Five-Year

Water Resource Development Work Program

Fiscal Year 2017-2018 Update

Proposed October 27, 2017

Northwest Florida Water Management District

PDS-17-04

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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Introduction

Chapter 373, Florida Statutes directs the state's five water management districts to conduct water supply planning through a two-step process that involves: (1) assessing the water supply needs and sources of each water supply planning region; and (2) developing regional water supply plans (RWSPs) for those regions where existing water sources are considered inadequate to supply water for all existing and future reasonable-beneficial uses while sustaining water resources and natural systems over a 20-year planning period. Regional water supply plans must include both water resource development and water supply development components, with supporting data and analysis, to exceed the projected water demands through the planning horizon (see 373.709, F.S.).

Section 373.536(6)(a)4, F.S., requires each district to prepare a Five-Year Water Resource Development Work Program (WRDWP or Work Program) to describe the implementation strategy and funding plan for the water resource, water supply, and alternative water supply development components of each approved RWSP. In accordance with the statute, the Work Program is submitted to the Governor, the President of the Senate, the Speaker of the House of Representatives, the Secretary of the Department of Environmental Protection, the chairs of legislative committees with substantive or fiscal jurisdiction over the districts, and the governing boards of counties in which the districts have jurisdiction. The Department of Environmental Protection (DEP) then conducts a review of the Work Program, to include a "written evaluation of the program's consistency with the furtherance of the district's approved regional water supply plans, and the adequacy of proposed expenditures."

Water resource development and water supply development are complementary components of the RWSP. Water resource development projects are typically regional and broad in scope and can support development of non-traditional water sources. Water supply development projects are more localized and address water treatment, storage, and delivery to end users. In statute, water management districts are largely responsible for water resource development, while water supply development is primarily the responsibility of local governments, water supply authorities, and utilities. While their primary focus is water resource development, the districts do provide technical and financial assistance for water supply development.

Regional Water Supply Planning in Northwest Florida

The Northwest Florida Water Management District (NWFWMD or "District") established seven water supply planning regions in 1996 (Figure 1). The initial District Water Supply Assessment (WSA) (NWFWMD 1998) evaluated the sufficiency of supplies to meet demands through 2020 and concluded that only Region II (Santa Rosa, Okaloosa, and Walton counties) required a RWSP. The primary resource concern identified in Region II is drawdown in the coastal Floridan aquifer caused by groundwater pumping.

In 2006, the NWFWMD Governing Board determined that the need for planning alternative surface water development in Gulf County and resource constraints in coastal Franklin County (Region V) warranted development of a RWSP. Similarly, in 2008, the Governing Board concluded that the need for additional source redundancy and sustainability warranted development of a RWSP for Region III (Bay County).

A 2008 WSA update extended water demand projections and an evaluation of sources through 2030. The update concluded that no additional RWSPs were required and that water supply planning and implementation efforts should continue in regions II, III, and V (Coates et al. 2008).

The District again updated the WSA in 2013, projecting water demands and evaluating source sufficiency through 2035 (Countryman et al. 2014). The report showed that public supply remains the largest use category for the District, accounting for approximately 45 percent of the demand in 2010. This ratio of water use is projected to remain similar through the 2015-2035 planning period. The Governing Board discontinued the RWSP for Region V due to the completion of surface water source development in Gulf County and adequacy of water supplies in Franklin County under revised growth projections. The District continues to work with Region V communities to address resource needs and concerns and is continuing hydrologic data collection and analysis to support resource monitoring.

A draft update to the WSA is currently under development and a draft document is anticipated to be completed in the spring of 2018. The report will include updated estimates and projections and an evaluation of sources through 2040.

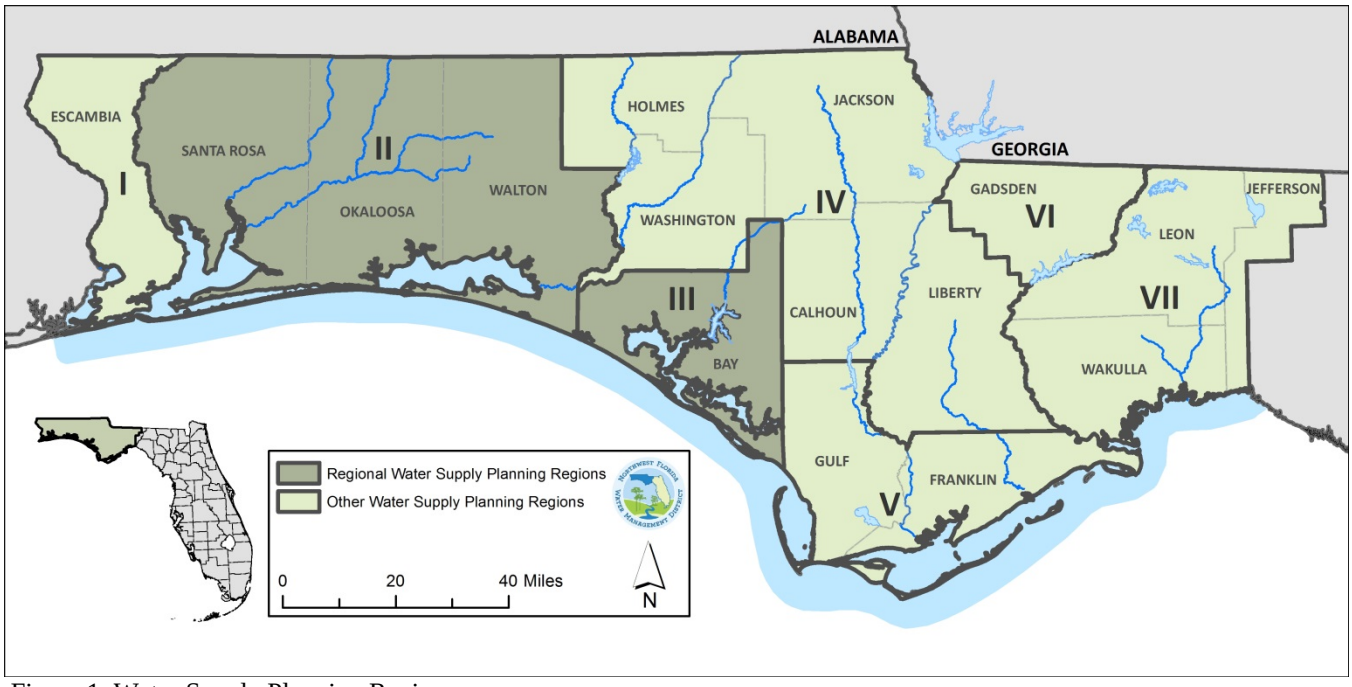

Figure 1. Water Supply Planning Regions

Funding for Water Resource and Supply Development

The state constitution limits the NWFWMD to 1/20th (0.05 mills) of one mill, significantly less than the ad valorem taxing authority afforded the other four water management districts. The budget for FY 2017-2018 includes a millage rate of 0.0353. Based on taxable values provided by the 16 counties in the District, tax collections are projected to be $3,538,881 for FY 2017-2018. Because the District has historically collected slightly less than the amount estimated (about 96%), ad valorem was budgeted at $3,395,217 or 4.0% less than projected. With a recurring operating budget of $16,956,126, the District must rely on state and other revenue sources to conduct many of its programs. Among the funding sources the District looks to for water supply planning and water resource development are the following:

- Land Acquisition Trust Fund;
- Direct Legislative appropriations;
- District Fund Balance;
- Federal grants;
- Florida Forever; and
- Local government and water supply utility cost sharing.

Until recently, water resource development in northwest Florida has depended primarily on funding from the Water Management Lands Trust Fund. This trust fund, however, was discontinued by the 2015 Florida Legislature through Senate Bill 2516-A. The bill established the Land Acquisition Trust Fund to accomplish purposes as set forth in Article X, Section 28 of the State Constitution.

To the extent possible, the District applies limited ad valorem funding to augment state appropriations for basic water supply planning functions. Because ad valorem funding is inadequate to support implementation of major water resource and supply development projects and initiatives, the District also applies available encumbered funds and reserves for priority projects.

The Water Protection and Sustainability Program Trust Fund (WPSPTF), established by the 2005 Legislature, enabled the District to provide cost-share assistance for construction of alternative water supply development projects and priority water resource development and springs protection activities. No funding has been appropriated for the WPSPTF since FY 2009-2010.

