# Fiscal Year 2022-23 Five-Year
# Water Resource Development Work Program

## Proposed October 20, 2022

**NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT**

# NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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# 1 INTRODUCTION

Florida's water management districts are required by sections 373.036 and 373.709, Florida Statutes (F.S.), to conduct water supply planning in regions where existing sources of water are determined to be inadequate to supply water for existing and future reasonable-beneficial uses and to sustain water resources and related natural systems for at least a 20-year planning period. This determination is based on a technical assessment of all sources of water, existing water uses, anticipated future needs, and water conservation efforts. District governing boards re-evaluate the determination at least once every five years.

The Northwest Florida Water Management District (NWFWMD or District) established seven water supply planning regions in 1996 (Figure 1). The most recent districtwide water supply assessment (WSA) was completed in 2018. Consistent with the findings of successive assessments beginning in 1998, a regional water supply plan (RWSP) for Region II (Santa Rosa, Okaloosa, and Walton counties) was first approved and has been in implementation since February 2001. The plan was most recently updated in 2019 with a 2020-2040 planning horizon. Additional information is available at: https://nwfwater.com/Water-Resources/Water-Supply-Planning.

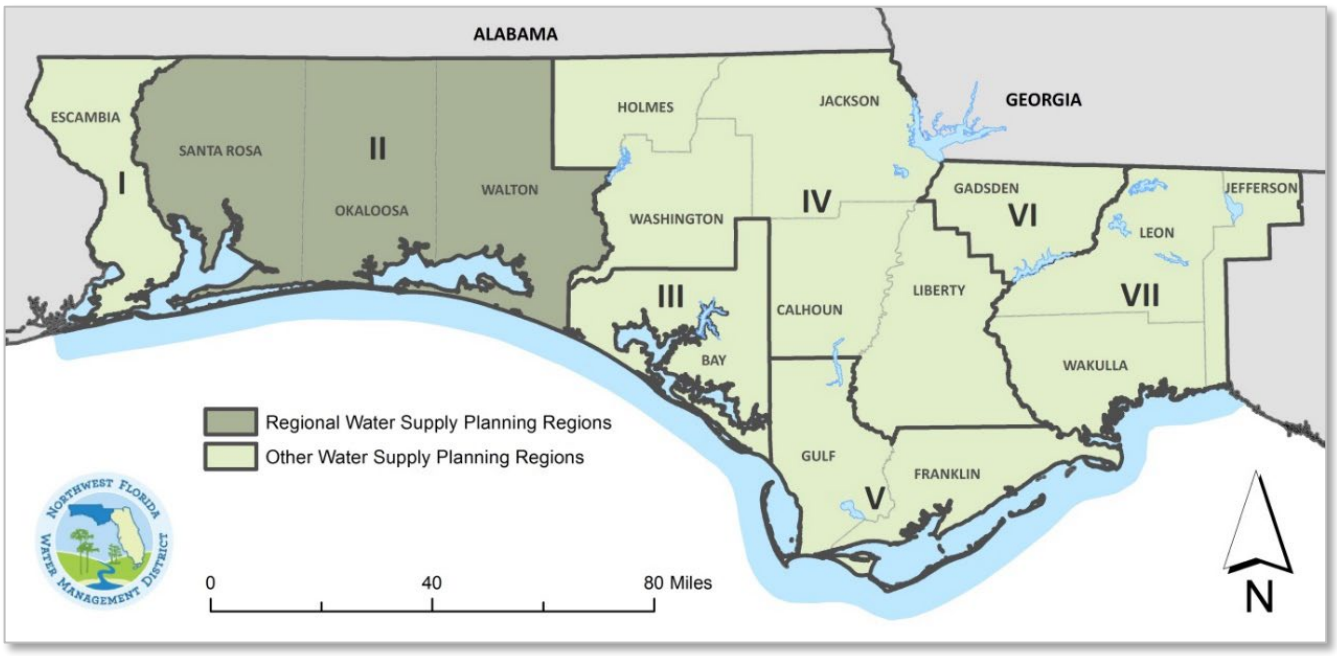


**Figure 1. NWFWMD Water Supply Planning Regions**

Districts are required by section 373.536(6)(a)4, F.S., to prepare a Five-Year Water Resource Development Work Program (WRDWP or Work Program) as a part of the annual budget reporting process. Work Programs describe implementation strategies and funding plans over a five-year period for water resource and water supply development, including alternative water supply development, for each approved regional water supply plan developed or revised under section 373.709, F.S.

This Work Program covers fiscal year (FY) 2022-23 through FY 2026-27. It is consistent with the projects and strategies described in the Region II RWSP and the District's final adopted budget.

