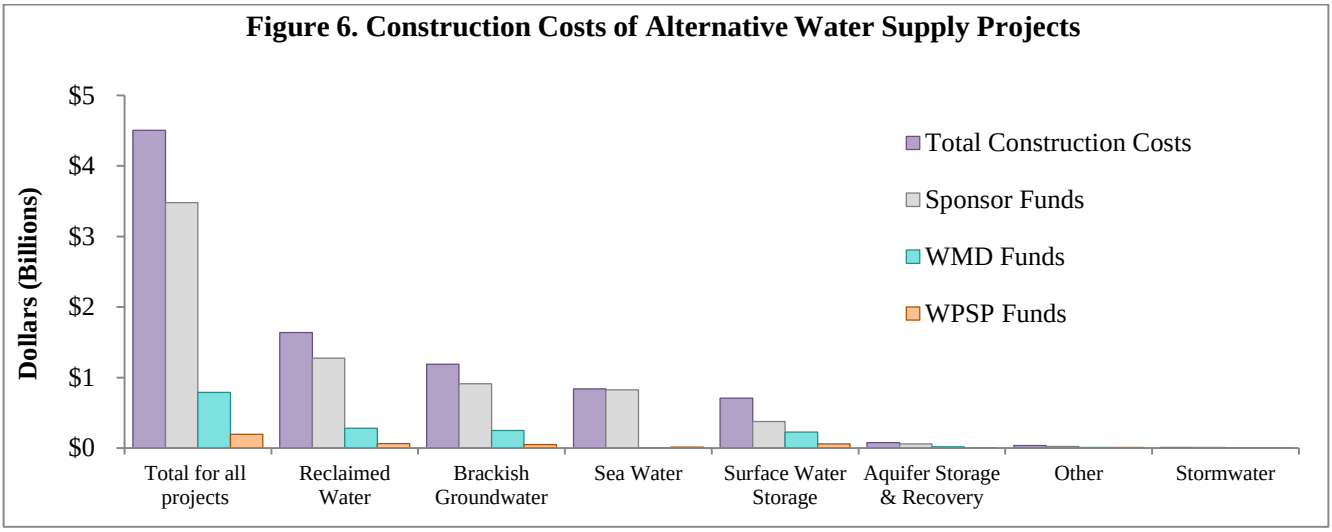
Figure 5. Quantity of Water to be Made Available from Funded Alternative Water Supply Projects



[2] Marella, R. L. 2012. Data for *Water Withdrawals, Use, and Trends in Florida, 2010*. U.S. Geological Survey. Available at http://fl.water.usgs.gov/infodata/wateruse/datatables2010.html.

The districts estimate that when all currently planned alternative water supply projects are complete they will make available over 807 mgd of additional water, almost 81 percent of the additional water needed to meet 2030 demands. Brackish groundwater projects are expected to produce the largest amount of water, approximately 279 mgd or almost 28 percent of the additional 1.0 bgd of water needed by 2030. The total construction costs[3] of the 444 alternative water supply projects are more than $4.5 billion (Figure 6).

Figure 6. Construction Costs of Alternative Water Supply Projects



The WPSP and the water management districts have provided more than $985 million, or about 22 percent, of the total alternative water supply construction costs. Thus far, water suppliers have committed to provide almost $3.5 billion toward construction of these projects, representing about 77 percent of the total funding. Other entities, such as the federal government, have provided the remaining small percentage of funding.

Although WPSP-funded projects were only a subset of the total water supply projects identified by the districts to meet 2030 demands, the program was successful in providing incentives to begin the construction of many alternative water supplies. Nevertheless, more alternative water supply projects identified in the regional water supply plans will need to be constructed in order to meet the remaining 2030 demand.

[3] The total construction costs are reported for the life of the project and may include funding before the WPSP started as well as funding from other sources. As a result, the total of sponsor match, water management district match, and WPSP match may not equal total construction costs.

Regional Water Supply Plan Updates

Table 1 summarizes the status of RWSPs in the districts. Between 2015 and 2035, statewide demand for fresh water is estimated to increase by at least 1.1 bgd. Of that, only 320.5 mgd is not met by existing allocation, capacity, or source. To date, the RWSPs have identified potential water conservation savings at 326.7 mgd and alternative water supply projects that could, if constructed, produce approximately 1.1 bgd of water by 2030-2035. This quantity, combined with the projects yet to be identified in the North Florida Regional Water Supply Partnership (NFRWSP) and the St. Johns River Water Management District's (SJRWMD) Central Springs and East Coast RWSP, will be more than adequate to meet projected 2030-2035 needs.

