

Northwest Florida Water Management District

Strategic Water Management Plan

September 2019

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***Gainer Spring
(Post-Hurricane Michael)***

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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Northwest Florida Water Management

Contents

1. Introduction	1
About the Northwest Florida Water Management District.....	1
Financial Resources.....	4
2. Strategic Priorities	5
Springs Restoration and Protection	5
Minimum Flows and Minimum Water Levels	8
Apalachicola-Chattahoochee-Flint River Basin	9
Water Supply.....	10
Watershed Restoration and Protection	11
Flood Protection and Floodplain Management	13
3. Implementation.....	15
4. Monitoring and Reporting.....	17

1. Introduction

The Strategic Water Management Plan (SWMP) describes statutory responsibilities and current priorities of the Northwest Florida Water Management District (NFWFMD or District). These responsibilities and priorities encompass those activities the District plans to undertake over a five-year planning horizon to accomplish its mission. This guidance document is complementary to and implemented by the District’s annual budget. The planning horizon for this 2019 SWMP is Fiscal Year (FY) 2020-2024.

About the Northwest Florida Water Management District

The NFWFMD is one of Florida’s five water management districts created on December 31, 1976 as a result of the Florida Water Resources Act of 1972 and Chapter 373, Florida Statutes (F.S.) to conserve and realize full beneficial use of state water resources. The District’s geographic region extends from the St. Marks River watershed in Jefferson County to the Perdido River in Escambia County (Figure 1).

A nine-member Governing Board appointed by the Governor and confirmed by the Senate oversees District activities by setting policy and administrating operating budgets. The District collaborates with a myriad of state departments, federal agencies, local governments, water supply utilities, non-governmental organizations, and other stakeholders to accomplish its mission and statutory areas of responsibility.

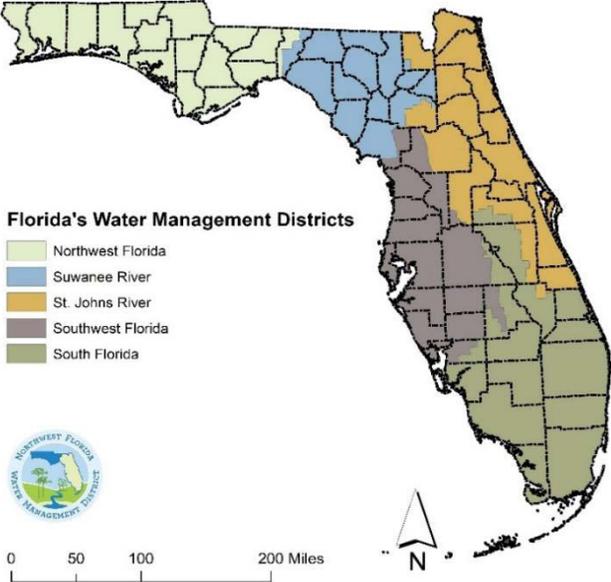


Figure 1. Florida’s Water Management Districts

Mission and Responsibilities

The District’s mission, as established by the Governing Board, is to implement the provisions of Chapter 373, Water Resources, F.S., in a manner that best ensures the continued welfare of the residents and water resources of northwest Florida. Section 373.036, F.S., sets forth four interrelated areas of responsibility (AORs) for water management districts: Water Supply, Water Quality, Flood Protection and Floodplain Management, and Natural Systems. Goals for each of these AORs are in Table 1.

Table 1. Areas of Responsibility and Goals

Water Supply	Promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.
Water Quality	Improve and protect the quality of the District’s water resources.
Flood Protection and Floodplain Management	Maintain natural floodplain functions and minimize harm from flooding.
Natural Systems	Enhance and protect natural systems.

Natural Characteristics

Seven major watersheds with diverse estuaries cross the District, six of which extend in to portions of Alabama and Georgia (Figure 2). The Apalachicola, Choctawhatchee, and Escambia rivers are three of Florida’s five largest rivers by volume of flow - the Apalachicola River is the state’s largest. The District contains more than 250 springs, including five first-magnitude springs: Wakulla Spring, Jackson Blue Spring, the Gainer Springs Group, St. Marks River Rise, and the submarine Spring Creek Springs Group.

