Executive Summary

Florida has a network of overlapping programs that are designed to protect Florida’s natural resources from adverse impacts caused by withdrawals while also ensuring that we have enough water to support our future growth. This report, as required by Section 373.709(6), F.S., reflects the most up-to-date information on Regional Water Supply Planning throughout the state. Information on other programs that help protect our water resources can be found in the Florida Water Plan¹.

The Department is pleased to present this year’s annual report on regional water supply planning in a dynamic and interactive Story Map format. This Story Map is best viewed using Microsoft Edge or Mozilla Firefox 64-bit. Alternatively, we have prepared a stand-alone ADA-compatible version of the full report that can be downloaded and viewed offline. Data used to complete this report is available to download on the Appendices tab.

What is a RWSP?

A Regional Water Supply Plan (RWSP) is a planning document developed by a water management district. RWSPs are required when it is determined that 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 planning period. RWSPs contain projections of future demands for at least a 20-year planning period and are updated every five years.

How does planning protect natural resources?

Regional water supply planning considers the needs of the natural system when determining whether we have sufficient supplies to meet our future water needs.

Planning, however, is only one tool in the toolbox for protecting water resources. Other means include the Minimum Flows and Minimum Water Levels (MFL) program, water reservations, water use permitting, and water shortage (drought) rules and orders.

How are RWSPs related to MFLs?

Water management districts consider adopted MFLs, as well as waterbodies for which an MFL has not been adopted, in evaluating current and potential future impacts of water use. Additionally, water management districts rely on water demand projections when evaluating the status of MFLs. Projects included in an MFL recovery or prevention strategy are also included in a RWSP.

¹ https://tinyurl.com/yyx63276
A RWSP is not intended to take the place of a recovery or prevention strategy, which may contain both regulatory and non-regulatory measures.

**How are RWSPs related to permits?**
The RWSP includes a list of project options that can help users meet their future demands. Project options included in a water supply plan have gone through initial screening for feasibility and have a likelihood of being permissable. Whether a project is required of a user is a determination made during the review of a specific water use permit application.

If a user seeks a quantity of water that, if permitted, would cause harm to our water resources and related natural systems, project options are available to that user to ensure that they can meet their demands while also protecting the water resources.

**How do RWSPs help prepare for drought?**
RWSPs forecast future water use for both the average condition (that is, the average amount of water used annually) as well as a 1-in-10 year drought condition (that is, the water used during a drought that statistically occurs once every 10 years).

Droughts affect various users differently. For example, a drought can have significant impacts on irrigation water use for an agricultural or landscape user, while having no impact on an industrial user. RWSPs identify water options to meet all of our future needs.

To manage water use during drought periods, water management districts are authorized to use water shortage orders. These may include voluntary or regulatory measures to reduce water use until the drought has ended.

**How much water do we use and need?**
A water demand projection is a forecast of how much water that all users will need over the next 20 years. Districts are required to forecast water use for six water use categories. Districts have developed water demands for each of the regions in the map to the right.

**2015 Estimated Water Use**
Public supply (that is, utilities providing water for various residential and commercial uses), and agriculture represent the largest water users in the state.
2035 Estimated Water Demand

The graph below shows the additional water projected to be needed by 2035 stacked above the 2015 water use. Though agricultural water use exceeded public supply in 2015, by 2020, public supply water use will surpass agriculture water use for the first time in Florida’s history.

2015-2035 Water Demand Projections

The below graph shows all water users together over the next 20 years relative to population growth. Between 2015 and 2035, population in Florida is expected to grow by 27% to 25.2 million people while water demands are expected to grow by 18% to 7.5 billion gallons per day.
Do we have enough water to meet those needs?

For many regions of the state, we have enough water to meet our future needs through existing sources, such as groundwater, and estimates of ongoing water conservation efforts.

Some areas of the state, however, require additional water to be developed. Even in areas that can meet future needs on a regional basis, water supply development may be required for an individual user to prevent harm to our water resources.

**Progress in water development**

In all, a total of 924 projects have been completed statewide since 2005 and an additional 280 projects are in the design or construction phase.

