

Northwest Florida Water Management District

Strategic Water Management Plan

September 2021

Publication Number: PDS 21-01



Pitt Spring

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT

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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 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 2021 SWMP is from Fiscal Year (FY) 2021-22 to 2025-26.

About the Northwest Florida Water Management District

The NFWFMD is one of Florida’s five water management districts established by the Florida Water Resources Act of 1972 and Chapter 373, Florida Statutes (F.S.) to protect and manage the water resources in a sustainable manner that benefits both the people and natural resources across its 16-county region. 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 approving operating budgets. The District collaborates with state and federal agencies, local governments, water and wastewater utilities, non-governmental organizations, and other stakeholders to accomplish its mission and statutory areas of responsibility.

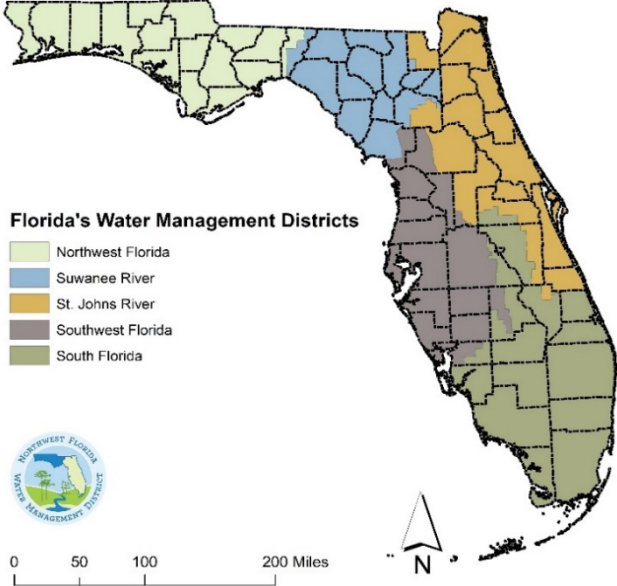


Figure 1. Florida’s Water Management Districts

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	Ensure 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 span the District, six of which extend into Alabama and Georgia. 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 three Outstanding Florida Springs: Wakulla Spring, Jackson Blue Spring, and Gainer Spring Group.

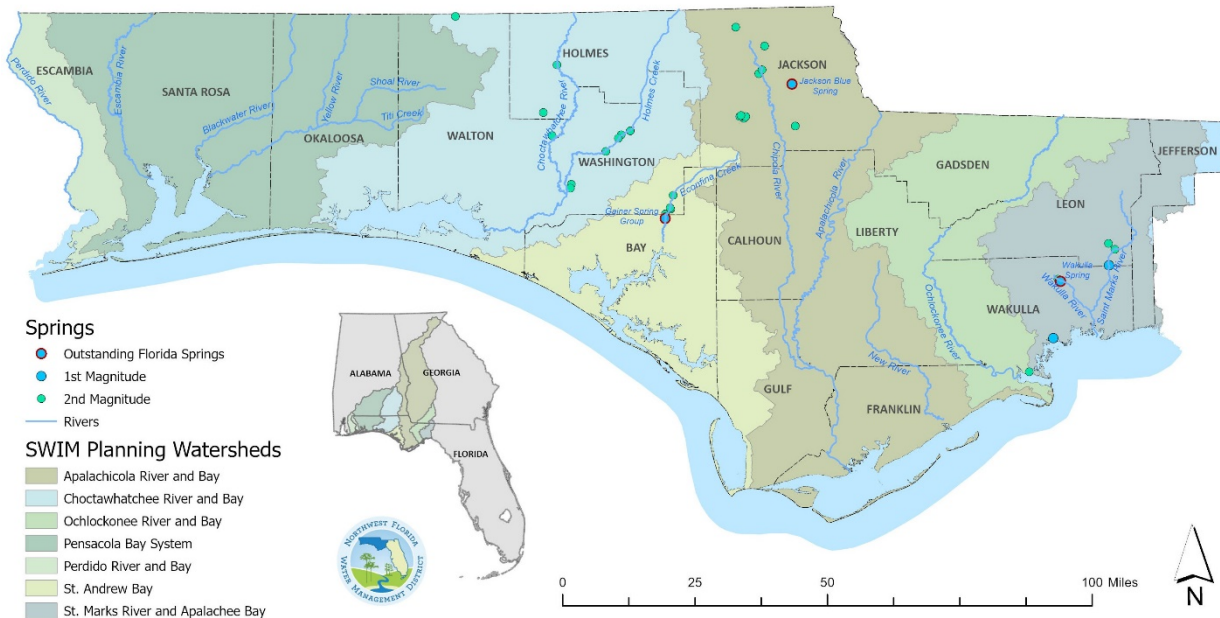


Figure 2. Northwest Florida Watersheds, Rivers, and Springs

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 primarily 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 April 2020, there were an estimated 1.49 million permanent residents in northwest Florida, with the majority of the population concentrated within Bay, Escambia, Leon, Okaloosa, and Santa Rosa counties. The 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 19 percent increase over the 2020 population.¹