The Florida Forever Trust Fund has supported acquisition of lands throughout northwest Florida that provide critical water resource functions, including water quality protection and aquifer recharge. Additionally, Florida Forever has been a potential source of construction funding for reclaimed water storage facilities. Florida Forever, however, has not had significant appropriations for NWFWMD programs since FY 2010-2011.

Since FY 2013-2014, the Governor and Florida Legislature have allocated $215,000,000 statewide in funding for springs restoration and protection. The District has received more than $48.4 million toward restoration and protection projects, including those that assess, protect, and improve water quality and quantity within the groundwater contribution areas of major spring systems. Additional funding benefitting water resource development has also been provided for springs data collection and monitoring.

Local government and utility funding participation is especially important for several types of water resource development projects, notably alternative surface water, reuse of reclaimed water, water conservation, and aquifer storage and recovery. All projects require substantial local investment once they reach the water supply development stage.

Funding budgeted for water resource development is listed in summary tables for water supply planning regions II and III in the following sections (Tables 2 and 6, respectively). The approved water resource development funding for FY 2017-2018 is $10,735,000. The anticipated five year water resource development implementation cost through FY 2021-2022 is $15,971,202.

Since FY 2013-2014, the District has approved $21.6 million from reserve funds for water supply development assistance grants across northwest Florida. As of July 1, 2016, this report includes funding budgeted for water supply development activities in water supply planning regions II and III. Summary tables are included in the following sections (Tables 4 and 8, respectively). The approved water supply development funding for FY 2017-2018 is $1,677,796. The anticipated five year water supply development implementation cost through FY 2021-2022 is $2,031,915.

In total, this represents a FY 2017-2018 budget for water resource and water supply development activities of $12,412,797 in Bay, Okaloosa, Santa Rosa, and Walton counties.

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Region II: Santa Rosa, Okaloosa, and Walton Counties

Since the 1940s, Santa Rosa, Okaloosa, and Walton counties (Figure 2) have been characterized by significant growth in water demands within coastal portions of the region. Extensive pumping of the coastal Floridan aquifer caused formation of a substantial cone of depression, creating a risk of salt water intrusion and damage to public supply wells. Resource regulation and water supply planning over the past two decades have focused on reducing coastal withdrawals, constraining coastal demand, and developing inland water supply sources as alternatives to coastal groundwater.

Chapter 40A-2, Florida Administrative Code (F.A.C.), established the coastal Water Resource Caution Area (WRCA) across the southern reach of all three counties. Within the coastal WRCA, regulatory approaches to resource sustainability are applied, including stringent conservation and reporting requirements and the prohibition of new allocations of coastal Floridan aquifer water for non-potable uses.

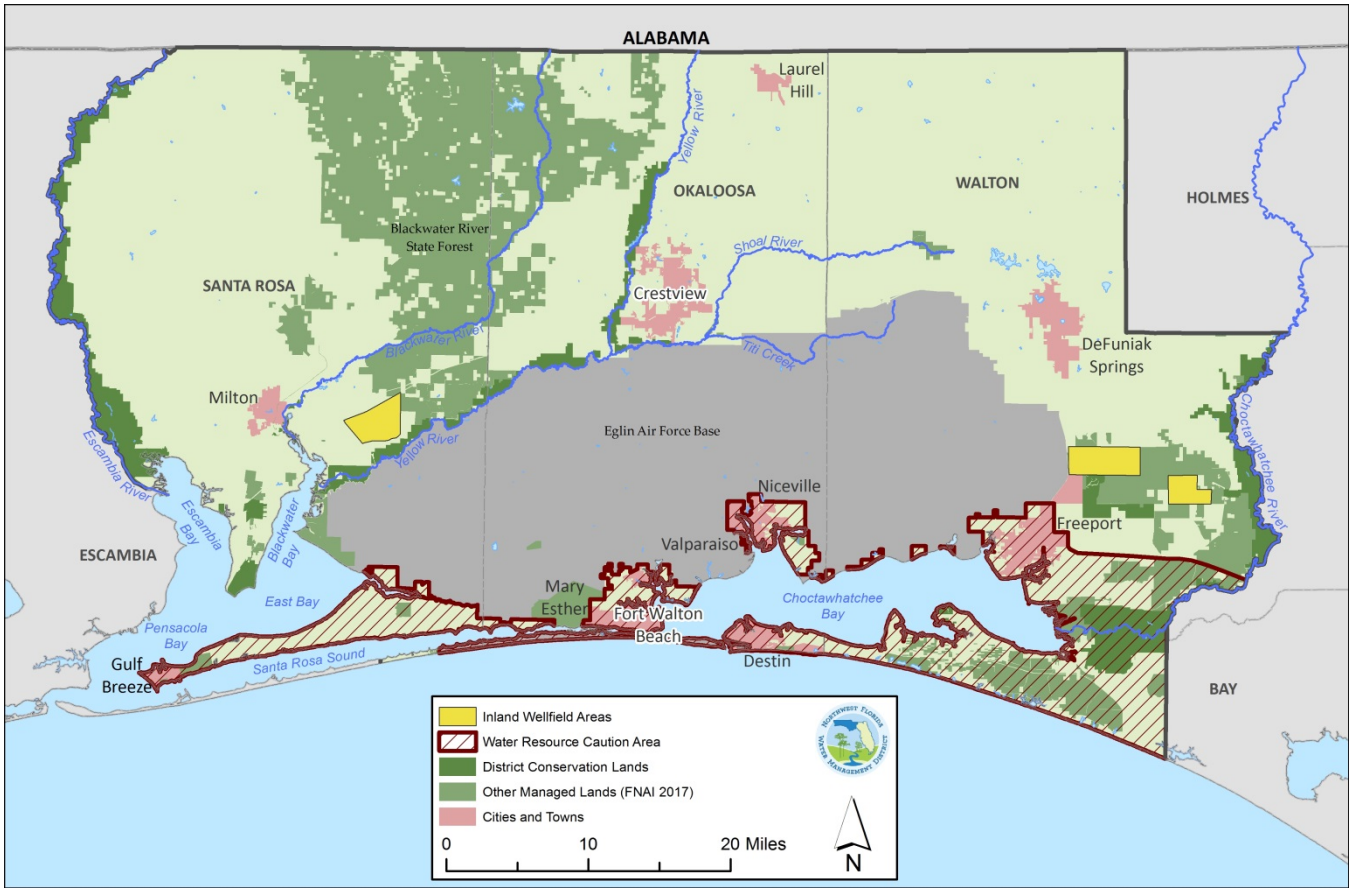

Figure 2. Water Supply Planning Region II

The District's first RWSP was approved by the Governing Board for Region II in February 2001, with updates to the plan approved in 2006 and most recently in 2012 (Busen and Bartel 2012). According to the 2013 WSA Update, public supply accounted for approximately 46 million gallons per day (mgd), or 62 percent of 2010 water use in Region II, with recreational water use comprising an additional 14 mgd (nearly 19 percent) (Countryman et al. 2014). It is expected that public supply demand within the region will increase through the planning horizon, although its relative proportion of water use will decline slightly.

Region II Water Resource Development Projects

The Region II RWSP includes 10 water resource development projects encompassing strategies for preserving water resources and in support of alternative water supply development (Table 1). The quantities of water identified in the table indicate preliminary figures based on regional scale model simulations of groundwater systems, regional planning objectives, and application of literature-based factors for reuse and water conservation. The amounts will be refined upon completion of updated analyses or project implementation.

Table 1. Region II Water Resource Development Projects

Project	Activity	Water Identified (mgd)
Floridan Aquifer	Development and application of a regional groundwater flow model and salt water intrusion models to identify regional availability from the coastal Floridan aquifer.	30
Inland Sand-and-Gravel Aquifer	Development and application of a three-dimensional, transient groundwater flow model.	18
Surface Water Sources	Identification and development of feasible surface water sources and optimal facilities.	25*
Aquifer Storage and Recovery	Development of aquifer storage and recovery systems, primarily to support the reuse of reclaimed water.	2
Water Reuse	Assistance in the development of reclaimed water to offset and conserve potable water resources.	5
Water Conservation	Assistance to local governments and utilities in the conservation of potable water resources.	3
Regional Water Supply Planning	Development and implementation of regional water supply plans.	N/A
Interconnection of Water Supply Systems	Interconnection of coastal utility infrastructure to enhance the resilience of the coastal water systems.	N/A
Hydrologic Data Collection and Analysis	Collection and analysis of surface and groundwater data throughout the region.	N/A
Abandoned Well Plugging	Assistance to local governments and utilities in the plugging of abandoned wells.	N/A

*This amount is an up-to amount originally included in the 2012 Region II RWSP for the Shoal/Yellow Rivers project; an updated estimate by Okaloosa County is approximately 10 mgd.