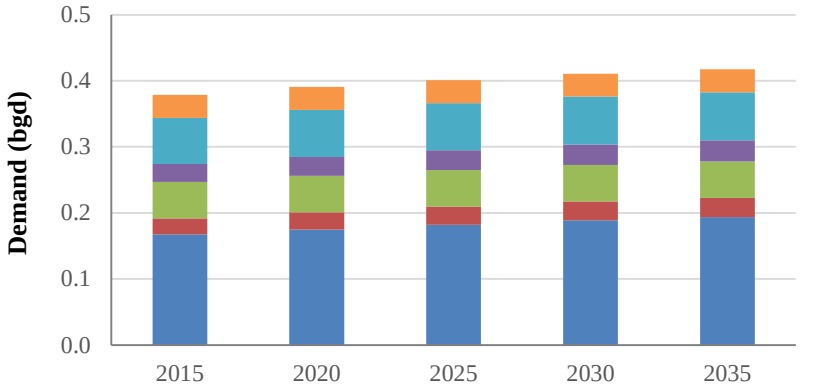
Table 1. Status of Regional Water Supply Plans

WMD/Planning Region	Net Demand Change (mgd)	Future Demand Not Met with Existing Allocation, Capacity, or Source (mgd)	Potential Conservation Savings Identified in RWSP (mgd)	Future Demand Not Met After All Conservation Implemented (mgd)	Potential Water from Alternative Water Supply Projects Identified in RWSP (mgd)
Northwest Florida WMD	**2015-2035[4]**				
Region II	19	1.8	6.5	0	59
Region III	9	0	9.5	0	35[5]
Regions I, IV, V, VI, & VII	10	n/a[6]	3.6[4]	n/a	n/a
Districtwide	**38**	**1.8**	**19.6**	**0**	**94**
St. Johns River WMD	**2015-2035[7]**				
North Florida (Region 1)	Included in NFRWSP	Included in NFRWSP	Included in NFRWSP	Included in NFRWSP	Included in NFRWSP
Central Springs East Coast (Regions 2, 4, and 5)	78.75	Under Development	47	Under Development	Under Development
Central Florida (Region 3)	Included in CFWI	Included in CFWI	Included in CFWI	Included in CFWI	Included in CFWI
CSEC Portion of SJRWMD	**57**		**47**		
South Florida WMD	**2015-2030[8]**				
Lower Kissimmee Basin	15	0	0	0	0
Upper Kissimmee Basin	Included in CFWI	Included in CFWI	Included in CFWI	Included in CFWI	Included in CFWI
Upper East Coast	23	3	14	0	70
Lower East Coast	189	10	52	0	76
Lower West Coast	257	10	41	0	66
Districtwide	**484**	**23**	**107**	**0**	**212**
Southwest Florida WMD	**2015-2035**				
Northern (excluding CFWI)	50.7	26.7	18.8	7.9	90.9
Tampa Bay	74.3	5.4	41.6	0	103
Heartland (excluding CFWI)	8.3	0.9	3.5	0	4.7
Southern	55.2	12.7	15	0	185.4
Districtwide	**188.5**	**45.7**	**78.9**	**7.9**	**384**
Central Florida Water Initiative (CFWI)	**2015-2035**				
Portions of SJR, SWF & SF	**234**	**250**	**42**	**208**	**455**
Suwannee River WMD	**2015-2035**				
Alapaha River Basin	North Florida Regional Water Supply Plan Under Development				
Lower Santa Fe River Basin					
Upper Santa Fe River Basin					
Upper Suwannee River					
Rest of SRWMD	**22**	**n/a**	**n/a**	**n/a**	**n/a**
North Florida RWSP	**2015-2035**				
Portions of SJR & SR	**125.3**	Under development	**32.2**	Under development	Under development
Statewide Total	**1,148.8**	**320.5**	**326.7**	**224**	**1145**

[4]Net demand change and potential conservation savings from NWFWMD 2013 Water Supply Assessment.
[5]Represents capacity of new upstream surface water intake (30 mgd) plus anticipated additional reclaimed water available (5 mgd).
[6] n/a indicates that a RWSP has not and does not need to be developed for that region.
[7] Source is Draft Joint NFRWSP Projections, 2016.
[8]SFWMD is transitioning from their 2010-2030 RWSPs to their 2015-2035 RWSPs, so numbers reported are for 2010-2030.

In 2015, water use in the Northwest Florida Water Management District (NWFWMD) was about 379 mgd (Figure 7). By 2035, the district expects water use to increase to 417 mgd, which is almost 16 percent more than the 2015 water use. Public water supply was the largest use sector in 2015, followed by commercial/industrial/institutional. Together, these two sectors accounted for 63 percent of the water used. By 2035, the district estimates these will remain the two largest water use sectors. Projections indicate that recreational irrigation and domestic and small public supply will experience the largest growth rate at nearly 23 percent.