These projects currently provide an estimated 976 mgd of water, with an additional estimated capacity of 1,543 mgd that will be available when the projects are fully completed and implemented.
Planning Regions

In order to ensure that we have enough water for our future, the water management districts (districts) have identified water supply planning regions, depicted in the map below. Regional Water Supply Plans (RWSPs) have been developed for most of the planning regions in the state. A RWSP is a planning document that is required when it is determined that 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 planning period. RWSPs contain projections of future demands for at least a 20-year planning period and are updated every five years.

The table below will provide more information about specific regions as well as a link to any applicable RWSP.

<table>
<thead>
<tr>
<th>Planning Region</th>
<th>Counties</th>
<th>Status</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWF - Southern</td>
<td>Manatee, Sarasota, DeSoto, Charlotte</td>
<td>RWSP last updated in 2015</td>
<td><a href="https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-southern-planning-region">https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-southern-planning-region</a></td>
</tr>
<tr>
<td>SWF - Tampa Bay</td>
<td>Pasco, Pinellas, Hillsborough</td>
<td>RWSP last updated in 2015</td>
<td><a href="https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-tampa-bay-planning-region">https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-tampa-bay-planning-region</a></td>
</tr>
<tr>
<td>Region</td>
<td>Counties</td>
<td>RWSP Last Updated</td>
<td>Link</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------</td>
<td>-------------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>SWF - Northern (Levy, Marion, Citrus, Hernando, Sumter, Lake)</td>
<td>SWFWMD last updated in 2015</td>
<td><a href="https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-northern-planning-region">https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-northern-planning-region</a></td>
<td></td>
</tr>
<tr>
<td>SWF - Heartland (Polk, Hardee, Highlands)</td>
<td>SWFWMD last updated in 2015</td>
<td><a href="https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-heartland-planning-region">https://www.swfwmd.state.fl.us/resources/plans-reports/rwsp/rwsp-heartland-planning-region</a></td>
<td></td>
</tr>
<tr>
<td>SJR - Central Springs and East Coast Regional Water Supply Planning Region (Marion, Lake, Okeechobee, Volusia, Brevard, Indian River)</td>
<td>SJRWMD Under Development</td>
<td><a href="https://www.sjrwmd.com/water-supply/planning/">https://www.sjrwmd.com/water-supply/planning/</a></td>
<td></td>
</tr>
<tr>
<td>SJR - Central Florida Water Initiative (Lake, Orange, Osceola, Seminole)</td>
<td>SJRWMD last updated in 2015</td>
<td><a href="https://cfwiwater.com/">https://cfwiwater.com/</a></td>
<td></td>
</tr>
<tr>
<td>NWF - Region III (Bay)</td>
<td>NWF last updated in 2014</td>
<td><a href="https://www.nwfwater.com/Water-Resources/Water-Supply-Planning/Regional-Water-Supply-Planning/Region-III-Bay-County">https://www.nwfwater.com/Water-Resources/Water-Supply-Planning/Regional-Water-Supply-Planning/Region-III-Bay-County</a></td>
<td></td>
</tr>
<tr>
<td>NWF - Region VI (Gadsden)</td>
<td>NWF last updated in 2018</td>
<td><a href="https://www.nwfwater.com/Water-Resources/Water-Supply-Planning/Water-Supply-Assessments">https://www.nwfwater.com/Water-Resources/Water-Supply-Planning/Water-Supply-Assessments</a></td>
<td></td>
</tr>
<tr>
<td>SJR, SWF, SF - Central Florida (Lake, Seminole, Orange, Polk, Osceola)</td>
<td>SJRWMD last updated in 2015</td>
<td><a href="https://cfwiwater.com/">https://cfwiwater.com/</a></td>
<td></td>
</tr>
</tbody>
</table>
Water Demands

RWSPs provide water demand projections, or forecasts, of how much water each planning region will need over the next 20 years. Water demand projections are used to identify any shortfalls in existing water sources and the need for development of alternative sources to ensure there are adequate volumes of water to meet future water needs while also protecting water resources and natural systems. Between 2015 and 2035, population in Florida was expected to grow by 27% (5.4 million people) to 25.2 million while water demands are expected to grow by 18% (1.1 bgd) to 7.5 bgd.

Districts develop water demand projections for six water use categories. In 2015, agriculture was the largest user of water in Florida, with public supply (that is, utilities providing water for various residential and commercial uses) close behind. By 2035, public supply’s water demand is projected to increase by 27% (661.1 mgd), which accounts for 58% of the total water demand increase projected statewide for all six use categories. By contrast, agriculture is predicted to grow by only 4% (114.5 mgd) during

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2 Water demand data comes from the Districts’ 2015 – 2035 RWSPs, with the exception of SFWMD’s Upper East Coast, Lower West Coast, and Lower East Coast planning regions. For those regions, the Department presents the 2015-2035 data from the recently approved 2020-2040 RWSPs.