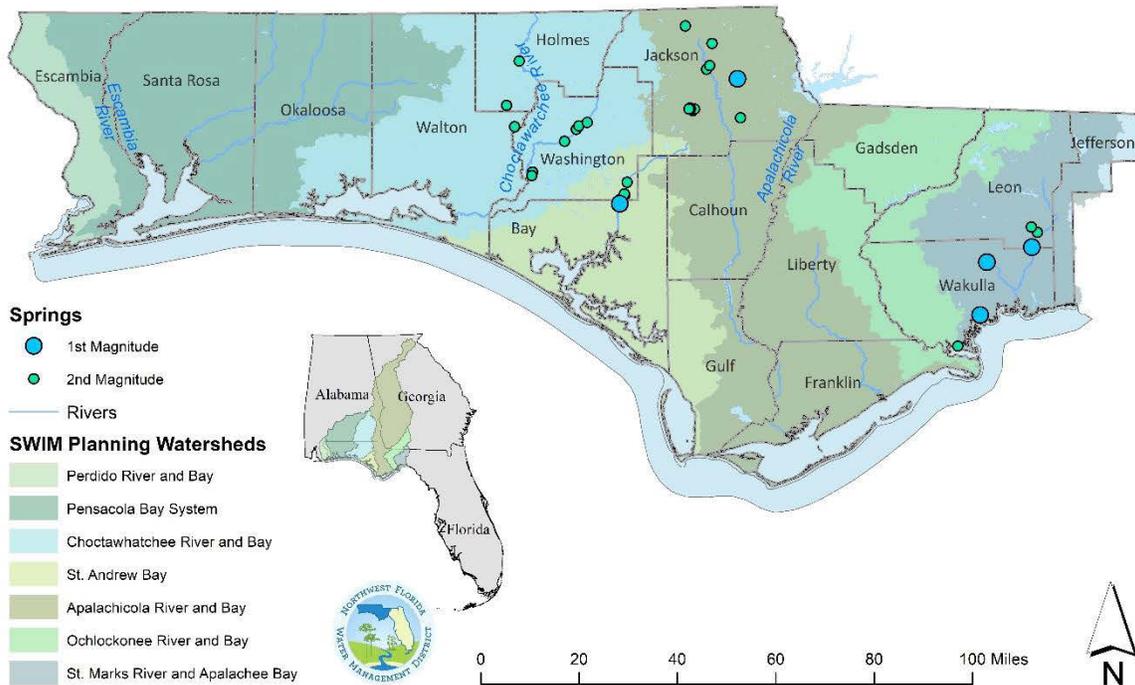


Figure 2. Northwest Florida Watersheds, Rivers, and Springs

The Floridan aquifer is the primary source of water supply across most of the District, and the sand-and-gravel aquifer is the primary source in Escambia and Santa Rosa counties. Bay County relies on surface water from Deer Point Lake Reservoir. A majority of the District’s non-urban land is devoted to forestry and agriculture. Private forest lands cover much of the District, and prominent public lands include military bases, state and national forests, national wildlife refuges, state parks, and District lands.

Population, Growth, and Development

As of 2018, there were an estimated 1.47 million permanent residents in northwest Florida, with nearly four-fifths of the population concentrated in the developed and urbanized counties of Bay, Escambia, Leon, Okaloosa, and Santa Rosa. Santa Rosa and Walton counties are the fastest growing in the District and among the fastest growing counties statewide. High growth trends in Santa Rosa and Walton counties are expected to continue through 2045, with the projected Walton County population in 2045 nearly double the 2010 estimate. Districtwide, population is projected to grow to about 1.78 million by 2045, reflecting a 20.8 percent increase.¹

¹ BEBR, 2019. University of Florida, Bureau of Economic and Business Research (BEBR), Florida Population Studies.

Operational Plans and Rules

The SWMP is designed as a functional plan to address the District’s statutorily defined AORs and guide, at a high level, how the District will carry out major activities over a five-year planning horizon. Activities that directly execute the strategic priorities are implemented through coordinated activities within each of the District’s four major divisions: Asset Management, Resource Management, Regulatory Services, and Administration. Each division has subordinate programs, and operational plans that report on these program activities are further described in Section 4. The District’s supporting regulatory framework including statute and adopted administrative code rules is online and updated as needed (<https://www.nwfwater.com/Permits/Rules-and-References>).

Strengths, Opportunities, and Challenges

Successfully implementing a strategic plan requires a realistic evaluation of an organization’s strengths, opportunities, and challenges that may enhance, provide insight toward, or hinder implementation. A current assessment of the District is outlined in Table 2.

Table 2. Strengths, Opportunities, and Challenges

Strengths	<ul style="list-style-type: none">• Partnership and cooperation with other public and private organizations with complementary functions and authority.• District water management lands and other public lands that protect water quality, floodplains, water recharge, and ecosystem health and productivity.• Technical capability and long-term outlook.• Ability to leverage external funding.• Improved permitting regulations for statewide consistency and streamlining.• Progress of minimum flows and minimum water levels (MFLs) program.
Opportunities	<ul style="list-style-type: none">• Potential to acquire floodplain and recharge areas to protect springs, surface waters, and groundwater resources.• More comprehensive hydrologic data collection and monitoring.• Additional springs and other sensitive resource protection projects.• Potential to enhance water conservation and continued development of alternative water supply sources, such as reuse.• Funding resources to restore and protect the Gulf of Mexico and related natural resources, and other funding to match and extend existing funds.• Identify and acquire new technology, data sources, and analytical methods.
Challenges	<ul style="list-style-type: none">• Out-of-state water withdrawals.• Saltwater intrusion in groundwater aquifers serving coastal communities.• Water quality issues at some springs and other water resources.• Rising demands for potable water for people, business, and agriculture.• Fragmentation of wetlands and other water-related habitats.• Nonpoint source pollution.• Hydrologic, water quality, and water use data gaps.• Infrastructure project funding limitations, particularly on the part of financially disadvantaged small local governments.

The District consistently leverages strengths and endeavors to capitalize on opportunities through program activities. Challenges are acknowledged in the selection of strategic priorities, related goals, and success indicators, and in the programs and projects chosen for implementation.

Financial Resources

The state constitution limits the NFWMD to 1/20th (.05 mills) of one mill, significantly less than the ad valorem taxing authority afforded to the other four water management districts. The District's FY 2019-2020 ad valorem tax millage rate, as set by the Governing Board, is 0.0327 mills. To meet its areas of responsibility, the District must rely on other sources of funding, when available. These include:

- State legislative appropriations – for management of District-owned lands, Environmental Resource Permitting (ERP) program, water supply planning and development, research and data collection, minimum flows and minimum water levels (MFL) program, the Apalachicola River and Bay System, programmatic operations; springs restoration and protection, surface water improvement and management (SWIM) plans, and other state priorities.
- Other state funding, for example:
 - Florida Department of Transportation (FDOT) Mitigation Funds – for wetland mitigation, flood protection, and floodplain management.
 - Florida Forever Trust Fund and Preservation 2000 – for land acquisition and capital improvements for watershed restoration.
 - Land Acquisition Trust Fund – for land acquisition, management and restoration of natural systems; and for enhancement of public access and recreational opportunities on District-owned lands.
 - Water Protection and Sustainability Program Trust Fund – for water resource and water supply development.
- 2010 Deepwater Horizon restoration programs: Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies (RESTORE) of the Gulf Coast Act of 2012 and Natural Resources Damages Act (NRDA) Restoration Program – for coastal and watershed restoration.
- Federal Emergency Management Agency (FEMA) – for flood hazard and risk mapping, assessments, and planning.
- Other federal funds – to leverage District and state funding.
- Public-private cost share: local governments, water supply utilities, and other project partners – for cooperative project implementation.
- General fund reserves – for water supply development, land management, and regional wetland mitigation.