Floridan Aquifer

Preserving the coastal Floridan aquifer as a viable water supply source is a primary focus of the Region II RWSP. Models of the Floridan aquifer were previously developed to include a western domain encompassing Santa Rosa and western Okaloosa counties and an eastern domain that includes eastern Okaloosa and Walton counties. Model simulations were made to predict the extent of salt water intrusion through 2100 for the eastern and western domain models. Results indicate that salt water intrusion into potable portions of the Floridan aquifer may continue to occur at a slow rate (HydroGeoLogic, Inc., 2007b, HydroGeoLogic, Inc. and Hazlett-Kincaid, Inc. 2007). Principal pathways of saline water intrusion identified include lateral intrusion within the upper Floridan aquifer from beneath the Gulf of Mexico, lateral intrusion from the lower to the upper Floridan aquifer around the edge of the Bucatunna Clay confining unit, intrusion of saline waters where the Bucatunna Clay confining unit is absent (easternmost Choctawhatchee Bay area), and downward vertical leakage through the Intermediate System.

Since late 2014, the District has worked to develop a new groundwater flow modelling tool within Region II. A western district regional model, which includes portions of Escambia and Bay counties, in addition to coastal Region II, incorporates newer monitoring data and updated water demand projections, in addition to being calibrated to reflect groundwater withdrawals since inland wellfields have been developed. Additional investigation into the sand-and-gravel aquifer is also planned as part of this model update (see more detail below).

The updated model will be used by both regulators and permittees to evaluate future withdrawal scenarios. Work on the groundwater flow model will be completed in FY 2017-2018 and updated to convert the flow model into a transport model in FY 2018-2019.

The increase in resources for this project is tied to the initiation in 2014 of minimum flows and levels (MFLs) for the coastal Floridan aquifer in Planning Region II. A work plan for developing and establishing an MFL for coastal Region II, an extensive data review and evaluation, and bid specifications for rehabilitating existing wells and expanding monitoring wells were completed in 2015. In October 2015, 12 existing wells were logged to evaluate downhole conditions and the suitability of the wells for use in an expanded monitoring network. Between August 2016 and September 2017 well construction and testing activities were performed at four new well sites in Region II. A total of eight new monitoring wells were installed and tested to provide additional water level and water quality data. These data will be used to evaluate the current position of the saltwater interface along the coast. Continued monitoring of new and existing wells is scheduled for FY 2017-2018. Monitoring will include discrete and composite water quality sampling and continuous water level recording. The current NWFWMD MFL Priority List shows the technical assessment for this project is scheduled for completion in 2020, with rule adoption in 2021.

Inland Sand-and-Gravel Aquifer

Due to its high recharge rate, the inland sand-and-gravel aquifer in Region II is capable of providing regionally significant quantities of water. Development of an inland sand-and-gravel aquifer wellfield was initiated in 1999 within Santa Rosa County. Water from the wellfield is conveyed south to alleviate pumping demand from the Floridan aquifer along the coast. Public supply water withdrawals from the inland wellfield and vicinity increased from 1.0 mgd in 1998 to 6.5mgd in 2016.

Previous District evaluations indicate that total groundwater production of up to 18 mgd, inclusive of current withdrawals, may be available from the inland sand-and-gravel aquifer between the Blackwater River and Yellow River in Santa Rosa and Okaloosa counties. Considerable data were gathered, which involved constructing project-specific monitoring wells, determining aquifer hydraulic properties, mapping aquifer unit thicknesses, and measuring groundwater levels and stream discharge. A groundwater flow model was subsequently developed and calibrated. The model includes the transient response of the aquifer to drought and climatic variability. The development of the inland sand-and-gravel aquifer model has produced a better understanding of the shallow groundwater flow system which acts regionally as a source of water for the deeper Floridan aquifer. Elements of the sand-and-gravel aquifer model will be incorporated into the western district model described above.

Surface Water Sources

In 2006, the District and its water supply consultants prepared an analysis of potential surface water supply sources in Okaloosa County, presented in the report “Conceptual Alternative Water Supply Development Projects and Planning Level Cost Estimates” (PBS&J 2006). This study reviewed the technical and economic feasibility of several alternatives, including direct river withdrawal, riverbank filtration, and construction of tributary reservoirs. The District also concurrently reviewed an evaluation of a proposed Yellow River Reservoir and concluded that the proposal was not feasible.

Okaloosa County continues to evaluate surface waters in the Yellow and Shoal river basins as potential future water supply sources. Potential facilities may include direct withdrawal and treatment systems, as well as an offline reservoir or other storage facilities. In 2015, the county completed a major land acquisition and has facilitated public workshops jointly with the U.S. Army Corps of Engineers as part of its long-range water supply planning efforts. The District will continue efforts to support planning for alternative surface water development, including MFL development for the Shoal River system, which began in FY 2016-2017. As part of the MFL development, the western district regional groundwater flow model described above will include refinements to better represent the permeable zones within the sand-and-gravel aquifer in the vicinity of the Shoal River.

Aquifer Storage and Recovery

Aquifer storage and recovery (ASR), depending on the particular hydrogeologic characteristics of an area, has the potential to store large quantities of water more effectively and at a lower cost than above-ground storage. Destin Water Users has developed an ASR system for storage of reclaimed water in the sand-and-gravel aquifer. This reclaimed water is available to meet irrigation demands, helping to conserve potable water resources and mitigate potential impacts associated with this volume of groundwater withdrawal.

The use of ASR in the future for storage of reclaimed water or perhaps the use of direct aquifer recharge as a salinity barrier may require a regional approach, since water introduced into a geologic formation could affect the groundwater beneath jurisdictions or service areas of multiple utilities and local governments. There are no current ASR projects included in the District's FY 2017-2018 Adopted Budget. However, the District will work with utilities on the feasibility of additional ASR activities within Region II, as needed or requested.

Water Reuse

The Region II RWSP previously identified approximately 5 mgd of new beneficial reuse available to offset demands on the coastal Floridan aquifer. In response to regulatory and cooperative planning efforts, significant investments in reuse have been made in the region, particularly for golf course irrigation in coastal areas. As of 2016, 27 reuse applications associated with 10 reuse systems in Region II were permitted for public access reclaimed water, producing an estimated 9.53 mgd for public access reuse (DEP 2017). These facilities supported landscape irrigation for approximately 3,010 residences, 16 golf courses, 11 parks, three schools, and three cooling towers. Past District funding assistance has helped provide for construction of wastewater infrastructure improvements to facilitate reuse near the City of Freeport and in north-central Okaloosa County.

The District continued efforts to further identify opportunities for more integrated water management and resource sustainability in northwest Florida in FY 2016-2017. Additionally, the District continued to support projects with utilities to expand the use of reclaimed water to meet non-potable water needs through the districtwide water supply grant program. Since 2013, $1,083,923 has been awarded for six reuse projects in Region II that include: expanding and upgrading reuse systems in the cities of Fort Walton Beach and Niceville in Okaloosa County and the City of Gulf Breeze, the Holley Navarre Water System, and Pace Water System in Santa Rosa County. With grant funding from the District, the City of Mary Esther will complete a reclaimed water feasibility study by June 2018.

Assisting utilities and local governments in developing beneficial reuse projects will remain a priority, with implementation depending on funding availability. Future water reuse projects may include assessments matching reclaimed water generators with users, feasibility studies, pilot projects, and demonstration projects. Projects of highest priority are those that offset and reduce the consumption of potable quality water, as well as those that protect natural systems and achieve integrated water resource management. Additionally, reuse information for the District will be updated annually.