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 within each of the District’s four divisions: Asset Management, Resource Management, Regulatory Services, and Administration. Each division has program responsibilities and operational plans that report on these programs and are further described

¹ BEBR, 2021. University of Florida, Bureau of Economic and Business Research (BEBR), Florida Population Studies.

in Section 4. The District’s supporting regulatory framework, including relevant statutes and adopted rules, is online and updated as needed (<https://www.nfwwater.com/Permits/Rules-and-References>).

Strengths, Opportunities, and Challenges

Successfully implementing a strategic plan requires an 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"> • Partnerships 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, efficiency, and a 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 • Expanded hydrologic and water quality data collection program
Opportunities	<ul style="list-style-type: none"> • Potential to acquire floodplain and recharge areas to protect springs, surface waters, and groundwater resources • Additional springs and other sensitive resource protection projects • Potential to enhance water conservation and continued development of alternative water supply sources • Funding resources to restore and protect the Gulf of Mexico and related natural resources, and other funding to match and extend existing funds • Potential for significant new state and federal resiliency funding to assist the District and regional partners across all AORs • Potential to identify and acquire new technology, data sources, and analytical methods • Significant State and Federal resiliency funding may contribute resources applicable across all areas of responsibilities.
Challenges	<ul style="list-style-type: none"> • Excessive out-of-state water withdrawals leading to decreased flows, increased coastal salinity, and associated impacts to estuarine ecosystems • Long-term saltwater intrusion in aquifers serving some 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 • Uncertainty regarding future climate conditions and sea level rise • Nonpoint source pollution • Gaps in hydrologic, water quality, and water use data • 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 and statutory millage rate cap for NFWFMD is 0.05, significantly less than the ad valorem taxing authority afforded to the other four water management districts. The District's FY 2021-2022 ad valorem tax millage rate, as set by the Governing Board, is 0.0294. To meet its areas of responsibility, the District must rely on other sources of funding, when available. These include:

- State legislative appropriations – For state priorities that include, for example:
 - Water quality enhancement projects including spring restoration and protection, wastewater, and innovative technology grants
 - Resiliency and adaptation to sea level rise and flooding
 - Water supply and alternative water supply development
 - Minimum flows and minimum water levels (MFL) program
 - Management of District-owned lands
 - Environmental Resource Permitting (ERP) program
 - The Apalachicola River and Bay System
 - Special appropriations for District hurricane recovery activities
 - Surface Water Improvement and Management (SWIM) program
 - Research, data collection, and programmatic operations
- Other state funding, for example:
 - Florida Department of Transportation (FDOT) Mitigation Funds – For regional wetland mitigation, including functional wetland restoration and protection
 - 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 alternative water supply development and associated water resource development
 - Resilient Florida Trust Fund – For planning, projects, and scientific research to improve resilience to the impacts of flooding and sea level rise.
- 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
- U.S. Environmental Protection Agency (EPA) – For nonpoint source and agricultural best management practices projects
- 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
- Fund Balance reserves – For regulatory services, mitigation, MFLs, water supply development, land management, Economic Stabilization Fund, and other District needs.

2. Strategic Priorities

The District's strategic priorities and the goal of each priority for fiscal years 2022-2026 are consistent with the District's mission, areas of responsibility (AORs), and AOR goals.