## 1.1 PURPOSE

Pursuant to section 373.536(6)(a)4, F.S., the Work Program must address all elements of the water resource development component in the approved RWSP and identify water supply projects proposed for District funding and assistance. The annual funding plan identifies anticipated District funding and additional funding needs. The Work Program must also:

- Identify projects that will provide water;
- Explain how each water resource development and water supply development project will produce additional water available for consumptive uses;
- Estimate the quantity of water to be produced by each project;
- Provide an assessment of the contribution of RWSPs in supporting the implementation of minimum flows and minimum water levels (MFLs) and water reservations; and
- Ensure sufficient water is available to meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event and to avoid the adverse effects of competition for water supplies.

A proposed Work Program is furnished within 30 days after adoption of the District's final budget and posted on the District website for public review. The final Five-Year WRDWP is incorporated into the District's March 1 Consolidated Annual Report.

## 1.2 WORK PROGRAM SUMMARY

The Work Program presented herein, including the District's implementation strategy and five-year funding plan, has been developed to ensure water is available to meet the water supply needs of existing and future reasonable-beneficial uses for a 1-in-10-year drought event, to maintain the function of natural systems, and to avoid the adverse effects of competition for water supplies. The Work Program is specifically focused on implementation of the Region II RWSP, with additional description of districtwide and supporting activities.

The fiscal year 2022-23 Work Program describes current progress toward implementing water resource development projects included within the Region II RWSP. The Work Program also describes funded alternative water supply development projects. The Work Program further includes five-year funding plans for water resource development and water supply development projects, to include the current year budgeted amounts and proposed funding levels for the following years.

For fiscal year 2022-23, $349,710 is budgeted for water resource development within Region II, and $12,468,439 is budgeted for alternative water supply development and water conservation within the region. The Work Program identifies approximately 5.9 million gallons per day (mgd) of reclaimed water to be made available through currently funded alternative water supply development projects within the region.

# 2 REGION II WORK PROGRAM

The 2019 update to the Region II RWSP was developed following the recommendation of the 2018 Water Supply Assessment. The 2019 Region II RWSP was approved by the District's Governing Board on January 23, 2020. Water use was estimated to be about 70 mgd in 2015, and it is projected to climb 36 percent to approximately 95 mgd by 2040. Public supply and recreational landscape irrigation water uses are expected to remain approximately 85 percent of all Region II water demand through the planning horizon (Table 1).

**Table 1. 2015 Estimated Water Use and 2020-2040 Demand Projections**

| Use Category | Estimates | Future Demand Projections - Average Conditions | | | | | 2015-2040 Change | |
|---|---|---|---|---|---|---|---|---|
| | 2015 | 2020 | 2025 | 2030 | 2035 | 2040 | mgd | % |
| **Public Supply** | 47.48 | 51.65 | 55.28 | 58.78 | 62.00 | 65.00 | 17.52 | 36.9% |
| **DSS** | 3.96 | 4.33 | 4.67 | 4.63 | 4.58 | 4.44 | 0.49 | 12.3% |
| **Agriculture** | 2.80 | 3.00 | 3.24 | 3.52 | 3.77 | 3.97 | 1.17 | 41.8% |
| **Recreational** | 10.79 | 11.83 | 12.75 | 13.55 | 14.29 | 14.92 | 4.13 | 38.3% |
| **ICI** | 4.71 | 6.07 | 6.32 | 6.55 | 6.55 | 6.55 | 1.84 | 39.0% |
| **Power** | - | - | - | - | - | - | n/a | n/a |
| **TOTALS*** | **69.73** | **76.88** | **82.25** | **87.03** | **91.19** | **94.88** | **25.14** | **36.1%** |

*Figures expressed in million gallons per day (mgd). Numbers may not sum due to rounding

Public supply is estimated to represent about 67 to 69 percent of the future demand over the planning horizon. In drought conditions, public supply and recreational landscape irrigation together are projected to comprise about 86.5 percent of demand in 2040.

There are currently no adopted MFLs, no recovery or prevention strategies, and no water reservations in Region II.

## 2.1 WATER RESOURCE DEVELOPMENT

Water resource development is "the formulation and implementation of regional water resource management strategies, including the collection and evaluation of surface water and groundwater data; structural and nonstructural programs to protect and manage water resources; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood control, surface and underground water storage, and groundwater recharge augmentation; and related technical assistance to local governments, government-owned and privately owned water utilities, and self-suppliers to the extent assistance to self-suppliers promotes the policies as set forth in s. 373.016."[1] As indicated in section 373.705, F.S., water resource development is primarily a role of the water management districts, although utilities may provide assistance.

The Region II RWSP includes six water resource development projects encompassing strategies for managing water resources and supporting alternative water supply development (Table 2).