Water Conservation

A significant effort to increase water conservation has been underway in Region II for some time, largely in response to regulatory requirements and incentives established within the coastal WRCA. As a result, per capita water use has declined in recent years in the region. Water conservation remains a priority to build upon current water use efficiencies and to further enhance resource preservation. To support this effort, an updated evaluation of water conservation potential was completed in 2015-2016. It includes a review of existing programs in the region and identification of potential water savings achievable from additional water conservation measures.

Under Chapter 40A-2, F.A.C., new and expanded withdrawals from the Floridan aquifer for non-potable uses are not permitted within the coastal WRCA. Additionally, in response to resource limitations, cooperative planning, and regulatory requirements and incentives, numerous utilities implement water conservation measures that include inclining block rates, conservation plans, and the reuse of reclaimed water. Goals for utility conservation measures for permitted withdrawals within the WRCA include reducing the annual average residential per capita

water consumption to 110 gallons per day or lower and reducing water leakage to 10 percent or less of the water withdrawn. Utilities withdrawing an average of more than 100,000 gallons per day are required to report withdrawals annually, with the majority required to report per capita water use. Most utilities in Region II reporting these values are achieving the 110 residential gallons per capita per day (gpcd) District goal.

The District has worked in cooperation with DEP and the Florida water management districts to address public supply water conservation within Florida under section 373.227, F.S. The participating agencies have worked to define a common water conservation planning process for public supply utilities including creating standardized analysis methods and tools, common supporting technical references, and consistent permitting requirements and incentives related to goal-based conservation planning. As part of this initiative, the District established a process to allow for extension of permit duration for utilities which have demonstrated water savings achieved through implementation of a goal-based water conservation plan (Rule 40A-2.321, F.A.C.).

Limited staff time was spent on conservation activities in FY 2016-2017, mainly focusing on quarterly coordination with water management districts. Staff will continue to maintain efforts with other water management districts, local governments and utilities to further improve water use efficiency for public supply and other water use categories.

Regional Water Supply Planning

Development and refinement of regional strategies, project planning and development, and RWSP updates are essential components of water resource development. Related activities include technical support and coordination with local governments and utilities to ensure a regional focus in the planning and development of alternative water supply projects. Associated administrative activities include project and funding management, coordination with DEP and other agencies, and progress reporting.

The District provides assistance with hydrogeology and related technical evaluations for development of new and alternative water sources including the inland Floridan aquifer, the sand-and-gravel aquifer, surface water, and reclaimed water. Other ongoing efforts include working with local governments and state and regional agencies to better coordinate land use and water supply planning. During FY 2016-2017, District staff maintained collaboration with the Florida Department of Agriculture and Consumer Services (DACS) and other water management districts on the Florida Statewide Agricultural Irrigation Demand (FSAID) reports.

Staff continued working on the next update to the districtwide water supply assessment including completion of draft estimates and projections in Region II and districtwide. The WSA Update draft will be completed in spring 2018 and presented to the Governing Board for approval by the end of FY 2017-2018. Additionally, work on an update to the Region II RWSP will begin in FY 2017-2018. These timelines are consistent with those listed in last year's work plan, while accounting for emerging priorities such as MFL development and springs restoration and protection projects.

Staff are also assisting communities and utilities through water supply development projects. In FY 2016-2017, four of the 12 water supply development grants were awarded to Region II totaling nearly $313,000, all to financially disadvantaged small local governments and utilities in the region. Additionally, staff maintain relationships with the Walton/Okaloosa/Santa Rosa Regional Utility Authority and other utilities in the region on project funding needs and collaboration opportunities.

Interconnection of Water Supply Systems

Largely focused on Region II, the Coastal Water Systems Interconnection Project was a District initiative focused on increasing water supply reliability in coastal communities in cooperation with local utilities. The goal of the initiative was to enhance the resilience of the coastal water systems by enabling transfer of water between utilities during droughts or other contingencies. The Coastal Water Systems Interconnection Initiative was completed in 2013 with the final report providing a detailed analysis of interconnect alternatives and design parameters. Two

interconnection projects were selected for potential future implementation: a coastal interconnection between Santa Rosa and Okaloosa counties and a coastal interconnection between Walton and Bay counties.

No expenditures are planned for this project in the five-year planning horizon. The District will continue to support local governments and utilities planning interconnect projects that help ensure available and reliable water supplies, particularly in coastal areas.

Hydrologic Data Collection

The District has a data collection network of rainfall gauges, stream gauges, and monitoring wells throughout Region II. Groundwater and surface water monitoring capabilities have been enhanced by continuing cooperation with the U.S. Geological Survey surface water gauging network and developing an expanded monitoring network for the sand-and-gravel and Floridan aquifers where new water sources have been developed or are planned. This monitoring is essential for ensuring the success of long-term water supply initiatives, as well as for refining groundwater models and analyses to support future management decisions.

Expansion of the groundwater and rainfall monitoring in Region II continues to support resource evaluations and development of improved modeling tools for both planning and consumptive use permitting. In FY 2016-2017, eight new monitor wells were constructed and one existing well was rehabilitated to improve water quality sampling and allow for continuous monitoring of the water level. Seven of the new wells were instrumented and instrumentation of the remaining two wells along with instrumentation of the rehabilitated well are expected to occur early in FY 2017-2018. Additionally 16 existing wells will be instrumented with water level loggers in FY 2017-2018. The data from these additional monitoring sites will support the establishment of MFLs for the coastal Floridan aquifer in Region II and improved water resource development monitoring activities.

Abandoned Well Plugging

The District's Regulatory Services Division implements an active effort to plug abandoned artesian wells. The overall goal of the program is to protect available groundwater resources from aging, uncontrolled, or improperly constructed wells that are no longer in use. The District achieves proper abandonment of such wells through two methods: requiring contractors to plug abandoned wells found on site during new well construction or initiating a well abandonment contract with a well owner or local government. Technical assistance and funding is available to local governments and utilities for plugging abandoned wells identified as having the potential to adversely affect groundwater quality. This is an ongoing effort that the District implements where feasible, in partnership with stakeholders and local governments.

To date, the District has facilitated the plugging of 7,956 abandoned wells within Region II, 223 of which were plugged in FY 2016-2017. Note that the historical count of permits changes from previously reported data as final completion reports are received and some permits are cancelled. For example the count of permits through September 2016 changed from 7,737 in the FY 2016-2017 report to 7,733 in this report.

Funding Summary: Region II Water Resource Development Projects

Table 2 displays past year expenditures, current year budget, and anticipated future expenditures for water resource development within Region II.

Table 2. 2018-2022 Region II Water Resource Development Project Funding

Water Resource Development Projects	Budget Activity	FY 16-17 Expen-ditures[1]	Anticipated Five Year Work Program					FY18-FY22 Cost Estimate
			FY 17-18 Budget[2]	FY 18-19	FY 19-20	FY 20-21	FY 21-22	
Floridan Aquifer	1.1.2 2.2.1	$645,228	$345,000	$308,750	$496,035	$371,481	$206,936	$1,728,202
Inland Sand-and-Gravel Aquifer	1.1.2 2.2.1	$164,246	$126,900	$106,250	$93,750	$93,750	$93,750	$514,400
Surface Water Sources	1.1.2 2.2.1	$4,634	$121,400	$100,000	$87,500	$87,500	$87,500	$483,900
Aquifer Storage and Recovery	2.2.1	$0	$0	$0	$0	$0	$0	$0
Water Reuse	2.2.1	$23,093	$26,100	$15,000	$15,000	$15,000	$15,000	$86,100
Water Conservation	1.1.1 2.2.1	$8,524	$10,200	$8,000	$8,000	$8,000	$8,000	$42,200
Regional Water Supply Planning	1.1.1	$29,383	$149,300	$75,000	$35,000	$35,000	$35,000	$329,300
Interconnect of Water Supply Systems[3]	1.1.1	$0	$0	$0	$0	$0	$0	$0
Hydrologic Data Collection	1.2.0	$78,305	$117,100	$100,000	$100,000	$100,000	$100,000	$517,100
Abandoned Well Plugging	4.2.0	$7,805	$12,000	$10,000	$10,000	$10,000	$10,000	$52,000
TOTAL		$961,218	$908,000	$723,000	$845,285	$720,731	$556,186	$3,753,202

[1]Preliminary figures; final costs will be provided in the March 1, 2018, Consolidated Annual Report.
[2]FY 2017-2018 figures based on adopted budget.
[3]Project completed during FY 2013-2014.