Figure 7. NWFWMD Districtwide Projected Demand



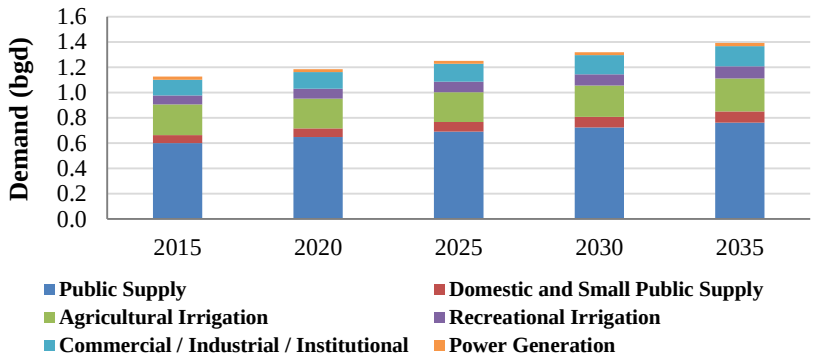
The NWFWMD has developed RWSPs for Regions II and III (Figure 8). In Region II, protection of the Coastal Floridan aquifer continues to be the major concern and inland groundwater sources have been developed to serve the region's coastal areas. In FY 2014-15, the district began a groundwater modeling project for the western district that refines existing Floridan aquifer groundwater models for Region II and expands the model to include portions of Regions I and III. The project will incorporate new and updated monitoring data and water demand projections and be calibrated to reflect current groundwater withdrawals in the region. The updated model is also tied to development of MFLs for the Coastal Floridan aquifer in Region II. In 2015, the district completed the MFL work plan, extensive data review and evaluation, and development of bid specifications to rehabilitate and expand the monitoring well network. As part of its water supply development grant program, the district awarded four water supply development grants in Region II to complete water system infrastructure improvements and evaluate the feasibility of developing a reclaimed water system.

Figure 8. NWFWMD Planning Regions

In Region III, protecting Deer Point Lake Reservoir from storm-induced saltwater intrusion is the major water supply issue. As a solution to this issue, Bay County, with the help of district funds, has completed construction of an alternate upstream intake for water supply. The district also completed the Williford Springs Restoration Project on Econfina Creek, upstream of the reservoir, which will help protect the groundwater recharge area. A water supply development grant was awarded in Region III to complete water distribution line improvements.

During the implementation of the WPSP, over $98 million of WPSP and sponsor monies was spent on tenalternative water supply projects. Through FY 2014-15, the district spent an additional $46 million implementing the water supply and water resource development projects identified in their regional water supply plans. These projects have already made available more than 25 mgd of water, and the district estimates they will produce 36 mgd by 2035. In FY 2015-16, the NWFWMD expects to spend more than $4 million for alternative water supply development.

Figure 9. SJRWMD Districtwide Projected Demand



In 2015, total water use in the St. Johns River Water Management District (SJRWMD), including the portion within the Central Florida Water Initiative (CFWI), was around 1,100 mgd (Figure 9). By 2035, the district expects water use to increase to almost 1,400 mgd, which is almost 25 percent more than the 2015 water use. Public water supply was the largest use sector in 2015, followed by agricultural irrigation. Together, these two sectors accounted for about 75 percent of the water used. By 2035, the district estimates that agricultural irrigation and public supply will remain the two largest use sectors. Domestic self-supply and small public supply systems will have the largest estimated growth rate at 40 percent.

Historically, the SJRWMD prepared a single water supply plan that encompassed the entire district. In the future, the district will develop three water supply plans, encompassing the entire district, for the following regions: Central Florida Water Initiative (with the South Florida and Southwest Florida Water Management Districts), the North Florida Regional Water Supply Partnership (with the Suwannee River Water Management District), and the Central Springs and East Coast Water Supply Planning Region (Figure 10). This approach will address local concerns expressed by stakeholders, improve planning efficiency, and reduce overall costs. Each regional water supply plan will include the most recent water supply assessment, which will determine the extent of planning needed for a particular planning region.