[1] Section 373.019(24), F.S.

**Table 2. Summary of Region II RWSP Water Resource Development Projects**

| Activity | Description | Water (mgd)[1] |
|---|---|---|
| **Surface Water** | Resource evaluations to determine minimum flows needed to protect riverine habitats and associated resources. | **TBD** |
| **Reuse** | Coordination of reuse of reclaimed water projects and programs. | **10** |
| **Conservation** | Coordination of water conservation projects and programs. | **6** |
| **Aquifer Storage and Recovery (ASR)** | Technical support for aquifer storage and recovery or aquifer recharge as a component of individual water use permits. | **2** |
| **Groundwater Evaluations** | Sand-and-gravel aquifer resource evaluations to update alternative water supply assessments. | **TBD** |
| | Floridan aquifer resource evaluations; development and application of groundwater flow and saltwater intrusion models; and coastal Floridan aquifer MFL technical assessment. | **TBD** |
| **Data Collection and Analysis** | Hydrologic and water quality data collection, monitoring, and analyses. | **NA** |
| | Water use data, analyses, planning, and water supply development support. | **NA** |

[1] Estimates of water available or potential to be made available.

## Surface Water Development

Surface water investigations and cooperative efforts have focused on the Shoal River as an alternative water supply source for Okaloosa County. This source has the potential to augment potable water supplies in mid-county and coastal areas of Okaloosa County, which will further support water resource sustainability and reduce reliance on Floridan aquifer withdrawals in coastal areas. Okaloosa County has acquired land along the Shoal River and has completed significant planning and analysis toward development of a future water supply source.

District staff developed an MFL Work Plan for the Shoal River and identified preliminary hydrologic data collection needs. In consideration of updated demand projections in Okaloosa County, the schedule for development of an MFL technical assessment for the Shoal River was moved to future years with the 2019 update to the MFL Priority List and Schedule. No additional surface water supply projects are currently under development within the region.

## Reuse of Reclaimed Water

Developing reclaimed water sources is an important strategy for developing alternative sources of supply and meeting future demands in Region II. Reuse feasibility studies are required of individual water use permittees who operate wastewater treatment plants within the Region II Water Resource Caution Area (WRCA) and are encouraged in other areas. The District continues to work with local and regional partners to identify viable strategies to further develop and extend reclaimed water resources.

Reuse planning is focused on achieving potable offset by providing reclaimed water for such purposes as public access irrigation, toilet flushing, fire protection, and industrial uses. The RWSP identified a potential for up to 10 mgd of reclaimed water to be made available by 2040. Ongoing efforts are focused on project development in cooperation with local governments and utilities and identification of future opportunities for water reuse and development of integrated water quality and quantity strategies. Among the strategies and projects within Region II are cooperative reclaimed water projects within Santa Rosa and Okaloosa counties, such as the ongoing multijurisdictional South Santa Rosa Reuse Initiative and

the Okaloosa County, Eglin AFB, and Niceville reclaimed water project. Future projects may include efforts with the City of Milton and with Pace Water System to extend reclaimed water to additional industrial, commercial, and residential users.

## Water Conservation

Like reuse, water conservation is an essential component of ensuring the long-term sustainability and sufficiency of water supplies within Region II. Enhanced water conservation measures are required of individual water use permittees within the coastal WRCA.

The RWSP identified a potential for up to six mgd in additional water conservation savings that may be achieved by 2040. Among potential strategies are cost-share grants and incentive programs, facility retrofits for improved efficiency and water loss prevention, conservation rate structures, improved utility data management, and public education and outreach. Conservation rate structures, public education, enhanced data analysis, and water loss prevention efforts are implemented by utilities in response to resource conditions and regulatory requirements. The District's Water Supply Assessment, currently being updated, incorporates data analysis directed towards water resource sustainability. Water use data and analysis have documented sustained progress in reducing per capita water use rates.

Earlier work programs incorporated planning for a District water conservation cost-share grant program, previously submitted for state funding consideration. This program was not awarded funding. The District, however, will reevaluate the potential for such a program to complement ongoing water conservation measures implemented by utilities and addressed through permit conditions. Additional efforts by the District to support water conservation measures are reflected in the water supply development assistance budget to support grants to help rural communities acquire and install modern water meters to facilitate a reduction in water loss.

## Aquifer Storage and Recovery

Depending on hydrogeologic characteristics, aquifer storage and recovery (ASR) has the potential to store large quantities of water for subsequent use. A few aquifer recharge projects have been permitted in the region for groundwater remediation and restoration. The RWSP estimated that approximately 2.0 mgd may be achieved over the 20-year planning horizon through ASR, including an existing ASR system permitted for 1.12 mgd. There are no current ASR projects included in the District's Budget or Five-Year Work Program.