The budget for FY 2017-2018 reflects a slight increase in anticipated spending as compared to that presented in the previous WRDWP. This increase reflects a focus on reuse and conservation projects through the development of an update to the Region II RWSP.

Changes to future budget years, as compared to last year's WRDWP, reflect the acceleration of the Shoal River system MFL development, which benefits both the *Surface Water Sources* and the *Inland Sand-and-Gravel Aquifer* projects. Decreases in the five-year costs for the *Floridan Aquifer* project reflect progress on tasks for the Floridan Aquifer, Coastal Region II MFL as well as some of the Shoal River system MFL tasks being completed with staff instead of through contractual services.

Region II Water Supply Development

Water supply development strategies of the Region II RWSP, including preferred alternative water supply development projects, are listed in Table 3.

Table 3. Region II Water Supply Development Projects

Project	Activity	Estimated Cost	Estimated Water Available (mgd)
Inland Floridan Aquifer Alternative Water Supply	Development of the inland Floridan aquifer wellfield and transmission infrastructure to bring inland groundwater to serve coastal utilities in Walton and Okaloosa counties.	$48,100,268	15[1]
Inland Sand-and-Gravel Aquifer Alternative Water Supply	Development of the inland sand-and-gravel aquifer wellfield and associated infrastructure to bring inland groundwater to serve coastal utilities in Santa Rosa County.	$9,588,500	18[2]
Surface Water Supply Development	Development of alternative surface water supply source, storage system, conveyance, and conjunctive use.	TBD	10[3]
Water Reuse Facilities	Assist utilities and local governments in the development of reclaimed water to achieve potable water offset.	TBD	5
Water Supply Management Projects	Development of conveyance and interconnection facilities, facilitating development of alternative water supplies.	$41,200,000	N/A

[1] Represents new inland wellfield pumping capacity; total pumping capacity approximately 28 mgd.
[2] Represents total estimated capacity of the inland wellfield region. Approximately 8 mgd currently permitted.
[3] Okaloosa County pursuing development of Shoal River surface water source; represents preliminary estimate.

Major completed water supply development projects include construction of inland groundwater wells, transmission pipelines, and associated facilities serving coastal utilities in all three counties. These include the inland sand-and-gravel aquifer wellfield in Santa Rosa County, inland Floridan aquifer wells and transmission facilities in Okaloosa County, and inland Floridan aquifer wellfield and transmission facilities in Walton County.

To date, Region II water supply development projects have made approximately 21 mgd of water available, including 13 mgd from the inland Floridan aquifer and 8 mgd from the inland sand-and-gravel aquifer. The District maintains efforts to make additional water supplies available to meet future needs, particularly focusing on reclaimed water. These water supplies, together with traditional water supply sources, are anticipated to be sufficient to meet demands through 2035 under both normal and 1-in-10 year drought conditions and to avoid the adverse effects of competition for water supplies.

Additionally, $312,999 in funding was awarded for four projects in Region II during FY 2016-2017 through the District's water supply development grant program. These projects include improving the reliability and capacity of potable water supply systems through waterline replacements (City of DeFuniak Springs and the City of Laurel Hill) and completing a preliminary engineering report (Berrydale Water System, Santa Rosa County). Additionally, funding will assist the City of Freeport complete a US-331 Corridor Utilities Planning Study. See Appendix A, Table 9 for more information.

Funding Summary: Region II Water Supply Development Projects

Table 4 displays past year expenditures, current year budget, and anticipated future expenditures for water supply development within Region II.

Table 4. 2018-2022 Region II Water Supply Development Project Funding

Water Supply Development Projects	Budget Activity	FY 16-17 Expen-ditures[1]	Anticipated Five Year Work Program					FY17-FY21 Cost Estimate
			FY 17-18 Budget[2]	FY 18-19	FY 19-20	FY 20-21	FY 21-22	
Inland Floridan Aquifer Alternative Water Supply	2.2.2	$0	$1,260,000	$40,000	$0	$0	$0	$1,300,000
Inland Sand-and-gravel aquifer Alternative Water Supply	2.2.2	$0	$42,302	$0	$0	$0	$0	$42,302
Surface Water Supply Development	2.2.2	$0	$0	$0	$0	$0	$0	$0
Water Reuse Facilities	2.2.2	$15,682	$170,535	$0	$0	$0	$0	$170,535
Water Supply Management Projects	2.2.2	$24,354	$151,778	$297,019	$4,500	$4,500	$4,500	$462,297
TOTAL		$40,036	$1,624,615	$337,019	$4,500	$4,500	$4,500	$1,975,134

[1]Preliminary figures; final costs will be provided in the March 1, 2018, Consolidated Annual Report.
[2]FY 2017-2018 figures based on adopted budget.

The budget for FY 2017-2018 reflects completion of several previously-awarded and multi-year water supply development grant projects with local governments and utilities in Region II. Funding for these projects, as well as planning and staff support, is reflected in the table above under *Water Supply Management Projects*. The decrease in *Water Reuse Facilities* reflects a reduced scope of work for the City of Fort Walton Beach reuse project.

Overall, the decrease in budgeted funds for Water Supply Development projects reflects the completion of the grant program to local governments, based upon spending down of District reserve funds, and does not reflect the need for water supply development activities across Santa Rosa, Okaloosa and Walton counties. Upon completion of projects, staff will continue to work with utilities and local governments on water supply development activities.

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Region III: Bay County

The RWSP for Region III (Figure 3) was developed initially in 2008 and updated in 2013 (NWFWMD 2008; Brooks et al. 2014). The plan describes concerns about the long-term sustainability of water supply resources within the region and presents strategies to increase source reliability and minimize the vulnerability of Deer Point Lake Reservoir, the region's primary public supply source, to a major hurricane storm surge. Pursuant to the RWSP, the NWFWMD provided over $5 million in grant funding to Bay County for a $23 million project to develop an alternate intake at the lower end of Econfina Creek, the primary tributary of the reservoir. The completion of this project has increased the resiliency of Deer Point Lake Reservoir to withstand storm surge impacts while providing safe drinking water to nearly all the county.