2.Strategic Priorities

The District’s strategic priorities and the goal of each priority for fiscal years 2020-2024 are consistent with the District’s mission, areas of responsibility (AORs), and AOR goals.

Strategic Priorities for Fiscal Years 2020-2024

- ◆ **Springs Restoration and Protection:** *Restore and protect water quality and flows within the major spring systems of northwest Florida.*
 - ◆ **Minimum Flows and Minimum Water Levels:** *Develop and implement science-based MFLs that protect water resources and associated natural systems.*
 - ◆ **Apalachicola-Chattahoochee-Flint River Basin:** *Protect Apalachicola River and Bay water quality and restore freshwater inflow.*
 - ◆ **Water Supply:** *Plan and facilitate sustainable water supplies for future reasonable and beneficial uses.*
 - ◆ **Watershed Restoration and Protection:** *Restore and protect watershed resources and functions.*
 - ◆ **Flood Protection and Floodplain Management:** *Maintain natural floodplain functions and minimize harm from flooding.*
-

Each strategic priority is further described with goal, strategies, success indicators, funding sources, deliverables, and milestones.

Springs Restoration and Protection

Goal: *Restore and protect water quality and flows within the major spring systems of northwest Florida.*

Springs restoration and protection is carried out through cooperative funding projects and through programs such as MFLs, Surface Water Improvement and Management (SWIM), land management, and hydrologic data services. Implementation criteria, priorities, and activities are summarized below.

Springs Restoration and Protection Criteria

Success Indicators:	<ol style="list-style-type: none"> (1) Project accomplishment (percent complete) (2) Trends in nitrate concentrations (3) Trends in spring flows
Funding Sources:	<ol style="list-style-type: none"> (1) State Legislative Appropriations (2) Land Acquisition Trust Fund (3) General Fund Reserves (4) Florida Forever Trust Fund
Milestones:	<ol style="list-style-type: none"> (1) Completion of spring streambank restoration projects (2019-2020) (2) Implementation of funded BMPs for agricultural producers in the Jackson Blue Spring basin and Mobile Irrigation Lab evaluations (2019-2020) (3) Completion of septic to sewer retrofit projects (2019-2023)
Deliverables:	<ol style="list-style-type: none"> (1) Mobile Irrigation Lab evaluation reports (2) Water quality data (3) Spring discharge data (4) Project completion reports

Springs Programs and Projects

Jackson Blue Spring

A major initiative to improve irrigation efficiencies, conserve water, reduce nutrients, and to restore and protect water quality in the Jackson Blue Spring groundwater contribution area in Jackson County.

- **Agricultural Programs and Projects**
 - Best Management Practices (BMPs) – A cost-share program implemented in cooperation with the Florida Department of Agriculture and Consumer Services (DACS), Department of Environmental Protection (DEP), and the Jackson Soil and Water Conservation District. Agricultural BMPs help agricultural producers in the Jackson Blue Spring basin integrate best management practices (BMPs) into their farming operations to conserve water and improve water quality without compromising production yields.
 - Grass-Based Crop Rotation – A federal 319(h) program provides cost-share grants to agriculture producers in the Jackson Blue Basin to implement grass-based crop rotation practices and evaluate the effectiveness at reducing irrigation rates, nutrient and pesticide applications, and increasing crop yields. Also, the District continues to partner with the University of Florida’s Institute of Food and Agricultural Sciences (IFAS) for research and public outreach on grass-based crop rotation practices.
 - Mobile Irrigation Laboratory (MIL) – A cooperative funding effort with the Jackson Soil and Water Conservation District, DACS, and U.S. Department of Agriculture’s Natural Resources Conservation Service (USDA-NRCS). On-site MIL evaluations help agricultural producers identify irrigation inefficiencies and make recommendations to implement appropriate BMPs to improve water use efficiencies and reduce nutrient loading.
- **Septic-to-Sewer Retrofit and Stormwater Projects**
 - Indian Springs Sewer Extension – To extend central sewer to the Indian Springs neighborhood adjacent to Merritts Mill Pond and Jackson Blue Spring.
 - Blue Springs Road Sewer Project – To extend central sewer to the Jackson Blue Springs Recreation Area and residences around Jackson Blue Spring and Merritts Mill Pond.
 - Jackson Blue Spring Recreation Area Stormwater Improvements – For stormwater runoff treatment and shoreline restoration improvements.

Wakulla Spring

Septic-to-sewer retrofit projects in Wakulla and Leon counties to improve water quality and benefit Wakulla Spring. All projects include connection to central sewer and abandonment of septic tanks.

- Magnolia Gardens and Wakulla Gardens Sewer System Expansions – For sewer expansion and connection of homes on septic systems to the Wakulla County Advanced Wastewater Treatment (AWT) plant.
- Magnolia Gardens Sewer System Phase III – Additional phase of septic-to-sewer conversions in the Wakulla Springs Priority Focus Area 2.
- City of Tallahassee Septic-to-Sewer in Wakulla BMAP – For the connection of properties on septic tanks to central sewer within the Wakulla Springs Priority Focus Area 1.