## Groundwater Evaluations

District groundwater evaluation programs include data collection, groundwater and saltwater intrusion modeling, MFL technical assessments, and associated resource assessments.

### *Sand-and-Gravel Aquifer*

The District plans to incorporate sand-and-gravel aquifer resources into larger groundwater models and further evaluate the sustainability of the sand-and-gravel aquifer as an alternative water source. Groundwater levels within the sand-and-gravel aquifer are routinely monitored as part of the District's quarterly water level and continuous monitoring networks. New monitoring wells completed in 2020 were instrumented with dataloggers to continuously monitor shallow groundwater levels in northern Walton County to improve knowledge regarding surface water/groundwater interactions. The District's 2021 MFL Priority List includes the sand-and-gravel aquifer in Okaloosa and Santa Rosa counties as a waterbody to be evaluated and scheduled, if necessary, for future years. Beginning in FY 2023-24, additional efforts are planned to include developing a sand-and-gravel aquifer model along with the Western District Model framework.

### *Floridan Aquifer*

The Floridan aquifer functions as a regional aquifer system across inland and coastal areas. Data collection and groundwater model development to support the Coastal Region II Upper Floridan Aquifer MFL technical assessment began in 2015. Data collection tasks included construction of deep Floridan aquifer wells to monitor the saltwater interface, expanded water quality data collection at existing wells, and enhanced water quality and water level monitoring at new wells. The technical assessment was substantially completed during FY 2020-21.

A regional groundwater flow model was updated and a sub-regional SEAWAT model was developed to simulate the effects of pumping on aquifer levels. In combination, these models were used to evaluate changes to the rate of saltwater intrusion under 2015 pumping conditions and projected pumping conditions through 2040 as presented in the 2018 Water Supply Assessment. Water quality trend analysis of saline indicators was also performed to identify locations of trends that may suggest movement of the saltwater inland.

The results of the modeling indicate saltwater intrusion continues to pose a significant challenge to Upper Floridan aquifer water supplies along coastal Planning Region II. As of 2015, modeling results indicate approximately 25 public supply wells are at risk of upconing saltwater and exceeding water quality standards. These 25 wells represent 15%, or 5.26 million gallons per day (mgd), of the estimated 35.6 mgd of major pumping from the Upper Floridan aquifer in 2015. However, water quality trend analyses of at-risk wells indicate most wells currently meet water quality standards and do not currently exhibit increasing trends in saline indicators. The estimated rate of saltwater intrusion is relatively slow, and the risk to existing water supply wells due to additional groundwater pumping through 2040 is minimal. Modeling results indicate only one additional well would be at risk by 2040. Careful management of the spatial distribution and magnitude of pumping can minimize the number of wells affected by saltwater intrusion. As a result, the District determined that establishing a minimum aquifer level for the Floridan aquifer in coastal Planning Region II is unnecessary at this time.

Water quality and water level data collection activities will continue for the Upper Floridan aquifer through FY 2022-23, and the groundwater modeling results are planned to be updated as part of the districtwide Water Supply Assessment update in 2023. Beginning in FY 2023-24, additional efforts are planned to include developing the Western District Model framework, together with the sand and gravel aquifer model.

## Data Collection and Analysis

### *Hydrologic Data*

Hydrologic data collection, monitoring, and analyses are essential to multiple District functions and programs. In Region II, the District maintains a network of rainfall gauges, streamflow gauges, and monitoring wells. Hydrologic and water quality data collection are enhanced by continued cooperation with the United States Geological Survey (USGS) and data provided by water use permittees. Data collected and the evaluation of long-term trends data inform water resource evaluation programs and activities.

As indicated previously, the Coastal Region II Upper Floridan aquifer MFL technical assessment was supported by construction of saltwater interface monitor wells, discrete interval water quality sampling at new and existing wells to determine the position of the saltwater interface, and evaluation of water quality trends in saline indicators. Sand-and-gravel aquifer monitoring wells within Region II provide water level data used for numerical groundwater flow models and to better understand surface water and groundwater interactions. This enhanced data collection and monitoring are scheduled to continue

through the five-year work plan period. The increase indicated for FY 2022–23 is associated with contracted services to monitor discharge in stage at the Shoal River and to perform discrete interval water quality sampling to monitor for potential saltwater intrusion.

### *Water Use Data and Planning*

Water use data collection and analysis support multiple District and state programs and reporting requirements. Data are analyzed to prepare water use estimates and report metrics annually, with future demand projections generated every five years in conjunction with WSA updates. Annually, individual water use permittees submit water use/pumpage reports detailing water use over the past year. District staff compile and evaluate these reports to assess water use trends and to calculate per capita use statistics.