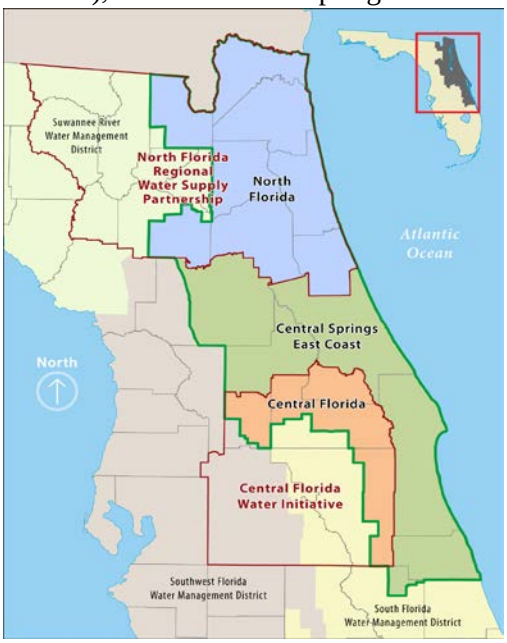


Figure 10. SJRWMD Planning Regions

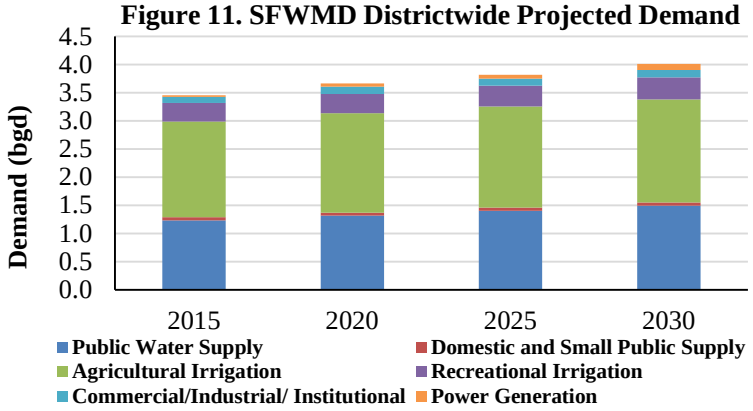
In November 2015, the governing board adopted the CFWI RWSP (see more in "Interdistrict Regional Water Supply Plans" section). In the Central Springs and East Coast Water Supply Planning Region, preliminary collaboration efforts have begun with the Southwest Florida Water Management District to develop a groundwater tool to assess impacts to MFL waterbodies. While work with stakeholders has begun, a more focused outreach effort will begin in the fall of 2017.

The Altamonte Springs A-First Project, which was developed through a partnership between the Cities of Altamonte Springs and Apopka, the Florida Department of Transportation, DEP, and the SJRWMD, was completed in 2015. This $12.5 million project will provide up to 4.5 mgd of water to the cities. Additionally in FY 2014-15, the district provided $5.52 million and cooperators provided $7.8 million for 16 cooperative cost share projects which generated approximately 30 mgd in additional water supply. The district also provided approximately $3.0 million to the agricultural community to improve irrigation efficiencies and reduce nutrient run-off. The total amount of money expected to be spent in FY 2015-16 includes: $24.7 million for alternative water supply projects; $5.0 million for Rural and Economic Development Initiative (REDI) communities and innovative projects; and $3.0 million to the agricultural community.

By the end of FY 2014-15, more than $1.2 billion of district, sponsor, and WPSP monies have been spent on construction for a total of 38 alternative water supply projects. These projects have already made available more than 82 mgd of water and it is expected that they will produce more than 192 mgd by 2035. All of the WPSP funds will be spent by the end of this year.

In 2015, total water use in the South Florida Water Management District (SFWMD), including the portion within the CFWI, was estimated to be 3,457 mgd (Figure 11). By 2030, the district expects water use to increase to 4,008 mgd, which is 16 percent more than the 2015 water use. Agricultural irrigation was the largest use sector in 2010, followed by public water supply. Together, these two sectors accounted for 84 percent of the water used. By 2030, agricultural irrigation and public supply will continue to remain the two largest use sectors. Projections indicate that power generation will experience the largest growth rate at 137 percent.

Figure 11. SFWMD Districtwide Projected Demand



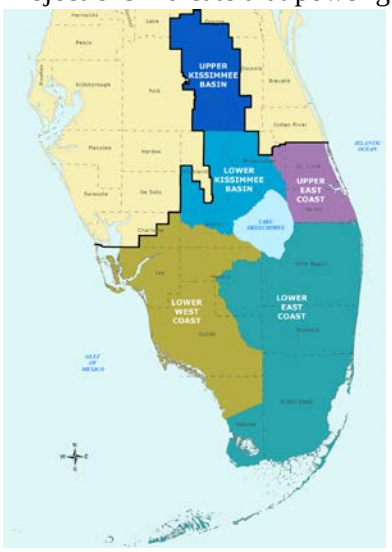


Figure 12. SFWMD Planning Regions

The district has adopted RWSPs for each of its five planning regions (Figure 12). Water supply issues include: a continuing need for hydrogeologic studies and groundwater models; developing methods to meet water supply needs for users and MFLs in the Lower East Coast Region; complying with the 2008 Ocean Outfall Act; completing Comprehensive Everglades Restoration Plan projects; meeting water demands related to citrus acreage fluctuations; and alleviating the impact of Lake Okeechobee releases on the Caloosahatchee and St. Lucie Estuaries. In general, the water supply plans have concluded that the regions' 2030 needs can be met with appropriate management, diversification of water supply sources, increased water storage, and enhanced conservation.

In November 2015, the governing board adopted the CFWI RWSP (see more in "Interdistrict Regional Water Supply Plans" section). Also in 2015, the SFWMD completed the following water resource development projects: the 2014 update to the Saltwater Interface Map for coastal surficial aquifers; documentation of the East Coast Floridan Model, a transient, density-dependent, numeric model of the Floridan aquifer system in the Upper and Lower East Coast Regions; an update to the Lower West Coast Floridan Aquifer System Model; and a contract with several Central Florida utilities to develop a "water wheeling" system that optimizes distribution of water from the Cypress Lakes wellfield.

In March 2016, the SFWMD's Governing Board approved the updated Upper East Coast RWSP. The district has begun to update the Lower West Coast RWSP, which will be completed in 2017. For this, the district will work on the Lower West Coast Floridan Aquifer Model; update the current and 2040 utility service area maps; and update population projections, per capita use rates, and water demands. For all regions, the district continues to provide technical assistance to local governments required to submit Water Supply Facilities Work Plans.