Econfina Creek Springs

- Econfina Blue Spring Camp – Spring shoreline restoration and protection, stormwater facilities, and public access improvements for a second magnitude MFL priority spring.

- Devils Hole Spring – A springs restoration project delayed due to impacts from Hurricane Michael with planned completion in FY 2019-2020.

Other Springs

- Cypress Spring – Land acquisition, shoreline stabilization and public access improvements for a second magnitude spring.
- Horn Spring Restoration – Streambank restoration and public access improvements to second magnitude spring in Leon County, in partnership with DEP.

Additional springs projects are planned as a continuation of annual grant funds received beginning in FY 2014-2015. A new grant funding cycle opened in December 2018, funding requests were approved by the District’s Governing Board in April 2019, and final DEP award determination is anticipated in late summer 2019. All future springs funding is subject to annual state appropriations.

Land Acquisitions

Planned acquisitions in fee simple or conservation easements include Gainer Springs in northern Bay County; properties within the Chipola River Springs Contribution Area and Jackson Blue Spring BMAP Area; Primary Focus Areas of the Wakulla Springs BMAP in Leon and Wakulla counties; and properties within the Econfina Creek and Springs Groundwater Contribution Area.

District Programs

The District’s Minimum Flows and Minimum Water Levels (MFLs) and Surface Water Improvement and Management (SWIM) programs support springs restoration and protection. Both programs are guided by statute² to identify priority water bodies including springs and Outstanding Florida Springs for technical and scientific evaluations, planning, and program development. Both programs are more fully described in their respective strategic priorities: *MFLs* and *Watershed Restoration and Protection*.

Supporting Initiatives

- Land Management – Multiple land and asset management activities aid in the long-term protection of northwest Florida springs. Typically, these activities are also beneficial for water quality protection, water recharge, natural resource conservation, watershed restoration and protection, and for flood protection and floodplain management.
 - The Econfina Creek Water Management Area (WMA) is more than 41,000 acres of District land that protects groundwater recharge, spring flow, and water quality within the Econfina Creek springs complex, which includes first magnitude Gainer Springs. The District owns and manages a total of 224,227 acres of land.
- Water Quality and Flow Monitoring – Data collection and monitoring network activities are implemented in an integrated manner to serve multiple areas of responsibility and strategic priorities and programs, including springs protection. Major objectives include expansion of the hydrologic monitoring network and continuation of cooperative agreements, including a joint funding agreement with the U.S. Geological Survey (USGS) to collect hydrologic data at the Spring Creek Springs Group in Wakulla County.
- Supporting and coordinated activities with other strategic priorities include protection of water resources, including springs, in the Apalachicola-Chattahoochee-Flint (ACF) River Basin.

² Sections 373.042 and 373.453, F.S.

Minimum Flows and Minimum Water Levels

Goal: Develop and implement science-based MFLs that protect water resources and associated natural systems.

The District’s MFLs program is a major component of the overall effort to ensure the long-term protection and sustainability of regionally significant water resources. A minimum flow or minimum water level is defined as the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area. The MFL program complements other efforts, including water use permitting, water supply assessments, regional water supply planning, and watershed management. Strategic approaches include data collection, groundwater and surface water modeling, technical assessments, and rule development. Implementation criteria, priorities, and activities are summarized below.

Minimum Flows and Minimum Water Levels Criteria

Success Indicators:	(1) MFL technical assessment accomplishment (percent complete per the approved schedule) (2) Waterbodies meeting their adopted MFLs (number and percentage)
Funding Sources:	(1) General Fund Reserves (2) State Legislative Appropriations
Milestones:	(1) Wakulla Spring (2021), Sally Ward Spring (2021), coastal Floridan aquifer in Region II (2021), Jackson Blue Spring (2023), and Shoal River System (2024)
Deliverables:	(1) Completed MFL technical assessments according to the approved schedule

MFL Technical Assessments

- Wakulla Spring, an Outstanding Florida Spring (OFS), and Sally Ward Spring in Wakulla County.
- Assessment to evaluate long-term saltwater intrusion in the Floridan aquifer in coastal areas of Walton, Okaloosa, and Santa Rosa counties.
- Data collection and development of hydrologic models to support:
 - Jackson Blue Spring, an OFS, and;
 - Shoal River System.

Supporting Initiatives

- Groundwater Modeling – Development and refinement of Western and Eastern Groundwater Models to support MFLs, water supply planning, and water use evaluations.
- Data Collection – Collection of discharge measurements for the Gainer Spring Group (an OFS), Sylvan Spring Group, Williford Spring Group, and Econfina Blue Spring Group.
- Additional Monitor Wells – Construction of additional wells in the Econfina Creek watershed.
- Monitoring Network – Enhancement of groundwater, surface water, and rainfall monitoring network; and continuation of agreements with:
 - DEP to monitor water quality in aquifers, streams, and lakes;
 - Bay County, Leon County, and City of Tallahassee to monitor surface water discharge and rainfall for reservoir supply, stormwater management, and flood warning; and;
 - USGS to collect hydrologic data on the Apalachicola River, Yellow River, Telogia Creek, and the Spring Creek Springs Group.

The MFL program is implemented according to the MFL priority list and schedule updated annually and available online at www.nfwwater.com/water-resources/minimum-flows-levels/.

Apalachicola-Chattahoochee-Flint River Basin

Goal: Protect Apalachicola River and Bay water quality and restore freshwater inflow.

The District supports and cooperates with state and local entities to protect the economic and ecological viability of the Apalachicola River and Bay, or Florida’s portion of the Apalachicola-Chattahoochee-Flint (ACF) River Basin. Nearly 90 percent of the ACF watershed is outside the State of Florida. Out-of-state water use and extreme low river flow conditions have impacted fisheries and habitats, creating economic and ecological harm. Still, the District continues proactive efforts to protect ACF waters within NFWFMD. Implementation criteria, priorities, and activities are summarized below.