During FY 2021-22 and FY 2022-23, District staff are continuing to work toward completing the 2023 districtwide Water Supply Assessment. Over the past year, this has included compiling 2020 data to provide base year water use estimates and conducting a geospatial population analysis of public water utility service areas to integrate with other population data sources. Associated ongoing efforts include collaboration with the Florida Department of Agriculture and Consumer Services (FDACS) on Florida Statewide Agricultural Irrigation Demand (FSAID) annual reports, which will also be incorporated into the 2023 WSA. Additionally, District staff continue statewide water supply planning coordination with the Department of Environmental Protection (DEP) and other water management districts and provide requested reviews and assistance for the Florida Legislature's Office of Economic and Demographic Research.

## Water Resource Development Annual Funding Plan

The proposed annual funding plan to support accomplishment of the District's water resource development priorities, as described above, is provided by Table 3.

**Table 3. Region II Water Resource Development Annual Funding Plan**

| Water Resource Development Projects | Budget Activity | FY 21-22 Expendi-tures[1] | Anticipated Five Year Work Program | | | | | FY 22-23 to FY 26-27 Cost Estimate |
|---|---|---|---|---|---|---|---|---|
| | | | FY 22-23 Budget[2] | FY 23-24 | FY 24-25 | FY 25-26 | FY 26-27 | |
| Surface Water | 1.1.1<br>1.1.2 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Reuse | 1.1.1<br>2.2.1 | $18,306 | $25,280 | $30,000 | $30,000 | $30,000 | $30,000 | $145,280 |
| Conservation | 1.1.1<br>2.2.1 | $10,380 | $19,120 | $12,000 | $12,000 | $12,000 | $15,000 | $70,120 |
| Aquifer Storage and Recovery | 2.2.1 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| Groundwater Evaluations | 1.1.2<br>2.2.1 | $27,803 | $65,460 | $250,000 | $250,000 | $250,000 | $250,000 | $1,065,460 |
| Data Collection and Analysis | 1.1.1<br>1.1.2<br>1.2.0 | $103,162 | $239,850 | $225,000 | $225,000 | $225,000 | $225,000 | $1,139,850 |
| **TOTAL** | | $159,651 | $349,710 | $517,000 | $517,000 | $517,000 | $520,000 | $2,420,710 |

[1]Preliminary figures. Final expenditures to be provided in the March 1, 2023, Consolidated Annual Report.
[2]Based on approved adopted budget.

Substantial water supply development funding is additionally budgeted to advance the reuse of reclaimed water and water conservation within the region, as described further below and listed in Table 4.

## 2.2 WATER SUPPLY DEVELOPMENT

Water supply development involves "the planning, design, construction, operation, and maintenance of public or private facilities for water collection, production, treatment, transmission, or distribution for sale, resale, or end use."[2] Water supply development encompasses both traditional and alternative water supply development. Alternative water supply sources may include salt water, brackish waters, surface water captured predominately during wet weather flows, sources made available through the addition of new storage capacity, reuse of reclaimed water, downstream augmentation of water bodies with reclaimed water, stormwater, and any other water supply source designated as nontraditional.[3] As indicated by section 373.705, F.S., water supply development is primarily the role of local governments, regional water supply authorities, and water utilities, although water management districts may provide assistance.

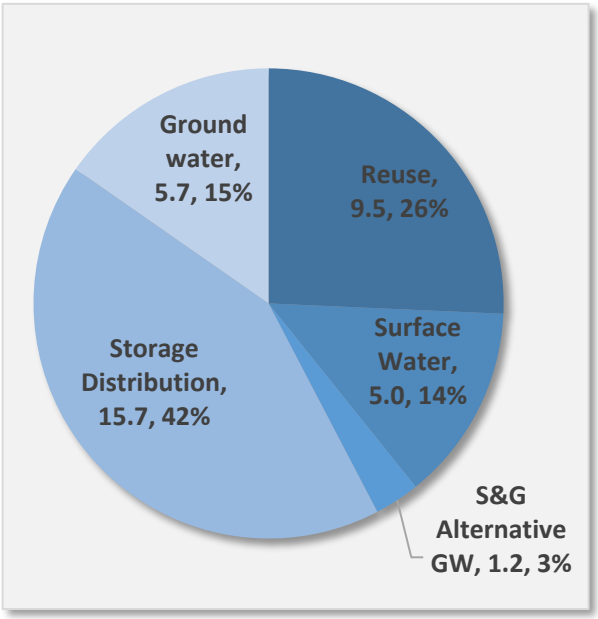


**Figure 2. Potential Water Supply Development by Project Type (mgd)**

The 2019 Region II RWSP identified water supply development options that may generate up to 37 mgd of water by 2040 for future needs (Figure 2). About 42 percent or 16 mgd are alternative supplies, including reclaimed water, surface water, and the sand-and-gravel aquifer as an alternative to coastal Floridan aquifer withdrawals.