In FY 2014-15, the SFWMD spent $7 million on implementing projects identified in their RWSPs. Moreover, almost $1.6 billion of district, sponsor, and WPSP monies have been spent on construction of 234 alternative water supply projects. These projects have already made available more than 287 mgd of water, and the district estimates they will produce more than 432 mgd by 2030. Approximately $18.7 million has been budgeted for water supply development projects/programs in FY 2016-17. In addition, it is estimated that over $108 million of the Central & Southern Florida (C&SF) Project operation and maintenance budget can be attributed to providing water supply to the region. This equates to approximately $126.7 million that is planned to be spent in FY 2016-17 to ensure water supply for the region.

In 2015, total water use in the Southwest Florida Water Management District (SWFWMD), including the portion within the CFWI, was about 1,240 mgd (Figure 13). By 2035, the district expects water use to increase to about 1,460 mgd, which is almost 18 percent more than the 2015 water use. Public water supply was the largest use sector in 2015, followed by agricultural irrigation. Together, these two sectors accounted for 79 percent of the water used. By 2035, the district estimates that public supply and agricultural irrigation will remain the two largest use sectors, even though agricultural irrigation is predicted to grow very little (about 4 percent) over this time period. Domestic users and small public supply are expected to have the largest growth rate at nearly 56 percent.

Figure 13. SWFWMD Districtwide Projected Demand

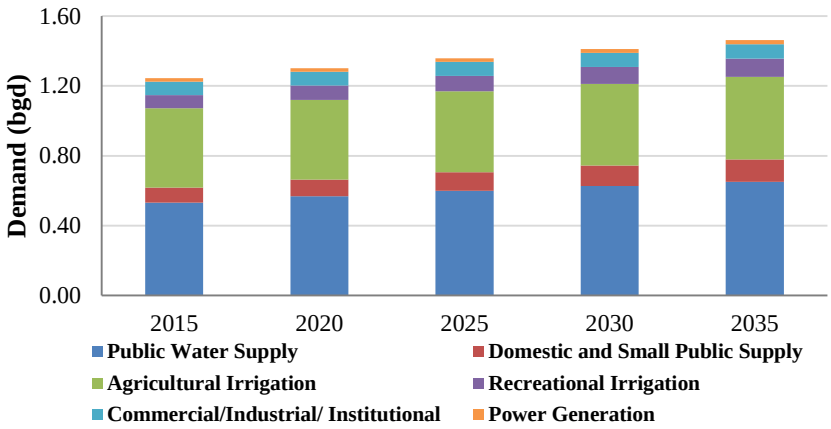


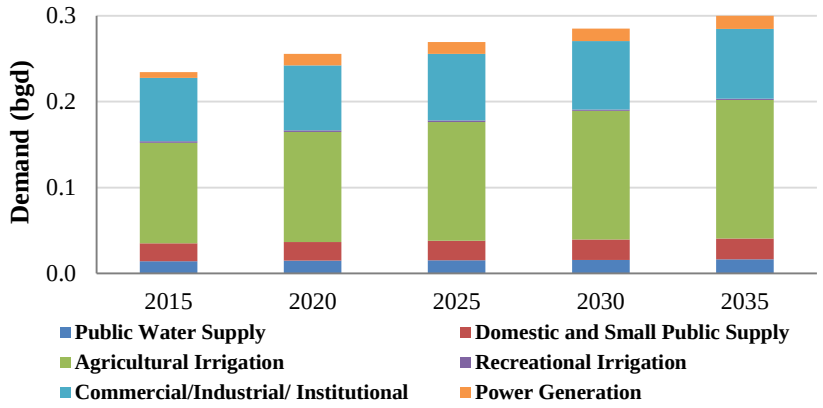
Figure 14. SWFWMD Planning Regions

In November 2015, the governing board adopted the RWSPs for its four planning areas (Figure 14) and the CFWI RWSP (see more in "Interdistrict Regional Water Supply Plans" section). Major water supply concerns throughout the district include the following: existing impacts to MFLs; limited availability of traditional groundwater resources; and saltwater intrusion (in the Tampa Bay and Southern Planning Regions). The district's solutions to these challenges include reducing water demands through increased water conservation and reclaimed water use; developing other alternative water supply sources; reallocating unused water during land use transitions; establishing MFLs; and participating in regional and interdistrict water supply planning and research efforts.

The plans identified approximately 838 mgd of water available from the following sources: surface water, reclaimed water, desalination, fresh groundwater, and water conservation. Approximately 108 mgd of that total will be provided through implementation of water conservation measures. The district projected that approximately $1.6 billion could be generated through district funding programs between 2016 and 2035. This amount of funding would be enough to fund the six large-scale water supply and water resource development projects identified in the plans.

By the end of FY 2014-15, the SWFWMD had provided almost $670 million in funding and approximately $54 million in WPSP funding towards 135 projects ($1.5 billion in total project costs) that will provide water resource benefits of nearly 166 mgd by 2030. Of this amount, more than 54 mgd has already been created.