Apalachicola-Chattahoochee-Flint River Basin Criteria

Success Indicators:	(1) Project accomplishment (percent complete) (2) Area restored or treated (acres) (3) Pollutant load reduction (pounds per year)
Funding Sources:	(1) State Legislative Appropriations (2) Natural Resources Damages Act Restoration Program (3) Land Acquisition Trust Fund (4) General Fund Reserves
Milestones:	(1) Completion of Apalachicola Bay water quality projects (2019-2021) (2) Continued participation in supporting state ACF Basin issues (2019-2024)
Deliverables:	(1) Project completion reports

Water Quality Improvement Projects

- Jackson County agricultural programs and projects, and septic-to-sewer retrofit projects, to restore and protect Jackson Blue Spring in the Jackson County portion of the ACF river basin. See *Springs Restoration and Protection* strategic priority for further detail.
- Apalachicola Bay Water Quality Improvement
 - City of Carrabelle Lighthouse Estates – Septic-to-sewer retrofit projects that remove onsite sewage treatment and disposal systems to help reduce nutrients and other nonpoint source pollution from flowing to St. George Sound.
 - City Apalachicola Stormwater Retrofit Project – Low-impact design practices and other infrastructure improvements to improve the quality of waters entering the bay.

Technical Assistance and Intergovernmental Cooperation

The District continues technical assistance to the Governor and DEP in the ongoing legal case between the states of Florida and Georgia over interstate freshwater allocation in the ACF river basin. The District also continues intergovernmental cooperation with the Governor’s Office; with state agencies such as DACS, DEP, and the Florida Fish and Wildlife Conservation Commission (FWC); and with local governments to plan and coordinate on projects that will improve water quality discharges to Apalachicola Bay.

Supporting Initiatives

- Water Quality and Flow Monitoring – To monitor water quality and measure spring flow to ensure the health of the ACF River Basin resources.
- Water Use Permitting – Regulation of ground and surface waters is a tool for preventing impacts to spring systems, rivers, lakes, wetlands, water supplies, and other water systems. Reservations of water have been established by rule for the Apalachicola and Chipola rivers.

Water Supply

Goal: Plan and facilitate sustainable water supplies for future reasonable and beneficial uses.

The water supply strategic priority is carried out through coordinated efforts in data collection and analyses, resource planning, regulatory services, and in water supply and water resource development. Implementation criteria, priorities, and activities are summarized below.

Water Supply Criteria

Success Indicators:	(1) Water supply made available (volume [mgd] and trend) (2) Public supply water demands met (volume in Million Gallons per Day [mgd] and percentage) (3) Public supply uniform per capita water use (Gallons Per Capita Per Day [gpcd] and trend) (4) Project accomplishment (volume [mgd] and trend)
Funding Sources:	(1) General Fund Reserves (2) Water Protection and Sustainability Program Trust Fund (3) State Legislative Appropriations
Milestones:	(1) Completion of local government water supply development grant projects (2021) (2) Completion of North Bay Wastewater Reuse project (2020-2021) (3) Region II RWSP Update (2019)
Deliverables:	(1) Water use data (2) Districtwide water supply assessment updates (3) RWSP updates (4) Project completion reports

Planning and Analyses

- Water Use Data – Collecting, analyzing, and reporting on water use data for water supply assessments, regional water supply planning, MFL technical assessments, and for agencies such as DEP, DACS, the Office of Economic and Demographic Research (EDR), and USGS.
- Districtwide Water Supply Assessment – A Districtwide evaluation of existing and future water demands, and an assessment of the sustainability and sufficiency of water supply sources. Water supply assessments are updated on a five-year basis and provide the technical data and analytical tools for regional water supply planning (RWSP).
- Regional Water Supply Planning – Where existing sources of water are not adequate, RWSPs develop plans and projects in cooperation with local and regional stakeholders to meet water supply needs and to sustain water resources and related natural systems over a 20-year planning period. The Region II (Santa Rosa, Okaloosa, and Walton counties) RWSP update is in progress.

Water Supply and Water Resource Development

- Water Resource Development – Regional-scale projects that support the availability of water supplies to meet long-term water supply needs and the needs of natural systems. Examples include planning for water reuse and conservation, data collection, source modeling and evaluation, and development and refinement of western and eastern groundwater flow models.
- Water Supply Development Grant Program – Water projects assisting local governments and utilities replace aging infrastructure, improve distribution systems, evaluate and develop alternative water supply projects, and address local drinking water quality issues. Funds were fully allocated in November 2016 and no future grant cycles are planned.

- Alternative Water Supply Development
 - North Bay Wastewater Reuse – A major collaborative wastewater reuse project with Bay County and Gulf Power Company to use reclaimed water in cooling processes.
 - Emerald Coast Utilities Authority (ECUA) Pensacola Beach Reclaimed Water System Expansion – A project to increase reuse capacity and distribution infrastructure on Santa Rosa Island in Escambia County.

Regulatory Services

- Water Use Permitting Program – To review, issue, renew, and enforce ground and surface water use permits that allow for reasonable-beneficial uses of water while protecting existing users and the long-term viability of the resource.
- Well Regulation Program – To review, issue, and enforce well permits and water well contractor licensing. Activities covered are well construction, repair, and abandonment. This program protects public health and resource sustainability, while also serving the regulated community.

Watershed Restoration and Protection

Goal: Restore and protect watershed resources and functions.

Healthy functioning watersheds help protect water quality, natural systems, and are vital for flood protection and floodplain management. Strategies include springs and streambank restoration and protection, wetland mitigation, environmental resource permitting, land management, and stormwater and site improvements. Implementation criteria, priorities, and activities are summarized below.