Storage and distribution project options include water storage, distribution infrastructure improvements, and system interconnections. Water conservation project options include infrastructure replacements and upgrades, advanced metering systems, and public information conservation programs. Water conservation and alternative water supply projects meet the goals of the RWSP and are therefore preferred options. Traditional groundwater projects may also continue to be an option for inland areas.

The 2019 RWSP includes within the water supply development component reuse project options submitted by utilities in all three Region II counties with a combined total potential reuse flow of 9.5 mgd. This is in addition to approximately 9.2 mgd of reclaimed water currently provided by utilities in the region for public access irrigation. Most of the project options indicate some availability of local matching funds and proposed implementation within the next five to ten years.

State alternative water supply and Water Protection and Sustainability Program Trust Fund appropriations have been awarded to leverage local and other resources for three major multijurisdictional reuse projects, summarized below.

[2] Section 373.019(26), F.S.
[3] Section 373.019(1), F.S.

- The Okaloosa County-Niceville-Eglin AFB Reclaimed Water Project, which includes construction of 11 miles of reclaimed water transmission main from the County's Arbennie Pritchett Water Reclamation Facility to the City of Niceville, with service connections to Eglin AFB. Upon completion, this project will increase the available capacity of reclaimed water by approximately 2.5 mgd.
- The South Santa Rosa Reuse Initiative, a cooperative effort between Santa Rosa County, the Holley-Navarre Water System, the City of Gulf Breeze, and Eglin AFB, will interconnect multiple utilities, improve water reclamation facilities, and expand reclaimed water systems, increasing the reclaimed water resource for the region and eliminating a wastewater discharge into Santa Rosa Sound. Upon completion, this project is expected to make 1.4 mgd of reclaimed water available.
- Pace Water System Chumuckla Highway Ground Storage Tank and Booster Pump Station Project will provide for construction of a 2.0 million gallon ground storage tank and a booster pump station to deliver reclaimed water to residential customers and a park complex.

Additionally, the District is working with rural communities to identify funding resources that can reduce water loss and better position these communities to meet current and future water supply infrastructure needs. During FY 2021-22, the District awarded $135,615 from the Water Protection and Sustainability Program Trust Fund (WPSPTF) to the City of Paxton to reduce water loss through installation of approximately 350 water meters and appurtenances. Table 4 lists currently funded and previously funded major water supply development projects within Region II.

## Table 4. Region II Water Supply Development Annual Funding Plan

| Unique ID | Project Name | Cooperating Entity | Project Type | Project Status | Total Water (mgd)[1] | Prior District Funding | FY 2022-23 Budgeted | FY 2023-24 | FY 2024-25 | FY 2025-26 | FY 2026-27 | Cooperating Entity Match | Project Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NF-00043A | Floridan Aquifer | Varies | Inland Groundwater | Complete | 17.19 | $8,745,149 | $0 | $0 | $0 | $0 | $0 | $15,578,371 | $24,323,520 |
| NF-00044A | Sand-and-Gravel Aquifer | Varies | Inland Groundwater | Complete | 6.08 | $3,302,647 | $0 | $0 | $0 | $0 | $0 | $451,947 | $3,754,594 |
| NF-00045A | Shoal River Surface Water | Okaloosa County | Surface Water Storage | Planning | TBD | $0 | $0 | $0 | $0 | $0 | $0 | $0 | $0 |
| NF-00046A | Reuse [2] | Varies | Reclaimed Water for Potable Offset | Planning | TBD | $6,061,125 | $0 | $0 | $0 | $0 | $0 | $6,511,666 | $12,572,791 |
| NWWS-00052A | Okaloosa, Eglin AFB, Niceville Reclaimed Water | Okaloosa County | Reclaimed Water for Potable Offset | Underway | 2.50 | $1,377,901 | $1,122,099 | $0 | $0 | $0 | $0 | $8,000,000 | $10,500,000 |
| NWWS-00053 (A-D) | South Santa Rosa Reuse Initiative | Holley-Navarre WS; Santa Rosa Co.; City of Gulf Breeze | Reclaimed Water for Potable Offset | Underway | 1.40 | $0 | $10,100,000[3] | $10,100,000 | $7,500,000 | $5,000,000 | $2.500,000 | $22,775,000 | $32,875,000 |
| | GST and Booster Pump Station | Pace Water System | Reclaimed Water for Potable Offset | Planning | 2.0 | $0 | $1,110,725 | $1,110,725 | $0 | $0 | $0 | $1,110,725 | $2,221,450 |
| | Water Meter Replacement | City of Paxton | PS Conser-vation` | Underway | TBD | $0 | $135,615[4] | $0 | $0 | $0 | $0 | $0 | $135,615 |
| NF-00047A | Storage and Distribution | Varies | Distribution/ Transmission Capacity | Planning | 0 | $6,481,222 | $0 | $0 | $0 | $0 | $0 | $21,902,083 | $28,383,305 |

Notes

[1] Total water made available or to be made available upon completion.