Figure 15. SRWMD Districtwide Projected Demand



In 2015, water use in the Suwannee River Water Management District (SRWMD) was approximately 234 mgd (Figure 15). By 2035, the district expects water use to increase to about 300 mgd, which is almost 28 percent more than the 2015 water use. Agricultural irrigation was the largest use sector in 2015, followed by commercial/industrial/institutional, together accounting for almost 82 percent of the estimated water use. Projections indicate these will continue to be the two largest use sectors in 2030. Public water supply, the third largest water use sector in 2010, will remain third in 2035. Demand estimates indicate that the power generation sector will experience the largest growth rate at almost 126 percent.

As a result of long-term groundwater level declines in the northeastern portion of the district, the district has established four water supply planning regions and designated them as Water Resource Caution Areas (WRCAs) (Figure 16). In coordination with the SJRWMD, the district is continuing development of the North Florida Regional Water Supply Plan for this region (see next section for more details).

The district is investigating the feasibility of implementing aquifer recharge projects, alternative water supply projects, and water resource development projects in its WRCAs. The Ichetucknee Trace-Cannon Creek Project and the Ichetucknee Springshed Water Quality Improvement Project are projected to provide a combined 3.4-5 mgd of additional water to the lower Santa Fe River. The Eagle Lake/Upper Suwannee Enhancement Project, the Middle Suwannee River/Springs Restoration/Aquifer Recharge Project, and the Brooks Sink Hydrologic Restoration Project will benefit the Upper and Middle Suwannee River by providing a projected 31 mgd of additional recharge.

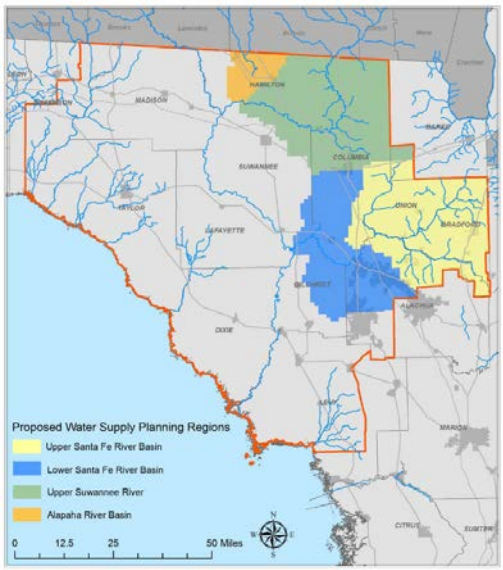


Figure 16. SRWMD Planning Regions

In 2015, MFLs for the Lower Santa Fe River, the Ichetucknee River, and priority springs became effective. Since these systems are not meeting their MFLs, the SRWMD, DEP, and SJRWMD jointly developed a recovery strategy and implementation is underway. The MFL will be re-evaluated no later than three years from the publication of the final peer review report on the North Florida Southeast Georgia Regional Groundwater Flow Model, or by December 31, 2019, whichever is earlier.

The district has spent all of its WPSP funds. The district's ongoing conservation and alternative water supply projects are focused on springs protection and aquifer recharge, especially in the Upper and Middle Suwannee River Basin WRCAs and the Lower Santa Fe River Basin WRCA. Springs protection projects and community water conservation efforts are being funded through their Regional Initiative Valuing Environmental Resources (RIVER) Program. Projects that increase irrigation efficiency are funded through the agricultural cost share program. In FY 2015-16, the district budgeted $14 million for project implementation. Completed projects have made an additional 5 mgd of water available. Active projects are expected to make an additional 52 mgd of water available.

Interdistrict Regional Water Supply Plans

In many areas, Florida has encouraged regional solutions to water supply challenges. In the past, regional solutions have been accomplished primarily through establishment of water supply authorities that have several member or local government utilities. Advantages offered by water supply authorities include the abilities to transfer water among members, reduce individual utility cost, and spread financial risk for large water supply projects among members. More recently, another type of regional solution has been the joint development of regional water supply plans among two or more water management districts. Florida currently has two inter-district water supply planning efforts - the North Florida Regional Water Supply Partnership and the Central Florida Water Initiative.

North Florida Regional Water Supply Partnership

The North Florida Regional Water Supply Partnership (NFRWSP) is a joint effort by the SJRWMD, SRWMD, DEP, and other stakeholders to address current and future water supply needs along the shared boundaries between the two water management districts (Figure 17). Water withdrawals in both districts have contributed to a regional decline in the Upper Floridan aquifer.