Watershed Restoration and Protection Criteria

Success Indicators:	(1) Balance of released mitigation credits (2) Cooperative project implementation (percent complete) (3) Area restored (acres)
Funding sources:	(1) State Legislative Appropriations (2) General Fund Reserves (3) FDOT Mitigation Funding (4) RESTORE Act and settlement funds
Milestones:	(1) Completion of streambank restoration projects (2019-2020) (2) Completion of Gulf of Mexico restoration projects (2020-2021)
Deliverables:	(1) Annual Regional Wetland Mitigation Plan and Mitigation Monitoring Reports (2) Project completion reports

Watershed Programs and Projects

- Gulf of Mexico Restoration – The District continues to work in cooperation with DEP, the Florida Fish and Wildlife Conservation Commission (FWC), and other stakeholders in Gulf of Mexico restoration. These activities help to implement the federal RESTORE Act and to effectively use civil penalty funding from settlements and the Natural Resources Damages Assessment (NRDA) process to mitigate damages incurred from the 2010 Deepwater Horizon oil spill.
- Port St. Joe Stormwater – The City of Port St. Joe will retrofit stormwater facilities within the 280-acre Forest Park basin, improve the quality of water discharging to Patton Bayou and St. Joseph Bay, improve flood protection, and develop a stormwater master plan for the city.

- Seven Runs Streambank Restoration – The District continues a restoration and protection project which will be completed at Seven Runs within the Choctawhatchee River Water Management Area (WMA). The project will create a natural vegetative retaining wall, stormwater improvements, and public access enhancements.
- Weems Pond – To improve flood protection and water quality in the St. Marks River watershed.
- Surface Water Improvement and Management (SWIM) Program – A long-term program to restore and protect watershed resources, SWIM provides a framework for watershed and project planning. The SWIM priority list includes all seven of the major riverine-estuarine watersheds of northwest Florida and includes all waterbodies, tributaries, estuaries, springs, wetlands, and contributing basins within each watershed. Updates to SWIM plans are every five years or as needed, with the most recent updates completed in 2017.
- Spring Restoration and Protection – Spring restoration and protection are essential for watershed management. See *Springs Restoration and Protection* strategic priority for further detail.
- Apalachicola River and Bay – Intergovernmental cooperation, technical assistance, water quality improvement projects, and supporting initiatives to restore and protect the Apalachicola River watershed. See *Apalachicola-Chattahoochee-Flint River Basin* strategic priority for further detail.

Land Acquisition and Management

- Land Acquisition – The District has acquired 224,227 acres of land for the protection of water quality, flood protection and floodplain management, natural systems, and water supply; and for public access and recreation. Future acquisition plans are noted in the *Springs Restoration and Protection* strategic priority.
- Restoration and Lands Management – Ongoing activities include prescribed burns, planting longleaf pine seedlings, erosion control, improving site access, and managing and maintaining more than 80 public recreation sites and more than 75 miles of public access roads.
- Perdido River Paddling Trail Project – The District will construct improvements at five recreation sites within the Perdido River WMA. Improvements consist of construction of camping shelters; road work; bank protection; and installation of ramps, composting toilets, signs, and campsite amenities. This work will complement comparable projects to be completed on other lands along the Perdido River owned by Escambia County and The Nature Conservancy.

Supporting Initiatives

- Environmental Resource Permitting (ERP) – The ERP program integrates stormwater management and treatment and wetland permitting. Implementation of the program improves and protects multiple watershed and wetland functions including water quality, fish and wildlife habitat, flood protection, shoreline stability, and aquifer recharge.
- Wetland Mitigation – In accordance with section 373.4137, F.S., the District assists the Florida Department of Transportation (FDOT) in developing wetland mitigation for transportation infrastructure development in areas not covered by private mitigation banks or where private mitigation banks are unable to provide appropriate credits. In the process, wetland resources and functions are protected and restored on a larger watershed scale. Activities include an In-Lieu Fee Program, the Sand Hill Lakes Mitigation Bank, and various individually permitted projects. Mitigation is supported by Land Acquisition and Management, ERP, and the SWIM Program.
- Data Collection and Analysis – To evaluate freshwater inflows from the Intercoastal Waterway and the Gulf County Canal that may be affecting St. Joseph Bay.

Flood Protection and Floodplain Management

Goal: Maintain natural floodplain functions and minimize harm from flooding.

Flood protection and floodplain management are facilitated by healthy functioning watersheds, addressed in the previous strategic priority. Additional strategies include flood hazard mapping, land acquisition and management, environmental resource permitting, and wetland mitigation. Implementation criteria, priorities, and activities are summarized below.

Flood Protection and Floodplain Management Criteria

Success Indicators:	(1) Area of floodplain protected through land acquisition (acres) (2) Percent of the District with updated DFIRMs meeting FEMA standards and criteria
Funding Sources:	(1) Federal Emergency Management Agency (2) State Legislative Appropriations (3) General Fund Reserves (4) FDOT Mitigation Funding
Milestones:	(1) Preliminary DFIRM for Bay County (2019) (2) DFIRM completion incorporating coastal remapping studies for Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties (2019-2020)
Deliverables:	(1) Risk MAP regulatory and non-regulatory products according to discovery report for each HUC 8 watershed within the District (2) Florida Forever Work Plan Annual Report