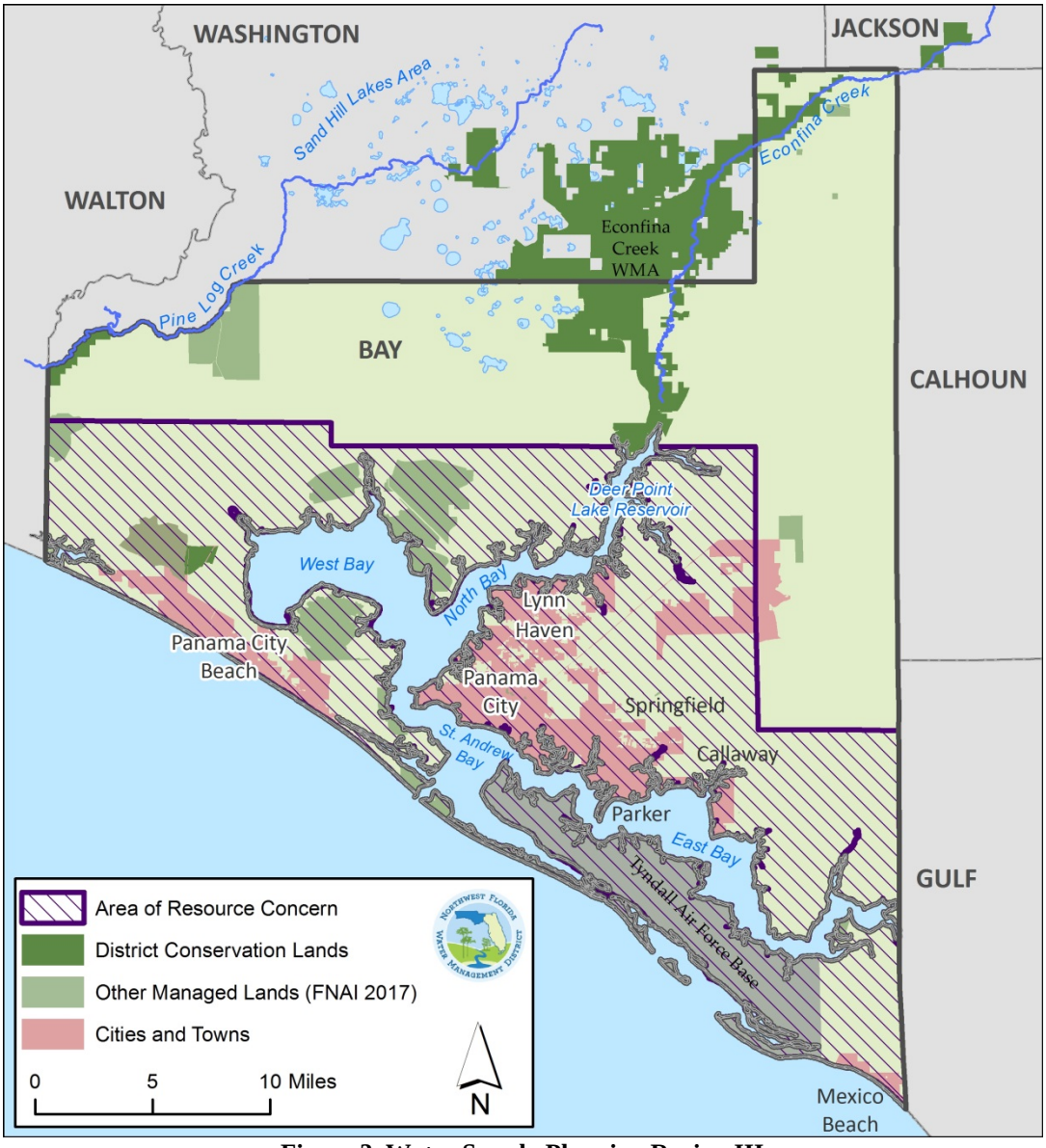

Figure 3. Water Supply Planning Region III

The 2013 WSA Update showed that public supply and industrial-commercial-institutional (ICI) water use together comprised approximately 72 percent of the water use in 2010, accounting for 38 percent and 34 percent respectively (Countryman el al. 2014). The report concluded that existing and reasonably anticipated surface water supplies are adequate to meet projected regional demands through 2035, although the reservoir was vulnerable to salt water intrusion from storm surge associated with hurricanes or tropical storms.

Region III Water Resource Development

The Region III RWSP update includes five water resource development strategies. These are summarized in Table 5. Descriptions of the strategies and progress to date follow.

Table 5. Region III Water Resource Development Projects

Project	Activity	Water Identified (mgd)
Econfina Creek and Groundwater Recharge Area Protection	Land protection and management of the Econfina Creek WMA, a regionally significant groundwater recharge area.	N/A
Hydrologic and Water Quality Data Collection and Analysis	Hydrologic data collection, monitoring, analysis, and modeling to identify baseline conditions and trends, evaluate current and potential water supply sources, and sustainably manage withdrawals.	N/A
Water Reuse Funding and Technical Assistance	Assistance to local governments and utilities in developing reclaimed water uses to extend potable water supplies and improve water quality of St. Andrew Bay.	5
Water Conservation Funding and Technical Assistance	Assistance to local governments and utilities in enhancing water conservation and efficiency efforts.	TBD
Regional Water Supply Planning, Coordination, and Technical Assistance	Technical assistance, support for utility interconnections, and development and update of the regional water supply plan.	N/A

Additional water supplies that could potentially be made available include water reuse and quantifiable conservation efforts. The District supports efforts to help facilitate and provide technical assistance to local governments and utilities on water reuse and conservation projects.

Econfina Creek and Groundwater Recharge Area Protection

The District's Land Acquisition and Management Division manages more than 43,000 acres in the Econfina Creek Water Management Area (WMA) to protect a regionally significant groundwater recharge area and other water resources while also providing public access and a resource for compatible public use and recreation. Land management activities include habitat enhancement, restoration, and development and maintenance of public access facilities. Acquisitions of inholdings and additions may be planned in the future depending on funding availability.

In FY 2016-2017, a shoreline restoration project at the James Tract along Econfina Creek was completed (parcel acquired in FY 2015-2016). Construction of spring restoration and public access improvements at Devil's Hole Spring began in August 2017. Work continued on acquisition of a major conservation easement to purchase up to 942 acres along Econfina Creek and adjacent to Gainer Springs, a first-magnitude springs group in northern Bay County.

For FY 2017-2018, legislative appropriations for springs restoration and protection were again awarded to the District toward two projects in the Econfina WMA. Additional funding was provided for the Econfina Blue

Spring Camp Improvements project, for a new project total of $500,000 to reduce erosion and sedimentation while making public access improvements. Additionally, $1,000,000 was provided for the purchase of approximately 200 acres near Gainer Spring.

Hydrologic and Water Quality Data Collection

This project provides the water resource data collection, analysis, and modeling needed for characterizing conditions and evaluating current and potential water supply sources. The project also incorporates long-term monitoring as needed to help ensure future withdrawals are managed to protect water resources and associated natural systems.

In cooperation with Bay County, the District maintains data collection stations for the Deer Point Lake Watershed Hydrologic Monitoring program. This effort includes operation of stream stage/discharge and rainfall monitoring stations that provide a continuous record of precipitation and surface water flows during both dry weather and storm conditions. The District operates additional groundwater level, stream flow, and lake level monitoring sites within the county, all intended to characterize water resource conditions and trends within the region.

In FY 2016-2017, data collection continued at five groundwater monitor wells in the Econfina Creek springs complex groundwater contribution area instrumented for continuous Floridan aquifer water level monitoring. This monitoring will be combined with discrete discharge measurements collected at individual springs to assist with development of the Econfina Creek and springs complex MFL. This monitoring will continue through FY 2017-2018.

Water Reuse

District staff work with utilities and local governments to identify opportunities for expanded water reuse to meet non-potable water needs, as well as feasible funding sources and strategies. As of 2016, five reuse applications associated with two reuse systems in Region III were permitted for public access reclaimed water, producing an estimated 2.93 mgd for public access reuse (DEP 2017). These facilities supported landscape irrigation for approximately 1,492 residences, one golf course, four parks, and three schools.

In FY 2015-2016, the District began working with utilities in Region III on a project to determine the feasibility of reclaimed water to serve the needs of Gulf Power's Lansing Smith Generator Plant near Southport. This project has the potential to reduce wastewater discharges to St. Andrew Bay, to eliminate brackish surface water withdrawals for power generation, and to position utilities to better meet future reclaimed water demand. In FY 2016-2017, the District entered into contract with Bay County providing $500,000 in grant funding to construct Phase I of the project.

Future water reuse projects may include assessments matching reclaimed water generators with users, feasibility studies, pilot projects, and demonstration projects. Projects of highest priority are those that offset and reduce the consumption of potable quality water, as well as those that protect natural systems and achieve integrated water resource management. In FY 2017-2018, a project with the City of Panama City Beach to expand reclaimed water for a new sports complex near Breakfast Point is planned. The District will contribute $50,000 toward design of the project. Additionally, in reuse information for the District will be updated annually.

Water Conservation

This project supports conservation and efficiency programs, practices, and measures on the part of local governments and utilities. Water conservation serves the public interest by enhancing efficiency, reducing costs to the public, and limiting impacts to natural resources. Limited staff time was spent on conservation activities in FY 2016-2017, mainly focusing on quarterly coordination with water management districts. Staff will continue to maintain efforts with other water management districts, local governments, and utilities to further improve water use efficiency for public supply and other water use categories.

Regional Water Supply Planning

This project includes funding for the District to manage implementation of the Region III RWSP. The work involves coordinating and tracking projects and programs, completing administrative tasks related to plan implementation, and fulfilling statutory reporting requirements. This project also provides for technical assistance to local governments and water suppliers, educational and outreach materials and programs within the region, and other related activities.

In FY 2016-2017, District staff reviewed the FSAID reports, developed by DACS, and provided additional planning and technical assistance for future updates. Staff also continued an update to the water supply assessment, including completing draft estimates and projections of water use. Completion of the WSA Update is planned to be completed in FY 2017-2018.

Funding Summary: Region III Water Resource Development Projects

Table 6 displays past year expenditures, current year budget, and anticipated future expenditures for water resource development within Region III.