3 SWFWMD additionally includes a seventh water use category for certain “Environmental Restoration” water demands. The figures in this report do not include these demands, which are unique to SWFWMD, but those are available in Appendix B: District Demands.
the same period. Public Supply’s projected growth makes continued decreases in per capita water use rates all the more important. You can view long-term trends of gross per capita calculated by USGS through 2010.

USGS Gross and Residential Per Capita

![Graph showing USGS statewide gross and residential per capita water demands from 1985 to 2010.]

**Water Demands by Planning Region**

The map and graph below allow you to visualize water demand projections by use type across each planning region. If you click on a planning region (or multi-select planning regions), you will see the water demand projections for just the areas you select.

To see all water demands by region and by district, please visit our Appendices where that data is available for download.

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4 Agricultural growth is based on District’s RWSPs projections. The Florida Department of Agricultural and Consumer Services publishes “Florida Statewide Agricultural Irrigation Demand” (FSAID) data that, pursuant to section 373.709, F.S., must be considered by the District.

Ensuring Water for the Future

In addition to identifying how much water is needed for the future, the Districts identify where that water will come from. This is done through a technical assessment of existing sources as well as an assessment of the region’s natural systems. Throughout the state, our future water needs will be met largely with existing sources of water. Existing sources include traditional sources, such as fresh groundwater, but also include certain alternative sources, such as brackish water. Conservation of existing and future sources helps to reduce future demands. In some areas of the state, however, it is necessary to develop projects in order to meet those regions’ future needs.

The map below, and the pie charts within it, present the total water needed over 20 years for each region. The blue pie sections represent the amount of that need that will be met with existing sources and the orange pie sections represent the quantity of water the RWSP identified as needing to be developed. This can be achieved through recharge, alternative water supplies, or saved through conservation. The status of those

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6 For most regions of the state, this represents a 20-year time period of 2015-2035. For three regions, SFWMD’s Lower East Coast, Lower West Coast, and Upper East Coast, the 20-year time period represented is 2020-2040. NFWFMD’s regions I, IV, V, VI, and VII are combined in the central part of the panhandle.

7 In the SR District outside the NFRWSP area, regional water supply planning has been recommended. Updated assessments on the water demands and sources of water to meet those demands will be completed with the approval of a final regional water supply plan for that region.
efforts can be seen in the bar graphs as the water that needs to be developed and the regions’ progress.\textsuperscript{8}

\textsuperscript{8} Progress includes projects completed after 2010 for those plans with a 2015-2035 planning period and those completed after 2015 for those with a 2020-2040 planning period as those dates represent the typical base year for projections.
A summary table of demands and how those demands will be met is available in the appendices.
Sources of Water

Alternative Water Supplies

When traditional water supplies are constrained (for example, when further use of groundwater may cause adverse impacts to wetlands, springs, or other waterbodies), alternative water supplies (AWS) must be developed in addition to water conservation efforts. Districts include AWS projects in their RWSPs, and many Districts implement cost-share programs to assist water users in developing these projects. Depending on the location in the state, AWS could include reclaimed water, brackish groundwater, surface water, and excess surface water captured and stored in reservoirs or aquifer storage and recovery wells.

The graph below depicts AWS developed or sources conserved in the state from 2005 to 2018 by project type. In all, a total of 924 projects have been completed statewide since 2005, and an additional 280 projects are in the design or construction phase. These projects provide an estimated 976 mgd in water, with an additional estimated capacity of 1,543 mgd that will be available when the projects are fully completed and implemented. A detailed list of each project is available as an appendix to this document.

Reclaimed Water

Florida is a national leader in the reuse of reclaimed water. Reclaimed water projects make up 35% of all water supply projects (with 439 mgd made available to date).
Reclaimed water is water from a domestic wastewater treatment facility that has been treated for use for a beneficial purpose. Reclaimed water is commonly used for irrigation of lawns, landscapes, cemeteries, and golf courses, as well as for agricultural irrigation, groundwater recharge, and industrial processes. Florida’s investment in reclaimed water helps to ensure that Florida will meet its future water demands.