Flood Protection Programs and Projects

- Flood Hazard Mapping, Assessment and Planning – The District continues to work in cooperation with the Federal Emergency Management Agency (FEMA) on flood map modernization in the Risk Mapping, Assessment, and Planning (Risk MAP) program. This effort includes collaboration with state and local agencies to deliver quality data and digital flood insurance rate maps (DFIRMs) to increase public awareness of and support for actions that reduce flood-related risks.
 - Final effective DFIRMs and preliminary DFIRMs issued according to planned milestones.
 - Risk MAP evaluations are ongoing for the Lower Ochlockonee River, Apalachicola River, New River, Chipola River, Pensacola Bay, Perdido River, Perdido Bay, Apalachee Bay – St. Marks River, Pea River, and the Lower Choctawatchee watersheds.
 - Risk MAP evaluations are in the planning stage for the St. Andrew – St. Joseph Bay, Choctawatchee Bay, and Escambia watersheds.
- Flood and Floodplain Data – The District maintains an on-line Flood Information Portal and provides technical expertise and public access to high-resolution Light Detection and Ranging (LiDAR) elevation data and maps.
- Land Acquisition and Management – District lands include extensive floodplains along the Apalachicola, Choctawatchee, Escambia, Yellow, Perdido, Blackwater and other rivers and major streams. Tidal wetlands are also protected on the Pensacola, Perdido, and Choctawatchee estuaries. These lands maintain floodplain functions and protect natural systems, water quality, property, and public safety, as well as provide public access and recreation. Substantial upland acreage owned by the District provides protective buffers.

Supporting Initiatives

- Forest Restoration Acquisition Area (FRAA) – A new conservation easement acquisition program established following Hurricane Michael in 2018. The goal of FRAA is to restore and protect flood protection and water quantity in hurricane impact areas by acquiring conservation easements and encouraging silviculture and agricultural BMPs. If funded, the FRAA program is also expected to improve water quality through nutrient reduction and help restore the rural economy.
- Environmental Resource Permitting – Among the important functions of the ERP program, as described above, is floodplain resource protection and thus protection of property and residents from potential flood damage through the regulation and management of surface water. Also included in ERP is permitting for dam design, construction, and maintenance.
- Regional Wetland Mitigation – Floodplain functions are protected on a watershed scale through implementation of the District’s regional wetland mitigation program for FDOT.
- Data Collection and Monitoring Network – Discharge measurements and rainfall monitoring provide critical data for flood protection and floodplain management. See *Minimum Flows and Minimum Water Levels* strategic priority for further detail.

3. Implementation

Table 3 is an overview of how each strategic priority is applicable to the District’s Areas of Responsibility and the major implementation activities. Note that activities may occur in, and benefit, multiple strategic priorities, and that different strategic priorities are needed to accomplish all areas of responsibility.

Table 3. Strategic Priorities Matrix

Strategic Priority and Goal	Areas of Responsibility				Major Implementation Activities
	Water Supply	Water Quality	Flood and Floodplain	Natural Systems	
Springs Restoration and Protection <i>Restore and protect water quality and flows within the major spring systems of northwest Florida.</i>	✓	✓		✓	Agricultural BMPs, grass-based crop rotation, and MILs; septic-to-sewer and stormwater retrofit projects; streambank restoration and protection; land management and acquisition; hydrologic data collection; water use permitting; MFL development.
Minimum Flows and Minimum Water Levels (MFLs) <i>Develop and implement science-based MFLs that protect water resources and associated natural systems.</i>	✓	✓		✓	Data collection, groundwater and surface water modeling, technical assessments, and rule making.
Apalachicola-Chattahoochee-Flint River Basin <i>Protect Apalachicola River and Bay water quality and freshwater inflow.</i>	✓	✓		✓	Agricultural BMPs, grass-based crop rotation, and MILs; water quality improvement projects; technical assistance and intergovernmental cooperation; hydrologic data collection; water use permitting.
Water Supply <i>Plan and facilitate sustainable water supplies for future reasonable and beneficial uses.</i>	✓	✓			Water use data, water supply assessments, regional water supply planning; consumptive water use and well permitting; regional water resource development; water supply development grant projects.
Watershed Restoration and Protection <i>Restore and protect watershed resources and functions.</i>	✓	✓	✓	✓	Springs and streambank restoration and protection, wetland mitigation, environmental resource permitting, land management, stormwater retrofits, and recreational site improvements;
Flood Protection and Floodplain Management <i>Maintain natural floodplain functions and minimize harm from flooding.</i>			✓	✓	Flood hazard mapping, DFIRM updates, land acquisition and management, environmental resource permitting, wetland mitigation.

Table 4 below summarizes the anticipated five-year activity schedule of projects and programs.

Ongoing district activities not noted in the table include: hydrologic data collection and monitoring, water use estimate and projections, land acquisition and management, regional wetland mitigation, environmental resource permitting, consumptive water use permitting, and wells permitting.