Table 6. 2018-2022 Region III Water Resource Development Project Funding

Water Resource Development Projects	Budget Activity	FY 16-17 Expen-ditures[1]	Anticipated Five Year Work Program					FY18-FY22 Cost Estimate
			FY 17-18 Budget[2]	FY 18-19	FY 19-20[3]	FY 20-21	FY 21-22	
Econfina Creek & Groundwater Recharge Area Protection	2.1.0 2.5.0 2.6.0 3.1.0	$734,609	$8,921,900	$2,100,000	TBD	TBD	TBD	$11,021,900
Hydrologic & Water Quality Data Collection	1.1.2 1.2.0 2.2.1	$45,355	$311,100	$265,000	TBD	TBD	TBD	$576,100
Water Reuse	2.2.1	$15,302	$576,900	$15,000	TBD	TBD	TBD	$591,900
Water Conservation	1.1.1 2.2.1	$2,760	$4,100	$3,000	TBD	TBD	TBD	$7,100
Regional Water Supply Planning	1.1.1	$8,036	$13,000	$8,000	TBD	TBD	TBD	$21,000
TOTAL		$806,062	$9,827,000	$2,391,000	$0	$0	$0	$12,218,000

[1]Preliminary figures; final costs will be provided in the March 1, 2018, Consolidated Annual Report.
[2]FY 2017-2018 figures based on adopted budget.
[3]Funding in future years will be budgeted based on RWSP determination to be made in FY 2018-2019.

The FY 2017-2018 budget reflects a substantial increase in expenditures due to continuation and the addition of new spring restoration projects in the *Econfina Creek and Groundwater Recharge Area Protection* project. The increase also reflects carry forward of a *Water Reuse* grant project with Bay County ($500,000) and a new reuse project with Panama City Beach. The spring restoration projects include carry forward of the Gainer Springs land acquisition ($6 million) on Econfina Creek as well as restoration improvements at Devil's Hole Spring, and Econfina Blue Spring within the Econfina WMA. Additional funding for the Econfina Blue Spring restoration project and $1 million in new funding for land acquisition are also included.

Other increases for FY 2017-2018 include *Hydrologic and Water Quality Data Collection* efforts for the Econfina Creek and Springs Complex MFL.

Region III Water Supply Development

Water supply development strategies identified in the Region III RWSP Update are listed in Table 7.

Table 7. Region III Water Supply Development Projects

Project	Activity	Estimated Cost	Water Made Available or Anticipated (mgd)
Development of Upstream Intake for Surface Water Supply	Develop an alternative raw water pump station near the mouth of Econfina Creek and nine-mile force main to tie in with existing raw water main.	$23,425,000[1]	30[2]
Water Reuse	Construction of water reuse facilities to provide reclaimed water for landscape irrigation and other non-potable uses.	TBD	5
Utility Interconnections	Assist with delivery system interconnections and facility improvements. Specifically includes potential 48" pipeline emergency interconnect between southern Bay and Walton counties.	$25,700,000	N/A
Water Conservation	Implementation of water conservation and efficiency programs and practices by local utilities.	TBD	TBD

[1] Final cost.
[2] Capacity of alternate raw water intake.

Bay County completed the development of an upstream intake for Deer Point Lake Reservoir in June 2015. The Deer Point Lake Reservoir is anticipated to be sufficient to meet demands through 2035 under both normal and 1-in-10 year drought conditions and to avoid the adverse effects of competition for water supplies.

During FY 2016-2017, an agreement with Bay County was executed for the collaborative reclaimed water project with Gulf Power in the North Bay area (see Water Resource Development section). Staff also continued to collaborate with other utilities on increasing or enhancing reclaimed water and conservation projects. The Governing Board awarded one water supply grant project for $49,825 to the City of Lynn Haven for water line improvements in November 2016 (Appendix A, Table 9). The project was substantially completed by September 2017.

Funding Summary: Region III Water Supply Development Projects

Table 8 displays past year expenditures, current year budget, and anticipated future expenditures for water supply development within Region III.

Table 8. 2018-2022 Region III Water Supply Development Project Funding

Water Supply Development Projects	Budget Activity	FY 16-17 Expen-ditures[1]	Anticipated Five Year Work Program					FY18-FY22 Cost Estimate
			FY 17-18 Budget[2]	FY 18-19[3]	FY 19-20	FY 20-21	FY 21-22	
Development of Upstream Intake for Surface Water Supply[4]	2.2.2	$0	$0	$0	TBD	TBD	TBD	$0
Water Reuse	2.2.2	$0	$0	$0	TBD	TBD	TBD	$0
Utility Interconnections	2.2.2	$0	$0	$0	TBD	TBD	TBD	$0
Water Conservation	2.2.2	$4,871	$53,181	$3,600	TBD	TBD	TBD	$56,781
TOTAL		$4,871	$53,181	$3,600	TBD	TBD	TBD	$56,781

[1]Preliminary figures; final costs will be provided in the March 1, 2018, Consolidated Annual Report.
[2]FY 2017-2018 figures based on adopted budget.
[3]Funding in future years will be budgeted based on RWSP determination to be made in FY 2018-2019.
[4]Project completed during FY 2014-2015.

The FY 2017-2018 budget consists of funding for one water supply development project with the City of Lynn Haven. This project, as well as planning and staff support, is reflected in table above in the *Water Conservation* project. The decrease in budgeted funds for Water Supply Development projects reflects the completion of the grant program to local governments, based upon spending down of District reserve funds, and does not reflect the need for water supply development activities in Bay County. Upon completion of this grant project, staff will continue to work with utilities and local governments in Bay County on water supply development activities.

District-Wide Initiatives

Water Supply Development Grant Initiative

The District continues to implement previously approved water supply development funding assistance for local governments and utilities. Since FY 2013-2014, the Governing Board has approved 70 projects totaling nearly $21.6 million for the water supply development assistance grant program. As all available funds have now been encumbered, no grant cycles are planned for this or future fiscal years.

Water Reuse

District staff continue to develop approaches for integrated planning of water and wastewater resources. In FY 2016-2017, staff maintained geographic information system (GIS) data and facility information associated with wastewater treatment plants and effluent disposition, focusing on opportunities for water reuse. Staff will maintain efforts to develop a Districtwide water reuse evaluation for understanding opportunities and costs for expanding reuse potential. Assisting utilities and local governments in developing beneficial reuse projects will remain a priority, with implementation depending on future funding availability.

Agricultural Best Management Practices Cost Share Program

Significant efforts are underway to enhance agricultural water use efficiency and to support implementation of associated water quality best management practices (BMPs), targeted primarily for the Jackson Blue Spring basin of the Apalachicola River watershed. Through FY 2016-2017, the District has received $3,239,500 of spring restoration funding for these activities. The District provides a 75 percent cost-share to help producers retrofit center pivot irrigation systems and to implement more efficient nutrient and water application systems. Together with the Northwest Florida Mobile Irrigation Laboratory, these efforts are expected to significantly enhance efficient use of both water and nutrients within the spring basin. As of June 2016, 89 percent of the available cost-share funds were under contract or distributed to producers for implementation of BMPs. An additional $1.5 million in legislatively-approved funding to sustain this effort was awarded and is budgeted for FY 2017-2018.

Well Abandonment

The District continues its program to properly plug abandoned or contaminated wells. Well abandonments typically considered for financial assistance from the District include: projects for financially constrained public water systems; wells located within water resource caution areas; and wells within areas identified under Chapter 62-524, Florida Administrative Code (F.A.C.) (Escambia, Santa Rosa, Jackson, and Leon counties). Other projects not meeting the previously listed criteria can also be considered, as appropriate. The program currently pays up to 50 percent of costs to plug and abandon eligible wells. During FY 2016-2017, approximately 900 permits were issued to plug wells districtwide at no cost to the District other than staff time. The District worked with Escambia County for the proper abandonment of four deep monitor wells, providing $4,240 to assist with the abandonment of these wells. The District also provides funding assistance for the abandonment of a domestic well in the groundwater contamination areas in Jackson County.

References

Many of these references, as well as related historical publications, may be found on the District's website Plans: www.nwfwater.com/data-publications/reports-plans/.