The map below shows where Florida currently uses reclaimed water as well as where there are additional future opportunities. The purple sections indicate the percentage of total reclaimed water that is reused. The blue sections indicate the percentage of total reclaimed water treated at a reuse facility, but which is ultimately disposed and not used. Details of the state’s reclaimed water use may be found in the Department's annual **Water Reuse Inventory**.  

![Reclaimed Water by Counties](image)

The designation of Water Resource Caution Areas assists the Department and districts to ensure that the feasibility of using reclaimed water to meet water supply needs is carefully evaluated and coordinated. Districts designate an area as a Water Resource Caution Area when a district determines the area has existing water resource constraints or forecasts constraints to develop during the next 20 years. Through these designations, the state can build upon past success in reclaimed water development and identify additional areas where more reclaimed water can be beneficially used.

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**Water Resource and Water Supply Development Funding**

To develop the 976 mgd of water for the 1,204 projects included in this report, more than $5.3 billion has been spent or committed. The state has invested $386.7 million, or 7% of the total identified project funding, and the districts have invested $1.7 billion, or 32% of the total identified project funding. Water suppliers have committed to provide over $3.3 billion toward development of these projects, representing approximately 61% of the total identified funding. Governor DeSantis’ 2019 Budget includes $40 million for water resource and water supply development projects.

The graph below shows the cost breakdown by project type and funding source for projects that are complete or underway.
District Projects

RWSPs identify project options for water resource and water supply development projects. The Department tracks these projects as they are completed. The pages below identify projects that have been completed since 2005 or are currently underway.

Filtering project status on each page allows you to see project options that have been identified for the future. A summary of the total funding amounts and water made available appear for each district as well.

Projects in the Northwest Florida Water Management District

The NFWFMD is pleased to highlight one recent project, the Mid-County Tank #4 located in Okaloosa County, which is included in the map above and pictured to the right. For all projects since 2005, the total funding and water made available is presented in the table below. Additionally, you may view totals cumulatively by year beneath the table.

<table>
<thead>
<tr>
<th>Total District Funding</th>
<th>Total State Funding</th>
<th>Total Project Sponsor Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>$10,124,154</td>
<td>$22,970,000</td>
<td>$80,290,184</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Water Made Available to date (reuse and non-reuse)</th>
<th>Water that could be made available upon project completion (reuse and non-reuse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.4 mgd</td>
<td>35.1 mgd</td>
</tr>
</tbody>
</table>
Projects in the Suwannee River Water Management District

The SRWMD is pleased to highlight three recent projects, which are identified in the map above, and include the Dairy Lagoon Expansion, the Suwannee Country Club Reuse Connection, and District Cost-Share programs aimed at increasing water conservation in agricultural operations through the district (pictured below). For all projects since 2005, the total funding and water made available is presented in the table below. Additionally, you may view totals cumulatively by year beneath the table.
SRWMD’s Agricultural Cost-Share Program has completed 14 projects with dairy producers to increase management of wastewater irrigation events. These projects have resulted in offsetting groundwater irrigation events and decreased the utilization of wastewater nutrients by crops.

<table>
<thead>
<tr>
<th>Total District Funding</th>
<th>Total State Funding</th>
<th>Total Project Sponsor Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>$17,900,766</td>
<td>$55,048,500</td>
<td>$13,756,977</td>
</tr>
</tbody>
</table>

Water Made Available to date (reuse and non-reuse)

38.1 mgd

Water to be made available upon project completion (reuse and non-reuse)

94.3 mgd

Cumulative Project Costs and Benefits
Projects in the St. Johns River Water Management District

The SJRWMD is pleased to highlight three recent projects, which are identified in the map above, and which include the Daytona Beach 2.5 MG Reuse Tank project, the St. Johns County St Augustine Beach Reclaimed Water Transmission Main, and the Winter Garden Reuse Distribution Retrofit project (pictured below). For all projects since 2005, the total funding and water made available is presented in the table below. Additionally, you may view totals cumulatively by year beneath the table.