[2] Past reclaimed water projects funded within Region II.

[3] Includes $5,100,000 funding carried forward and $5,000,000 of additional state and federal alternative water supply funding.

[4] Includes $135,615 in Water Protection and Sustainability Program Trust Fund budget carried forward.

# 3 DISTRICTWIDE AND SUPPORTING INITIATIVES

Implementation of water resource, water supply development, and water quality projects in Region II are complemented by broader regional and Districtwide programs and initiatives. Programs such as these, including in areas where RWSP development is not required, reflect proactive efforts that are protective of resources and advance resource sustainability Districtwide.

## Water Supply Development Assistance

The District continues support for water supply development by assisting local governments and utilities with project development and in identifying funding sources and options. Limited additional grant funding may be provided as resources allow. Assisting utilities and local governments in developing reclaimed water projects with potable offset projects will remain a Districtwide priority, with implementation assistance depending on future funding availability. Current projects include an award of $50,000 to the City of Gretna for construction of a ground storage tank and a grant of $300,000 to assist Gulf County in construction of an in-line booster pump station and associated improvements to improve water service on St. Joseph Peninsula. Both of these grants will help leverage additional State and Federal grant funding and help the affected communities recover from impacts from Hurricane Michael. Additionally, the District has awarded a $40,000 grant to the Town of Campbellton for replacement of approximately 130 water meters to reduce water loss and to help the Town meet current and future water supply needs.

## Water Reuse

Helping local governments and utilities across northwest Florida identify opportunities to develop and expand the reuse of reclaimed water remains a District priority. Projects that both offset the use of potable water sources and reduce wastewater discharges have been identified in several regions.

During FY 2021-22, Panama City Beach completed construction of a 7,350-foot, 20-inch reclaimed water line along U.S. Highway 98. The project will provide access to reclaimed water for approximately 200 existing connections and an estimated 1,500 future connections. The District provided $544,900 toward the project, including $494,900 of State alternative water supply funding. The City of Panama City Beach provided over $1,200,000 toward the project. Also in Bay County, the District has awarded $500,000 in grant funding to assist Bay County Utility Services in construction of an approximately six-mile reuse transmission main to provide reclaimed water to meet landscape irrigation water needs and reduce or eliminate effluent discharge from the North Bay Wastewater Treatment Facility.

In 2021, the District awarded a grant of $44,385 from the WPSPTF to help the City of Gretna acquire, install, and calibrate effluent meters, integrated within a supervisory control and data acquisition system, to allow continuous monitoring of wastewater constituents. This, in turn, will allow the City to continue to meet requirements for providing reclaimed water to a nearby nursery operation.

## Water Conservation

As funding becomes available, the District will extend water conservation cost-share assistance to utilities Districtwide, with emphasis on assisting financially disadvantaged small communities. Among projects considered may be installation of modern water meters to enable rural communities to improve potable water conservation and management. Additional efforts include agricultural water use efficiency measures, as described below.

## Water Resource Evaluations

The District conducts monitoring and assessment activities to assess the status and sustainability of water resources across northwest Florida. The 2023 districtwide WSA, described above, will include evaluations of the sustainability of water resources through 2045 for all seven regions of the District. Additionally, during FY 2021-22, the District completed a hydrogeologic evaluation in Gulf County to assess the suitability of the intermediate aquifer as a water supply source. The work involved the construction of a test production well and several monitor wells, water quality testing, and completion of an aquifer performance test. The results indicated that modest quantities of potable groundwater are available from the intermediate aquifer system near White City.

## Precision Agriculture Strategies and Systems (PASS) Cost Share Program

Significant efforts continue to enhance agricultural water use efficiency and support implementation of associated precision agriculture practices, targeted primarily for the Jackson Blue Spring basin of the Apalachicola River watershed. Together with the Northwest Florida Mobile Irrigation Laboratory, these efforts are increasing water use efficiency and reducing nutrient applications within the spring basin.

Through FY 2021-22, the District has received $9.8 million of state spring restoration funding and other grant funds for these activities. The District provides a 75 percent cost-share to help producers retrofit irrigation systems and to implement more efficient nutrient and water application systems. Through September 2022, approximately 140 projects with 100 producers have been implemented.