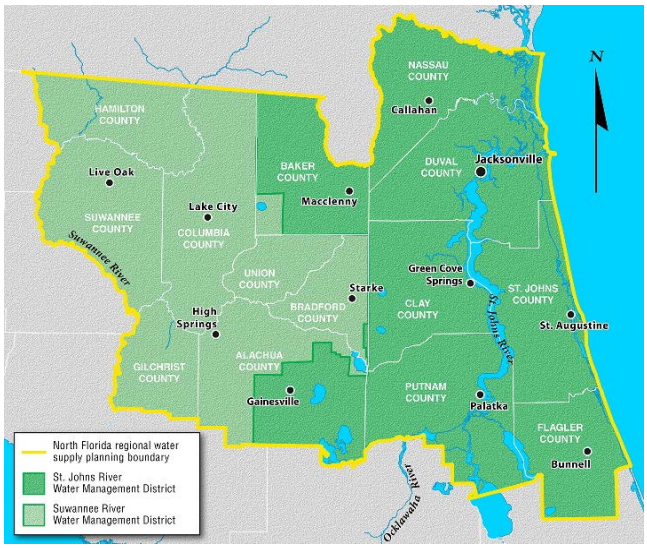


Figure 17. Map of NFRWSP

The NFRWSP has several initiatives, including:

- A Stakeholder Advisory Committee that meets regularly with the districts and DEP to ensure that all interests are considered during development of the RWSP.
- The development of the North Florida Southeast Georgia (NFSEG) Regional Groundwater Flow Model to assess and predict water resource impacts. The model, which has been under development by SRWMD and SJRWMD, in collaboration with other stakeholders, is undergoing calibration and will be ready to use for preliminary simulations in 2016. When complete and peer-reviewed, the NFSEG model will be used in both regional water supply planning and water use permitting by both water management districts.
- A joint RWSP, a draft of which will be produced by the middle of 2016. Public workshops will be held in mid-summer and governing board acceptance is anticipated in the fall of 2016.

In FY 2014-15 the following was completed:

- Water demand projections, methodologies, and values for all water users except agricultural;
- Water use demand projections, methodologies, and values for reclaimed water; and
- Groundwater quality analysis.

In order to complete the RWSP in 2016, the following activities will be completed:

- The NFSEG model and simulations;
- Agricultural use water demand projections, methodologies, and values;
- Irrigation efficiency potential;
- Water conservation potential and cost estimates (non-agricultural); and
- Water resource assessment methodology.

More information on the NFRWSP can be found at http://northfloridawater.com/.

Central Florida Water Initiative

The Central Florida Water Initiative (CFWI) is a joint effort by DEP, SWFWMD, SJRWMD, SFWMD, the Florida Department of Agriculture and Consumer Services, area utilities, and other stakeholders to address current and long-term water supply needs in a five-county area of Central Florida where the three districts' boundaries meet (Figure 18). Historically, the Floridan aquifer system has supplied the vast majority of fresh water used in this area.

Demand projections in the CFWI area for 2015-2035 predict a 22 percent demand increase to about 1,100 mgd (Figure 19). Public water supply demands constitute 70 percent of this total projected increase, with recreational and agricultural irrigation accounting for approximately 10 percent each of the total 2010-2035 demand increase.

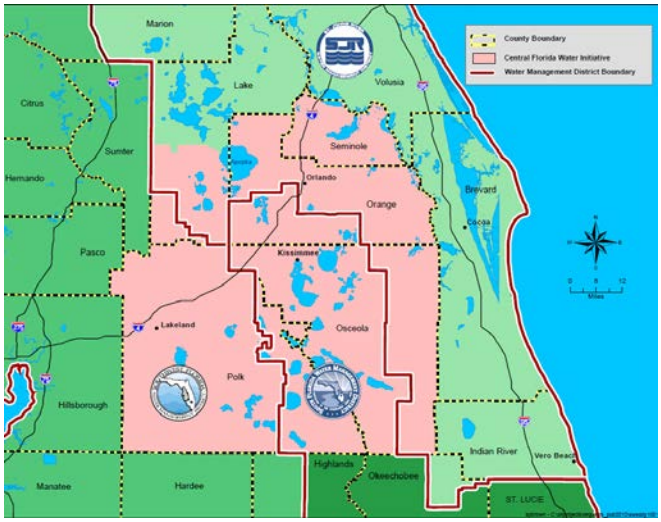
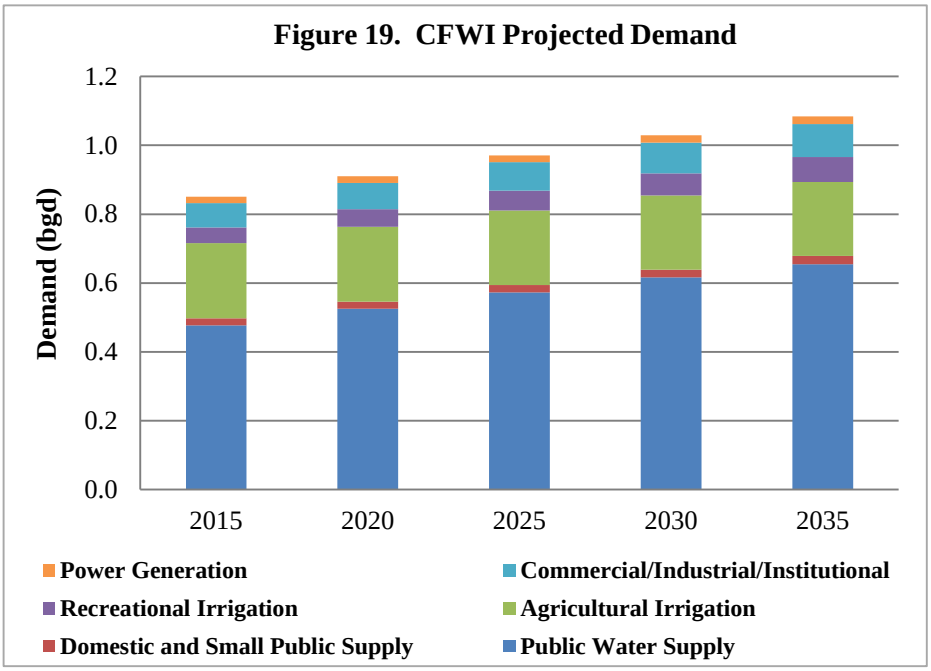