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Appendix A. Water Supply Development Projects in Regions II and III

Table 9 presents additional water supply development assistance and alternative water supply development projects funded in regions II and III since FY 2013-2014. These projects are included in this report to demonstrate how complementary programs and activities, including regional water supply planning, water resource development, alternative water supply development, and water supply development assistance work together to ensure sustainable long-term water supplies.

Table 9. Water Supply Development Assistance Projects in Regions II and III

Project	Local Sponsor	Project Type	Region	Activity	Status	Completion	NWFWMD Contribution	District Funding Source
Chumuckla Water System Upgrades	Chumuckla Water System	Water Supply	II	Well and SCADA upgrade; equipment acquisition for water line improvements	Complete	FY 2014-2015	$100,721	District General Fund
Highway 285 Reclaimed Water Main Upgrade	City of Niceville	Reuse	II	Replacement and upgrade of reuse lines to increase capacity	Complete	FY 2014-2015	$95,923	District General Fund
Santa Rosa Soccer and Horse Complex Reclaimed Water Extension	Pace Water System, Inc.	Reuse	II	Reuse transmission main construction	Complete	FY 2014-2015	$160,000	District General Fund
Water Main Replacement	City of DeFuniak Springs	Water Supply	II	Replacement of asbestos cement water main; installation of additional hydrants	Complete	FY 2015-2016	$473,750	District General Fund
Town of Jay Asbestos Watermain Replacement	Town of Jay	Water Supply	II	Replacement of asbestos cement water main	Complete	FY 2015-2016	$687,024	District General Fund
West Destin Water Supply Analysis	Destin Water Users	Water Supply	II	Develop system model to analyze water system improvements throughout the western and northern service area	Complete	FY 2015-2016	$40,000	District General Fund
U.S. Hwy 98 Water Line Extension Phase VI	Florida Community Services Corporation of Walton County	Water Supply	II	Phase IV of major upgrade of potable water transmission lines along the U.S. Highway 98 corridor	Complete	FY 2015-2016	$487,620	District General Fund
Holt-Baker Interconnection	Holt Water Works, Inc.	Water Supply	II	Construct a 1,100 LF 6” interconnection with Baker Water System, Inc.	Complete	FY 2015-2016	$8,700	District General Fund
Golf Course Re-Use Line Replacement	Holley-Navarre Water System, Inc.	Reuse	II	Increase size of reclaimed water line serving the Hidden Creek Golf Course and surrounding neighborhood	Complete	FY 2015-2016	$295,000	District General Fund
South Santa Rosa Utility System Reclaimed Water Elevated Storage Tank	City of Gulf Breeze	Reuse	II	Construction of a 300,000 gallon elevated reclaimed water storage tank	Complete	FY 2016-2017	$345,500	District General Fund
Waterline Loop System	Town of Jay	Water Supply	II	Construction of a looped water system to reduce water loss	Complete	FY 2016-2017	$173,563	District General Fund

Project	Local Sponsor	Project Type	Region	Activity	Status	Completion	NWFWMD Contribution	District Funding Source
Well No. 7 and Transmission Line	Fairpoint Regional Utility System	Water Supply	II	Design, permitting, and administration for future new well, treatment facility, and water transmission line	Close-out	FY 2016-2017	$123,947	District General Fund
Reclaimed Water System Improvements	City of Fort Walton Beach	Reuse	II	Design, engineering, and demolition preparation to provide reclaimed water to cemetery and athletic complex	In progress	FY 2017-2018	$87,500	District General Fund
Mid-County Tank #4	Okaloosa County Water and Sewer	Water Supply	II	Construction of 1 MG elevated water tank for northern wellfield	Construction	FY 2017-2018	$1,250,000	District General Fund
Water Production Wells	Moore Creek Mount Carmel Utilities	Water Supply	II	Construction of 1 MG elevated water tank for northern wellfield	Design/ Permitting	FY 2016-2017	$151,020	District General Fund
Nokuse Well Field Expansion	Florida Community Services Corporation of Walton County	Water Supply	II	Construction of two inland potable water production wells	Complete	FY 2016-2017	$245,149	District General Fund
Reclaimed Water Feasibility	City of Mary Esther	Reuse	II	Planning and feasibility study evaluating reclaimed water reuse program and partnership with Fort Walton Beach	In progress	FY 2017-2018	$100,000	District General Fund
Millside Road Waterline Loop	City of Laurel Hill	Water Supply	II	Install 5,100 LF of 6” water main and two fire hydrants	Design/ Permitting	FY 2018-2019	$134,863	District General Fund
Dixonville Area Preliminary Engineering Report	Berrydale Water System	Water Supply	II	Completion of a preliminary engineering report that will be the basis for a capital improvement plan	In progress	FY 2018-2019	$35,000	District General Fund
Red Eye and Widner Circle Waterline Loop	City of DeFuniak Springs	Water Supply	II	Install 3,200 LF of6” water main, provide looped system and fire protection	Design/ Permitting	FY 2018-2019	$93,136	District General Fund
US-331 Corridor Utilities Planning Study	City of Freeport	Water Supply	II	Engineering, hydraulic modeling, and surveying of major water system improvements along US-331.	In progress	FY 2018-2019	$50,000	District General Fund
Alternative Inland Pump Station	Bay County	Alternative Water Supply	III	Construction of alternative surface water intake for the Deer Point Lake Reservoir	Complete	FY 2014-2015	$5,470,000	WPSPTF
Water System Improvements - Gate Valve Replacement	City of Parker	Water Supply	III	Replace the City’s 30 non-functioning gate valves	Complete	FY 2015-2016	$271,481	District General Fund

Project	Local Sponsor	Project Type	Region	Activity	Status	Completion	NWFWMD Contribution	District Funding Source
Water System Improvements 2015	City of Springfield	Water Supply	III	Install 6,300 LF of 6” to 8” water line	Complete	FY 2015-2016	$499,192	District General Fund
Highway 2297 Bridge Water Line Relocation	City of Callaway	Water Supply	III	Relocate and replace water main serving Laird Bayou	Complete	FY 2015-2016	$168,374	District General Fund
9th Street Watermain Replacement	City of Lynn Haven	Water Supply	III	Replace water line serving an elementary school and add fire protection capacity	Construction	FY 2017-2018	$49,825	District General Fund
Sports Complex at Breakfast Point Reuse Project	City of Panama City Beach	Reuse	III	Design and engineering to support expansion of reclaimed water system to new sports complex	In progress	FY 2017-2018	$50,000	LATF
				Total	**27**		**$11,647,288**	

*WPSPTF = Water Protection and Sustainability Program Trust Fund (See Section 403.891, F.S.)
LATF = Land Acquisition Trust Fund (See Section 375.041, F.S.)

Appendix B. BMAP and Recovery and Prevention Strategies in Regions II and III

In 2016, the Florida legislature amended section 373.036, F.S. relating to information required in the Consolidated Annual Report and potentially the Five-Year Water Resource Development Work Program. To meet the statutory intent of these changes, as well as to ensure consistency with the other water management districts, this appendix has been added to describe the Basin Management Action Plan (BMAP) projects and minimum flows and minimum water levels (MFLs) recovery and prevention strategy projects.

Basin Management Action Plans (BMAPs) have been adopted for three areas within the District: Bayou Chico in Escambia County; the Upper Wakulla River and Wakulla Springs basin in portions of Wakulla, Leon, and Gadsden counties; and Jackson Blue Spring and Merritts Mill Pond basin in Jackson County. As none of these BMAPs are within Regional Water Supply Planning regions II or III, there are no BMAP projects to include in this five-year work plan update.

The District is currently working to develop MFLs for several waterbodies, including three Outstanding Florida Springs located in northwest Florida. The technical assessment of the first MFL, St. Marks River Rise, will be completed in 2018. Work on development of an MFL for the Floridan aquifer in coastal Planning Region II is underway, with the technical assessment scheduled to be completed by 2020. The Shoal River system MFL, also in Region II, was initiated in FY 2016-2017, with the technical assessment completed in 2023. In Region III, there are three MFL waterbodies on the current approved priority list with work initiation dates in future years: Econfina Creek and Spring complex (2019); Deer Point Lake (2020); and the Floridan aquifer in coastal Bay County (2021).

With no MFLs adopted to date, there are no recovery and prevention strategy projects to include in this five-year work plan update.