## Well Abandonment

The District continues its program to properly plug abandoned and contaminated wells through well permitting and a cost-share assistance program. Well abandonments considered for financial assistance typically include financially constrained public water systems, wells located within a WRCA, and wells within areas delineated under Chapter 62-524, F.A.C. (Escambia, Santa Rosa, Jackson, and Leon counties). Other projects not meeting the previously listed criteria can also be considered, as appropriate.

During FY 2021-22, approximately 762 permits were issued to plug abandoned or contaminated wells Districtwide. Approximately 44 percent of those were in Region II. As there were no requests for financial assistance, permits were issued at no cost to the District other than staff time.

## Water Quality

The District's interrelated programs support achievement of statewide goals articulated in the Governor's Executive Order 19-12 to improve water quality, as well as to further development of

alternative water supplies and to enhance coastal resilience. The District's Surface Water Improvement and Management (SWIM) program provides a watershed-based planning framework to support water quality protection and improvement throughout northwest Florida. The program engages stakeholder-driven initiatives and complements and supports State water quality restoration efforts, including Total Maximum Daily Loads (TMDLs), Basin Management Action Plans (BMAPs), the Blue-Green Algae Task Force, nonpoint source management grants, and other cooperative funding programs. Priorities, funding resources, and progress for watershed management and water quality protection and restoration are outlined in Chapter 9 of the District's March 1 Consolidated Annual Report.

## Land Acquisition, Restoration, and Management

Since 1984, the District has protected 225,584 acres across northwest Florida for water resource purposes, either in fee simple or through conservation easements. The District acquires lands for water quality protection, flood protection and floodplain management, water recharge, and natural resource conservation. District lands within the Econfina Creek Recharge Area, purchased for water resource development purposes, serve to protect the quality and quantity of recharge for Deer Point Lake Reservoir, the primary source of water for Bay County.

# 4 FUNDING SOURCES AND NEEDS

The state constitutional and statutory millage rate cap for the NWFWMD is 0.05, significantly less than the ad valorem taxing authority afforded the other four water management districts. The District's FY 2022-23 ad valorem tax millage rate, as set by the Governing Board, is 0.0261. To meet its areas of responsibility, the District must rely on other sources of funding, as available. Funding sources used to support water resource and supply development include:

- State Legislative appropriations for alternative water supply;
- Water Protection and Sustainability Program Trust Fund;
- Federal funding awarded by the State for alternative water supply;
- Land Acquisition Trust Fund;
- District Fund Balance;
- State Legislative appropriations for General Operations;
- Local government match funding; and
- Ad valorem.

Since 2019, the Florida Legislature has made significant resources available for alternative water supply development. The funding is available to help communities develop alternative water supplies and to implement water conservation programs, with priority funding given to regional projects in the areas of the greatest need. The District conducts an annual grant cycle and submits recommended projects to the Governing Board for consideration. Board-approved projects are then forwarded to DEP, which evaluates projects from all five of the water management districts in making final funding awards.

The WPSTF, established by the 2005 Legislature, has enabled the District to provide cost-share assistance for construction of alternative water supply development projects and implementation of priority water resource development projects. In FY 2019-20, limited funding was appropriated to the water management districts for the first time since FY 2009-10. The District received $100,000, which will help support the South Santa Rosa Reuse Initiative. An additional $180,000 was appropriated in FY 2020-21, to provide additional support for alternative water supply development and water conservation.

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, as well as for construction of water supply development projects. All projects require substantial local investment once they reach the water supply development stage.

# APPENDIX: BASIN MANAGEMENT ACTION PLAN PROJECTS

Basin Management Action Plans provide blueprints for achieving pollutant load reductions specified in TMDLs to meet water quality standards. In 2016, the Florida Legislature amended section 373.036, F.S., to require identification of specific projects related to water quality or water quantity within a work program. To support this requirement, information related to BMAP projects or recovery or prevention strategies within regional water supply planning regions are included within the District's Water Resource Development Work Program. Additional information related to water quality projects and MFLs Districtwide will be reported in the District's March 1 Consolidated Annual Report.

Within northwest Florida, BMAPs have been adopted for three waterbodies: Bayou Chico (Escambia County), Jackson Blue Spring and Merritt's Mill Pond (Jackson County), and the Upper Wakulla River and Wakulla Springs (with a contribution area in Wakulla, Leon, and Gadsden counties). Additionally, a small portion of Jefferson County within the NWFWMD is within the contribution area for the Wacissa River and Wacissa Spring Group BMAP.

As none of these BMAPs are within Regional Water Supply Planning Region II, there are no BMAP projects to include in this five-year work plan update. Moreover, there are no adopted MFLs in Region II and henceforth no recovery or prevention strategies to report on in this Work Program.