Strategic Priorities for Fiscal Years 2022-2026

- ◆ **Water Quality:** *Protect and restore water quality across northwest Florida, with emphasis on springs, the health and productivity of coastal and inland waterbodies, cooperative projects, water quality and flows for the Apalachicola River and Bay, and integrated efforts to protect watershed functions and long-term resiliency.*
 - ◆ **Minimum Flows and Minimum Water Levels:** *Develop and implement science-based MFLs that protect water resources and associated natural systems.*
 - ◆ **Water Supply:** *Plan and facilitate sustainable water supplies for future reasonable and beneficial uses, with emphasis on development of alternative water supply sources, including reclaimed water, water conservation, and integrated projects contributing to water quality and resiliency.*
 - ◆ **Flood Protection and Floodplain Management:** *Maintain natural floodplain functions and minimize harm from flooding, with emphasis on long-term resilience for coastal and inland communities.*
 - ◆ **Watershed Protection and Restoration:** *Protect and restore watershed resources and functions, with emphasis on water quality; wetland, riparian, and aquatic habitats; and compatible public access.*
-

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

Water Quality

Goal: Protect and restore water quality across northwest Florida, with emphasis on springs, the health and productivity of coastal and inland waterbodies, cooperative projects, and water quality and flows for the Apalachicola River and Bay. Additional emphasis on integrated efforts to protect watershed functions and long-term resiliency.

Protecting and, where necessary, restoring water quality are essential for ensuring the health and productivity of waterbodies and watersheds, as well as the many public benefits provided by northwest Florida’s water resources. Efforts focused on water quality are integrated with broad-based efforts to protect and restore watershed resources, including floodplains, wetlands, and aquatic and riparian habitats. The District is focused on working with public and private stakeholders to develop and implement cooperative projects that protect and restore water quality and associated resources, habitats, and public benefits. The District supports and implements stormwater retrofit, septic-to-sewer, and other water quality improvement projects, as well as spring and streambank restoration, wetland mitigation, environmental resource permitting, land management, and hydrologic data services. Implementation criteria, priorities, and activities are summarized below.

Water Quality Criteria

Success Indicators:	<ol style="list-style-type: none">(1) Project accomplishment (percent complete)(2) Area restored (acres)(3) Pollutant load reduction (pounds per year)(4) Trends in nitrate concentrations(5) Trends in spring flows(6) Established minimum flows for Outstanding Florida Springs and other priority springs
Funding sources:	<ol style="list-style-type: none">(1) State Legislative Appropriations(2) General Fund Reserves(3) Land Acquisition Trust Fund(4) FDOT Mitigation Funding(5) RESTORE Act and settlement funds(6) Natural Resources Damages Act (NRDA) Restoration Program
Milestones:	<ol style="list-style-type: none">(1) Lake Munson Harmful Algal Bloom Demonstration (2022)(2) Farmer to Farmer Algae Abatement Demonstration (2023)(3) City of Tallahassee Septic Connections within Wakulla BMAP (2022)(4) St. Joseph Bay Assessment (2022+)(5) City of Apalachicola Stormwater Retrofit (2023)(6) Lighthouse Estates Septic to Sewer, Phases 1 and 2 (2023)(7) Port St. Joe Stormwater Improvements (2024)(8) Magnolia Gardens and Wakulla Gardens Septic to Sewer Projects Phase III (2023)(9) Advanced Septic Systems Pilot Project (2023)(10) Blue Spring Road, Indian Springs, and Tara Estates Sewer Extensions (2023)(11) Implementation of best management practices (BMPs) and Mobile Irrigation Lab evaluations for agricultural producers in the Jackson Blue Spring basin (Continuing)(12) Establishment of minimum flows (Schedule under MFLs)
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