Figure 18. Map of CFWI

In November 2015, the governing boards of the SJRWMD, SFWMD, and SWFWMD adopted the CFWI 2015 Regional Water Supply Plan. Within the CFWI RWSP, a groundwater deficit of 250 mgd was identified and the collaborative teams of the districts and stakeholders are working to implement the necessary water conservation projects, alternative water supply projects, and any MFL recovery and prevention strategies that may be needed. Development of the five-year update has also been initiated.

More information on the CFWI, including a copy of the final RWSP, can be found at http://cfwiwater.com/.

Figure 19. CFWI Projected Demand



2016 Legislation

On January 21, 2016, Governor Scott signed into law Senate Bill 552. The bill will become effective July 1, 2016, and includes many provisions related to the management of the state's environmental resources. Of particular relevance to the development of regional water supply plans are the provisions related to the CFWI and the Florida Springs and Aquifer Protection Act. The bill also includes minor refinements and clarification to the requirements for regional water supply plans.

Amendments to Chapter 373, Florida Statutes, will serve to codify and encourage the continuation of the collaborative process used in the CFWI to develop a multi-jurisdictional regional water supply plan and solutions to the water supply issues of the region. The bill also directs the Department to "*adopt uniform rules for application within the Central Florida Water Initiative Area that include:*

1. *A single, uniform definition of the term "harmful to the water resources" consistent with the term's usage in s. 373.219;*
2. *A single method for calculating residential per capita water use;*
3. *A single process for permit reviews;*
4. *A single, consistent process, as appropriate, to set minimum flows and minimum water levels and water reservations;*
5. *A goal for residential per capita water use for each consumptive use permit; and*
6. *An annual conservation goal for each consumptive use permit consistent with the regional water supply plan."*

The uniform rules must also include any MFL recovery and prevention strategies that existed before July 1, 2016. Work on these provisions has already begun within the structure of the CFWI. Rulemaking will be initiated by December 31, 2016.

The Florida Springs and Aquifer Protection Act designates all first magnitude springs, as well as DeLeon Springs, Peacock Springs, Poe Springs, Rock Springs, Wekiwa Springs, and Gemini Springs, as "Outstanding Florida Springs." MFLs must be adopted for these springs by July 2017, except for those springs in the NWFWMD, which must have MFLs adopted by July 1, 2026. The water management districts have established MFLs for 15 of the 31 springs designated as Outstanding Florida Springs. The annual MFL priority lists submitted by the districts indicate that MFLs will be adopted for the remaining systems according to the statutory provisions. The Act also includes specific requirements for the development of MFL recovery and prevention strategies for the Outstanding Florida Springs that will not meet their MFLs.

Water Resource Development Work Programs

The RWSPs identify both water supply development and water resource development projects to meet 20-year projected demands. Annually, after adoption of their budgets, each water management district prepares a five-year water resource development work program which describes the district's implementation and funding strategies for the water resource, water supply and alternative water supply development portions of their RWSPs. The districts submit their work programs to DEP for review and approval.

Water resource development projects are primarily the responsibility of the water management districts. Typically, these projects focus on assuring long-term availability of adequate water supplies and supporting local and regional water supply development. Types of water resource development projects found in the RWSPs include:

- Collection and evaluation of water source data needed to make water supply decisions;
- Programs to manage water resources, public works projects for flood control, and water storage;
- Regional storage projects;
- Utility interconnections;
- Water conservation programs; and
- Technical assistance to local governments and utilities.

The water resource development component of a RWSP must include:

- Lists of water resource development projects that support water supply development;
- Estimates of the water each project will make available;
- The timeframe and cost of the project;
- A funding strategy; and
- Identification of the local government or other water supplier recommended to implement the project.

In contrast, water supply development includes planning, design, construction, operation and maintenance of public or private facilities for water collection, production, treatment, transmission, or distribution (section 373.019(26), Florida Statutes). These project types, such as the alternative water supply projects discussed earlier in this report, primarily are the responsibility of local water suppliers. The districts also operate cost share programs to assist local water suppliers with water supply development

DEP reviewed the current work programs of each district and found they were consistent with the RWSPs and the included expenditures reasonably contribute to meeting the districts' future water supply needs.