Table 4. Anticipated Schedule of Projects and Programs

	FY 19-20	FY 20-21	FY 21-22	FY 22-23	FY 23-24
Agricultural Programs and Projects					
Agricultural BMPs	→				Complete
Grass-Based Crop Rotation	→				Complete
Mobile Irrigation Lab (MIL) Program	→				
Springs Restoration and Protection Projects					
<i>Jackson Blue Spring</i>					
Indian Springs Sewer Extension Phs. I-2A	→		Complete		
Blue Springs Road Sewer	Complete				
Jackson Blue Spring Recreation Area	→		Complete		
<i>Wakulla Spring</i>					
Magnolia Gardens and Wakulla Gardens Phases I-II	Complete				
Magnolia Gardens Phase III	→				Complete
Septic-to-Sewer in Wakulla BMAP Area	→		Complete		
<i>Econfina Creek Springs</i>					
Econfina Blue Spring Camp	Complete				
Devils Hole Spring	Complete				
<i>Other Springs Projects</i>					
Cypress Spring Restoration	→				Complete
Horn Spring in Leon County	→		Complete		
Land Acquisition for Springs Protection	→				Complete
Water Supply Development Projects					
<i>Alternative Water Supply Development</i>					
North Bay Wastewater Reuse	→		Complete		
ECUA Reclaimed Water Expansion	→		Complete		
<i>Other Water Supply Development</i>					
WSD Grant Program Assistance	→		Complete		
Watershed and Flood Protection Projects					
Port St. Joe Stormwater	→				Complete
Seven Runs Streambank Restoration	Complete				
Weems Pond	→		Complete		
Perdido River Paddling Trail	→			Complete	
<i>Apalachicola Bay Water Quality Improvements</i>					
Carrabelle Lighthouse Estates Phase I&II	→				Complete
Apalachicola Stormwater Retrofits	→		Complete		
Technical Programs					
<i>Modeling, Planning, Assessments</i>					
Ground and Surface Water Modeling	→				
St. Joseph Bay Assessment	→				
Water Supply Assessments (WSAs)			WSA 2023	→	
Regional Water Supply Planning	Reg-II Complete			Updated RWSPs as needed	
SWIM Program Planning			Assess need for updated SWIM Plans		
Region II Water Resource Development	→				
<i>MFL Technical Assessments</i>					
Wakulla Spring & Sally Ward Spring	→		Complete		
Region II Coastal Floridan Aquifer	→		Complete		
Jackson Blue Spring	→				Complete
Shoal River System	→				Complete
Other Priority Waterbodies	→				
<i>Flood Protection</i>					
Flood Hazard Mapping and Assessments	→				
Updated DFIRMs	Five Counties Complete		→ Additional Counties in Progress		

4. Monitoring and Reporting

As required by section 373.036, F.S., a strategic water management plan includes an annual work plan report on the implementation of the strategic plan for the previous fiscal year. This annual report details activities and accomplishments, evaluation of indicators, milestones and deliverables; and project costs and timelines to complete. The Consolidated Annual Report (CAR) due by March 1st of each year incorporates this SWMP work plan report and includes other statutorily-required reporting as noted in Table 5. The CAR is submitted to the Governor, Senate President and Speaker of the House, and to DEP for review and monitoring purposes. Table 5 also summarizes the District’s operational plans and reports which are available online at: <https://nwfwater.com/Data-Publications/Reports-Plans>.

Table 5. Summary of NFWFMD Operational Plans and Reports

Resource and Asset Management	<ul style="list-style-type: none"> • Consolidated Annual Report (CAR): <ol style="list-style-type: none"> 1. SWMP Annual Work Plan Report 2. Minimum Flows and Minimum Water Levels (MFLs) Priority List and Schedule 3. Annual Five-Year Capital Improvements Plan 4. Alternative Water Supplies Annual Report 5. Five-Year Water Resource Development Work Program (WRDWP) 6. Florida Forever Work Plan Annual Report 7. Mitigation Donation Annual Report 8. Water Projects in Five-Year WRDWP 9. Surface Water Improvement and Management (SWIM) Program Annual Report • FEMA Risk Map and Map Modernization Business Plan • In-Lieu Fee Instrument Annual Program Report (USACE) • Annual Reports on: Wetlands, Sand Hill Lakes Mitigation Bank Monitoring, Agency Reuse, Umbrella Watershed-Based Regional Mitigation Plan; and Habitat Impacts, Preservation, and Restoration • Every five years: Districtwide water supply assessments • Every five years: applicable regional water supply plans • Every five years or as needed: SWIM plans
Budget and Supporting	<ul style="list-style-type: none"> • Preliminary, Tentative, and Final Annual Budgets • Financial Audits and Audit Reports • Continuity of Operations Plan (COOP) Annual Update • Annual Regulatory Plan

In addition, each of the state’s water management districts completes and submits monitoring data and reports to Florida’s DEP, including:

- Annual and quarterly metrics on permitting process efficiencies, water supply and natural systems, and mission support (Table 6, below).
- Regional Water Supply Planning Annual Report.
- Florida Statewide Annual Report (STAR) on Total Maximum Daily Loads (TMDLs), Basin Management Action Plans, (BMAPs), Minimum Flows or Minimum Water Levels (MFLs), and Recovery or Prevention Strategies.

Table 6. Statewide Water Management District Performance Metrics

Permitting
For closed applications within the CUP and ERP permitting areas, median time to process by permit type and total
For closed applications within the CUP and ERP permitting areas, the median time in house by permit type and total, including those applications under legal challenge
Within the CUP and ERP permitting areas, percentage of individually-processed open applications with greater than two Requests for Information (RAIs)
Within the CUP and ERP permitting areas, average number of RAIs for individually processed applications that closed in the last twelve months
Within the CUP and ERP permitting areas, percentage of individually processed open applications that have been in-house six months or longer
Within the CUP and ERP permitting areas, cost to process for all permit types
Within the CUP and ERP permitting areas, application to staff ratio for all permit types
Number of Closed Applications (CUP only)
Permit Process Time for Legislative Extensions and Emergency Orders (ERP only)
Cost to Process Legislative Extensions and Emergency Orders (ERP only)
Mission Support
Administrative costs as a percentage of total expenditures
Water Supply
District-wide, the quantity [mgd] and percentage of the 2010-2030 Public Supply increase in demand that has been met separately by non-water conservation projects, and by water conservation (only) projects
Uniform gross per capita water use (Public Supply) by District
Uniform residential per capita water use (Public Supply) by District
Natural Systems
Number of MFLs and Reservations, by waterbody type, established annually (fiscal year) and cumulatively
Number and percentage of water bodies meeting their adopted MFLs
For water bodies not meeting their adopted MFLs, the number and percentage of those water bodies with an adopted recovery or prevention strategy
MFL Priorities List table