Water Quality Programs and Projects

- Surface Water Improvement and Management (SWIM) Program – The SWIM program provides a framework for watershed and project planning. SWIM plans have been completed for all of the District’s major riverine-estuarine watersheds, to include strategies and projects to protect and improve water quality and watershed resources, functions, and benefits. In support of the SWIM plans, the District coordinates with public and nonprofit stakeholders, as well as members of the public. Among regional partners are estuary programs, modeled on the U.S. EPA’s nonregulatory [National Estuary Program](#), that have recently been established for Pensacola and Perdido bays, Choctawhatchee Bay, and St. Andrew Bay and St. Joseph bays.
- Spring Protection and Restoration – The District will continue to work in cooperation with the Florida Department of Environmental Protection (DEP) and local governments and stakeholders to identify and implement priority projects to protect and improve the District’s major spring systems. Additional information is provided below.
- Apalachicola Stormwater Retrofit – The City of Apalachicola has constructed a pervious pavement system and will annually implement maintenance procedures and standards.
- Lighthouse Estates Septic to Sewer – The City of Carrabelle will design and connect approximately 163 residences to central sewer in the Lighthouse Estates Community proximate to Carrabelle Beach and St. George Sound.
- Assessment of St. Joseph Bay, East Bay, the Intracoastal Waterway, and Lake Wimico – The District will continue data collection and analysis to evaluate freshwater flows and water quality from the Intracoastal Waterway and Gulf County Canal that flow into St. Joseph Bay, and to develop management recommendations. The project also includes evaluation of flows interacting with Lake Wimico and East Bay of St. Andrew Bay.
- Port St. Joe Stormwater Improvements – The City of Port St. Joe will retrofit stormwater facilities to improve the quality of water discharging to St. Joseph Bay and improve flood protection. As part of this effort, the city developed a stormwater master plan.
- Lake Munson Harmful Algal Bloom Demonstration – With funding provided through a State Innovative Technology grant, the District has employed a mobile algae harvesting unit at Lake Munson. The unit uses dissolved air flotation technology to extract blue-green and other algae and remove it, intact with nutrients and potentially algal toxins, from the lake.
- Farmer to Farmer Algae Abatement Demonstration – With funding provided by the U.S. EPA, the District will work in cooperation with the University of Florida (UF) and a participating agricultural producer in Gadsden County to demonstrate how nutrients discharged from agricultural operations can be captured and reused on-site by employing a dissolved air flotation system to harvest intact cellular algae and reuse nutrient-rich algae biomass from surface runoff.
- 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.
- Lake Jackson – The District will continue to work in collaboration with DEP, and local stakeholders to identify further opportunities to address nonpoint source pollution in the Lake Jackson watershed.

- Apalachicola River and Bay – The District will continue intergovernmental and stakeholder cooperation, technical assistance, water quality improvement projects, and supporting initiatives to restore and protect the Apalachicola River watershed.
- Hydrologic Data Services – Data collection and management, to include stage, precipitation, flow and water quality data, are implemented in an integrated manner to serve multiple areas of responsibility and strategic priorities and programs, including MFLs and springs protection. Major objectives include continuing to enhance efficiencies 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.
- Water Use Permitting – Regulation of ground and surface waters is a tool for preventing impacts to spring systems, rivers, lakes, wetlands, and ground and surface water resources. Reservations of water have been established by rule for the Apalachicola and Chipola rivers.
- Environmental Resource Permitting (ERP) – The ERP program reviews, issues, and enforces permits allowing activities in, on, or over wetlands and surface waters, and integrates stormwater management and wetland protection therein. Implementation of the program improves and protects multiple watershed and wetland functions including the preservation of water quality, fish and wildlife habitat, flood protection, shoreline stability, and aquifer recharge.

Springs Programs and Projects

Springs programs and projects have multiple benefits that include water quality improvements, habitat restoration, public access enhancements, water conservation, and floodplain management. Projects that restore and protect water quality are instrumental in the implementation of Basin Management Action Plans (BMAPs) for Jackson Blue Spring and Wakulla Spring.

Jackson Blue Spring

A major District initiative is to improve irrigation efficiency, 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
 - Precision Agriculture Strategies and Systems (PASS) – A cost-share program implemented in cooperation with the Florida Department of Agriculture and Consumer Services (FDACS), DEP, and the Jackson Soil and Water Conservation District. PASS helps producers in the Jackson Blue Spring basin integrate practices into farming operations to conserve water and improve water quality without compromising production yields. With available funding, this program was expanded to producers throughout the greater Chipola groundwater contribution area.
 - Sod-Based Crop Rotation – A cost-share program to provide grants to producers in the Jackson Blue Spring basin to implement sod-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 sod-based crop rotation practices.
 - Mobile Irrigation Laboratory (MIL) – A cooperative funding effort with the Jackson Soil and Water Conservation District, FDACS, 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 practices to improve water use efficiencies and reduce nutrient loading.

- Septic-to-Sewer Retrofit Projects
 - Indian Springs Sewer Extension (multiple phases) – 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.
 - Tara Estates Sewer Project – To extend central sewer to the Tara Estates neighborhood proximate to the Chipola River.

Wakulla Spring

Septic-to-sewer retrofit and advanced septic projects in Wakulla and Leon counties to improve water quality and benefit Wakulla Spring.

- Magnolia Gardens and Wakulla Gardens Sewer System Expansions (multiple phases) – For septic-to-sewer connection of homes on septic systems to the Wakulla County Advanced Wastewater Treatment (AWT) plant 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.
- Advanced Septic Systems Pilot Project – Design and install individual advanced septic system upgrades in low-density areas not serviced by central sewer within the Wakulla Spring Priority Focus Areas in Leon County.