<table>
<thead>
<tr>
<th>Total District Funding</th>
<th>Total State Funding</th>
<th>Total Project Sponsor Funding</th>
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</thead>
<tbody>
<tr>
<td>$214,092,975</td>
<td>$108,959,773</td>
<td>$365,612,144</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Made Available to date (reuse and non-reuse)</th>
<th>Water to be made available upon project completion (reuse and non-reuse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>234.8 mgd</td>
<td>350 mgd</td>
</tr>
</tbody>
</table>
The SWFWMD is pleased to highlight three recent projects, which are identified in the map above, and which include the St. Petersburg Toilet Rebate Program (Phase 17) project, the Auburndale Polytechnic University Reclaimed Water project (pictured below) and the PRWC Southeast Wellfield Project\(^{10}\). For all projects since 2005, the total funding and water made available is presented in the table below. Additionally, you may view totals cumulatively by year beneath the table.

\(^{10}\) https://www.youtube.com/watch?v=xKcg_npy91o&feature=youtu.be
<table>
<thead>
<tr>
<th>Total District Funding</th>
<th>Total State Funding</th>
<th>Total Project Sponsor Funding</th>
</tr>
</thead>
<tbody>
<tr>
<td>$938,557,554</td>
<td>$132,278,197</td>
<td>$780,351,187</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Water Made Available to date (reuse and non-reuse)</th>
<th>Water to be made available upon project completion (reuse and non-reuse)</th>
</tr>
</thead>
<tbody>
<tr>
<td>138.2 mgd</td>
<td>248.8 mgd</td>
</tr>
</tbody>
</table>
Projects in the South Florida Water Management District

The SFWMD is pleased to highlight two recent projects, which are identified in the map above, and which include the Reclaimed Water System Expansion (NE Pompano and Lighthouse Point) project and the South Bermuda WRF Reuse Pump Station Expansion project (pictured below). For all projects since 2005, the total funding and water made available is presented in the table below. Additionally, you may view totals cumulatively by year beneath the table.
Total District Funding | Total State Funding | Total Project Sponsor Funding
--- | --- | ---
$530,312,436 | $67,415,701 | $2,052,137,525

Water Made Available to date (reuse and non-reuse) | Water to be made available upon project completion (reuse and non-reuse)
--- | ---
556.3 mgd | 814.7 mgd
The Central Florida Water Initiative (CFWI) is a collaborative water supply planning effort among the state’s three largest water management districts, the Department of Environmental Protection, and the Department of Agriculture and Consumer Services (DACS) as well as water utilities, environmental groups, business organizations, agricultural communities and other stakeholders. This effort has been undertaken to meet water supply challenges in the central Florida area. Additionally, you may view totals cumulatively by year below. Please note that these totals are duplicative of totals included in individual districts, above.
In addition, the Department initiated rulemaking on December 30, 2016, to develop uniform rules for the CFWI as required by section 373.0465, F.S., and continues to work with stakeholders on those rules. More information on the rulemaking may be found on the Department’s website11.

Projects in the North Florida Regional Water Supply Partnership

The North Florida Regional Water Supply Plan was developed through a highly collaborative process among the Suwannee River and St. Johns River water management districts and the Department, local governments, public supply utilities, environmental advocates and other stakeholders. This plan is a direct result of the collaboration between these groups, each sharing the common goals of preserving and extending our future water supply. Additionally, you may view totals cumulatively by year by below. Please note that these totals are duplicative of totals included in individual districts, above.

11 https://floridadep.gov/water-policy/water-policy/content/office-water-policy-rulemaking#Central%20Florida%20Water%20Initiative
Appendices

Thank you for your interest in the Annual Status Report on Regional Water Supply Planning. For more information, please contact:

- **FDEP Office of Water Policy**: Kristine Morris, (850) 245-3139
- **NWFWMMD**: Christina Coger, (850) 539-5999
- **SRWMD**: Amy Brown, (386) 362-1001
- **SJRWMD**: Tammy Bader-Gibbs, (386) 329-4500
- **SJRWMD**: Joe Quinn, (352) 796-7211
- **SFWMD**: Tom Colios, (561) 681-6944

The data linked to below was used as the basis for this report and is provided as downloads in Excel for your convenience:

Appendix A: RWSP Summary Table
Appendix B: District Demands
Appendix C: Project Table (complete)

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12 https://floridade.gov/water-policy
13 https://www.nwfwater.com/
14 http://www.srwmd.state.fl.us/
15 https://www.sjrwmd.com/
16 https://www.swfwmd.state.fl.us/
17 https://www.sfwmd.gov/