Econfina Creek Springs

Spring shoreline restoration and related improvements to Econfina Creek and associated spring systems, the primary water source for Deer Point Lake Reservoir and potable supply for Bay County.

- Econfina Blue Spring Camp – Spring shoreline restoration and protection, stormwater facilities, and public access improvements including landscaping, irrigation, signage, and picnic shelters for a second magnitude MFL priority spring.
- Enhanced Monitoring – Increased discharge monitoring for Gainer Spring Group, an Outstanding Florida Spring (OFS), and Sylvan and Williford Spring groups, located on Econfina Creek.

Other Springs

- Cypress Spring – Purchase of a conservation easement, shoreline stabilization, and public access improvements for a second magnitude spring in Washington County. The District partnered with the FAMU-FSU College of Engineering to design the project.
- Horn Spring Restoration – Streambank restoration and public access improvements to a second magnitude spring in Leon County, in partnership with DEP.

In addition to the projects described above, the District acquired 2,874 acres, in both fee-simple and less-than-fee, protective of Wakulla Spring, Jackson Blue Spring, and Cypress Spring, as well as springs along Econfina Creek and the Chipola River. The District will continue to identify additional acquisition opportunities to protect and restore priority springs.

Additional projects are planned as a continuation of annual grant funds received beginning in FY 2014-2015. A new grant funding cycle opened in December 2020, funding requests were approved by the District’s Governing Board in April 2021, and final DEP award determination is anticipated by the end of FY 2020-21. All springs funding is subject to annual state appropriations.

Minimum Flows and Minimum Water Levels

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

The District's Minimum Flows and Minimum Water Levels (MFL) 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) Technical Assessment for Wakulla Spring and Sally Ward Spring (2021) (2) Technical Assessment for Coastal Floridan aquifer in Region II (2021) (3) Technical Assessments for Jackson Blue Spring and the Gainer, Sylvan, and Williford Spring Groups (2024)
Deliverables:	(1) Complete MFL technical assessments and rule adoption according to the approved MFL Priority List and Schedule

MFL Technical Assessments

- The technical assessment for Wakulla Spring, a first magnitude Outstanding Florida Spring (OFS), and Sally Ward Spring has been completed, and the rule establishing the MFL was adopted and effective May 2021.
- The technical assessment for St. Marks River Rise was completed in 2019. The rule establishing the corresponding MFL was adopted and effective June 2019.
- Additional technical assessments in progress include:
 - Coastal Floridan Aquifer in Region II (Walton, Okaloosa, and Santa Rosa counties), to evaluate long-term saltwater intrusion in the Floridan aquifer.
 - Jackson Blue Spring, a first magnitude OFS.
 - Gainer Spring Group, a first magnitude OFS, and second-magnitude Sylvan and Williford Spring Groups.

Supporting Initiatives

- Hydrologic Modeling – Develop and refine regional groundwater flow and transport models, estuarine hydrodynamic models, and surface water models to support MFLs, water supply planning, and water resource evaluations.
- Data Collection – Discharge measurements, stream channel surveys, and instream habitat attributes to support MFL technical assessments.

- Cooperative Monitoring Activities – Ongoing enhancement of groundwater, surface water, and rainfall monitoring network; and continuation of agreements with:
 - DEP to monitor water quality in District aquifers, streams, and lakes;
 - Bay County, Leon County, and City of Tallahassee to monitor surface water levels 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 Spring Group.

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

Water Supply

Goal: Plan and facilitate sustainable water supplies for future reasonable and beneficial uses, with emphasis on development of alternative water supply sources, including reclaimed water, water conservation, and integrated projects contributing to water quality and resiliency.

The water supply strategic priority is addressed through water supply and water resource development projects in cooperation with northwest Florida communities, as well as in data collection and analyses, resource planning, and regulatory services. Implementation criteria, priorities, and activities are summarized below.

Water Supply Criteria

Success Indicators:	(1) Water supply made available (volume [mgd] and trend) (2) Public water supply demands met (volume in Million Gallons per Day [mgd] and percentage) (3) Public supply per capita water use (Gallons Per Capita Per Day [gpcd] and trend) (4) Project accomplishment (percent complete)
Funding Sources:	(1) General Fund Reserves (2) Water Protection and Sustainability Program Trust Fund (3) State Legislative Appropriations (4) Ad valorem
Milestones:	(1) North Bay Reuse Project (2022) (2) Panama City Beach Reclaimed Water Extension (2022) (3) Okaloosa County Reuse Extension (2022) (4) South Santa Rosa Reuse Initiative, Phase I (2022) (5) Gulf County Well Drilling and Aquifer Testing (2022) (6) Districtwide Water Supply Assessment Update (2023)
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 partner agencies such as DEP, FDACS, and the USGS.
- Districtwide Water Supply Assessment (WSA) – 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). The next WSA update is planned to be conducted in the 2021-2023 timeframe.
- Regional Water Supply Planning – Where existing sources of water are not adequate, RWSPs develop programs 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 was completed in 2019 and approved by the District’s Governing Board on January 23, 2020.

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 groundwater and transient flow models.
 - Hydrogeologic Evaluations – Well construction and aquifer performance testing to determine the availability of groundwater from intermediate and surficial aquifers. Priority areas outside of the Region II RWSP include Bay and Gulf counties.
- Water Supply Development Grants – Grant funding to help local governments and utilities replace aging infrastructure, improve distribution systems, evaluate and develop alternative water supplies, and address local drinking water quality issues.
- Alternative Water Supply (AWS) Development
 - Annual alternative water supply development grant program, conducted in cooperation with the Florida Department of Environmental Protection.
 - North Bay Wastewater Reuse – Construct six miles of reuse main connecting Bay County’s North Bay WWTF and Gulf Power to use reclaimed water in power generating cooling processes. Design efforts are ongoing following project delays due to impacts from Hurricane Michael.
 - Panama City Beach Reclaimed Water Extension – Design and construct approximately 1.4 miles of reclaimed water transmission line; making reclaimed water available to more than 200 existing and over 1,500 future connections, as well as a new sports complex.
 - Okaloosa-Eglin AFB-Niceville Reclaimed Water Project – Construct 11 miles of reuse main connecting Eglin AFB and Niceville to the Okaloosa County Water and Sewer system to serve landscape irrigation needs.
 - South Santa Rosa Reuse Initiative – A comprehensive and long-term multi-stakeholder initiative involving Santa Rosa County, the Holley-Navarre Water System, and the City of Gulf Breeze with the goal of eliminating wastewater effluent discharges and increasing the beneficial reuse of reclaimed water in southern portions of the County.
 - 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.
- Water Conservation – Cost-share grant program to enable public and nonprofit utilities and local governments to implement water conservation projects with quantifiable water savings. Among other types of projects, this program may help rural communities install modern water meters to improve potable water management and conservation.

Regulatory Services

- Water Use Permitting Program – The water use program reviews, issues, and enforces 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 Permitting Program – The wells program reviews, issues, and enforces permits for the construction, repair, modification, and abandonment of wells, and it administers and enforces the licensing of water well contractors. This program protects public health and resource sustainability, while also serving the regulated community.

Flood Protection and Floodplain Management

Goal: Maintain natural floodplain functions and minimize harm from flooding, with emphasis on long-term resiliency for coastal and inland communities.

Flood protection and floodplain management are important for protecting communities, water quality, and habitats. Specific strategies for flood protection and floodplain management 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 (FEMA) (2) State Legislative Appropriations (3) General Fund Reserves (4) FDOT Mitigation Funding
Milestones:	(1) Preliminary DFIRMs for the Apalachee Bay-St. Marks, Pea, and Lower Choctawhatchee Watersheds (2022) (2) DFIRM completion incorporating coastal remapping studies for Bay and Escambia counties (2022)
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 detailed data to foster informed risk management decisions through the development of digital flood insurance rate maps (DFIRMs). The Risk MAP program and DFIRMs are a consistent approach to assess potential vulnerability and losses and helps to increase public awareness of and support for actions that reduce flood-related risks. Preliminary DFIRMs and final effective DFIRMs are 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, Lower Choctawhatchee, and Escambia watersheds.
 - Risk MAP evaluations are in the planning stage for the St. Andrew – St. Joseph Bay, Choctawhatchee Bay, Yellow River, and Blackwater River watersheds.
- Flood and Floodplain Data – The District maintains an on-line Flood Information Portal parcel-level mapping tool 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, Choctawhatchee, Escambia, Yellow, Perdido, Blackwater and other rivers and major streams. Tidal wetlands are also protected on the Pensacola, Perdido, and Choctawhatchee 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.

- Environmental Resource Permitting (ERP) – Among the important functions of the ERP program is the protection of property, resources, and residents from potential flood damage through the regulation and management of stormwater and wetlands. Also included in ERP is permitting for dam design, construction, repair, modification, 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.
- Resilience Planning and Implementation – The District will work with local governments and regional agencies, regional stakeholders, DEP, and other agencies to support coordinated efforts to enhance resilience to flooding and sea level rise. District efforts will include assistance in coordination with the Resilient Florida Grant Program and efforts to identify other state and federal funding sources. These efforts will also be integrated where possible with water quality improvement, alternative water supply development, and restoration projects.

Watershed Protection and Restoration

Goal: Protect and restore watershed resources and functions, with emphasis on water quality; wetland, riparian, and aquatic habitats; and compatible public access.

Healthy functioning watersheds help protect water quality, natural systems, and are vital for flood protection and floodplain management. Strategies include land acquisition and management, restoration and reforestation, streambank restoration, wetland mitigation, and environmental resource permitting. These activities also directly support, and are supported by, water quality and floodplain management activities described above. Implementation criteria, priorities, and activities are summarized below.

Watershed Protection and Restoration Criteria

Success Indicators:	(1) Area protected through land acquisition (acres) (2) Area restored (acres) (3) Balance of released mitigation credits
Funding sources:	(1) State Legislative Appropriations (2) General Fund Reserves (3) FDOT Mitigation Funding (4) Federal Emergency Management Agency (FEMA) (5) RESTORE Act and settlement funds
Milestones:	(1) Central Region Land Management Plan (2021) (2) Live Oak Point Living Shorelines (2023)
Deliverables:	(1) Annual Regional Wetland Mitigation Plan and Mitigation Monitoring Reports (2) Land Management Plans (3) Florida Forever Work Plan Annual Report (4) Project completion reports

Watershed Programs and Projects

- Restoration and Land Management – Ongoing activities include prescribed burns, planting native pine tree species seedlings and native groundcover, erosion control, improving site access, and managing and maintaining public access sites and roads.
- Land Acquisition – The District has acquired more than 224,000 acres of land to protect water quality, habitats, and floodplain functions across northwest Florida’s watersheds. District lands also help sustain groundwater recharge, and they provide for public access and recreation. Currently planned acquisitions, in both fee-simple and less-than-fee, are focused on protection of northwest Florida’s springs and spring-fed rivers and streams. These include Wakulla Spring, Jackson Blue Spring, Cypress Spring, Econfina Creek springs, and springs along Holmes Creek and the Chipola River.
- Hurricane Recovery and Reforestation – With state legislative funding, the District has been conducting hurricane recovery efforts throughout the Econfina Creek, Chipola River, and Apalachicola River basins since 2018. This effort will continue for the next few years. In addition, the District is conducting reforestation within the Econfina Creek, Choctawhatchee River, Chipola River, and Apalachicola basins. This effort includes planting pine trees (longleaf, slash, and loblolly), native hardwoods, and native groundcover species to restore the areas back to historical ecosystems.
- 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 watershed scale. Activities include an In-Lieu Fee Program, the Sand Hill Lakes Mitigation Bank, and individually permitted projects. Mitigation is supported by Land Acquisition and Management, ERP, and the SWIM Program.

- 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.
- Perdido River Paddling Trail – NRDA is funding improvements within the District’s Perdido River WMA consisting of construction of camping shelters, restrooms, road work, and streambank protection. This work will complement comparable projects to be completed on other lands along the Perdido River owned by Escambia County and The Nature Conservancy.

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 Protection	Natural Systems	
Water Quality <i>Restore and protect watershed resources and functions, with emphasis on water quality and flows within Apalachicola River and Bay and other District watersheds and within the major spring systems of northwest Florida, and long-term resiliency.</i>	✓	✓	✓	✓	Agricultural BMPs, sod-based crop rotation, and MILs; septic-to-sewer and stormwater retrofit projects; springs and streambank restoration and protection; land management and acquisition; hydrologic data collection; water use and environmental resource permitting; MFL development; regional wetland mitigation; and recreational site improvements.
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 rulemaking.
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; water use and well permitting; regional water resource development; water supply and AWS development projects.
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.
Watershed Protection and Restoration <i>Protect and restore watershed resources and functions, with emphasis on water quality; wetland, riparian, and aquatic habitats; and compatible public access.</i>	✓	✓	✓	✓	Restoration, land acquisition and management, hurricane recovery and reforestation, wetland mitigation, recreational site improvements

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

Ongoing district activities not noted in Table 4 include: hydrologic data collection and monitoring, water use planning and projections, land acquisition and management, regional wetland mitigation, environmental resource permitting, water use permitting, and well permitting. Also not noted are smaller projects such as planning or feasibility studies.

Table 4. Anticipated Schedule of Projects and Programs

	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Agricultural Programs					
Agricultural BMPs	→				
Sod-Based Crop Rotation	→				
Mobile Irrigation Lab (MIL) Program	→				
Springs Restoration and Protection					
<i>Jackson Blue Spring</i>					
Indian Springs Sewer Extension Phs. 1-2A	→ Complete				
Indian Springs Sewer Extension Phase 2B	→				Complete
Blue Springs Road Sewer Expansion	→				Complete
Tara Estates Sewer Extension	→				Complete
<i>Wakulla Spring</i>					
Septic-to-Sewer in Wakulla BMAP	→ Complete				
Advanced Septic Systems Pilot Project	→				Complete
Magnolia Gardens Phase III	→				Complete
Wakulla Gardens Phase III & 4A	→				Complete
<i>Other Springs Projects</i>					
Cypress Spring Protection & Restoration	→				Complete
Horn Spring in Leon County	→ Complete				
Land Acquisition for Springs Protection	→				Complete
Water Quality Protection and Restoration					
Port St. Joe Stormwater	→				Complete
Lake Munson Algae Harvesting	→ Complete				
EPA Farmer to Farmer Grant	→				Complete
Carrabelle Lighthouse Estates Phase I & II	→				Complete
Apalachicola Stormwater Retrofits	→				Complete
Live Oak Point Living Shorelines	→ Complete				
Water Resource and Supply Development					
<i>Alternative Water Supply Development</i>					
North Bay Wastewater Reuse	→ Complete				
PCB Reclaimed Water	→ Complete				
Okaloosa-Eglin-Niceville Reclaimed Water	→ Complete				
ECUA Pensacola Beach Reclaimed Water	→				Complete
South Santa Rosa Reuse Initiative	→				
Gulf County Aquifer Testing	→ Complete				
<i>Traditional Water Supply Development</i>					
Water Supply Development Grants	→				

	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26
Technical Programs					
<i>Modeling, Planning, Assessments</i>					
Ground and Surface Water Modeling	→				
St. Joseph Bay Monitoring & Assessment	→				
Water Supply Assessments	WSA 2023 →				
Regional Water Supply Planning			Update RWSP(s) as required		
SWIM	Assess need for updated SWIM Plans				
Region II RWSP Implementation	→			T.B.D.	-----→
<i>MFL Technical Assessments</i>					
Wakulla Spring & Sally Ward Spring	Complete				
Region II Coastal Floridan Aquifer	→ Complete				
Jackson Blue Spring	→				Complete
Gainer, Sylvan, and Williford Springs	→				Complete
Other Priority Waterbodies		Work Plans	Start	→	
<i>Flood Protection</i>					
Flood Hazard Risk MAP Program	→				
Final Effective DFIRMs for six coastal counties: Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf	→		Complete		
Evaluations and Preliminary DFIRMs	→				

4. Monitoring and Reporting

As required by section 373.036, F.S., the 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, the President of the Senate, the Speaker of the House of Representatives, the Florida Department of Environmental Protection (DEP), and the Office of Economic and Demographic Research (EDR) for review and monitoring purposes. Table 5 also summarizes the District’s operational plans and reports which are available online at: <https://nfwwater.com/Data-Publications/Reports-Plans>.

Table 5. Summary of NFWWMD 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. 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. SWIM Program and Water Quality Projects 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; Regional Mitigation Plan; and Habitat Impacts, Preservation, and Restoration • Every five years: Districtwide water supply assessments • Every five years: Applicable regional water supply plans • As needed: SWIM plan updates • As needed: land management plans and updates
Budget and Supporting	<ul style="list-style-type: none"> • Preliminary, Tentative, and Adopted 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 DEP, the legislature, and local governments, including:

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

Table 6. Statewide Water Management District Performance Metrics

<i>Permitting</i>
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 Additional 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)
<i>Mission Support</i>
Administrative costs as a percentage of total expenditures
<i>Water Supply</i>
Districtwide, the quantity [mgd] and percentage of the 20-year (e.g., 2015-2035) Public Supply increase in demand that has been met by water conservation and non-conservation projects, and by all water projects
Uniform gross per capita water use (Public Supply) by District
Uniform residential per capita water use (Public Supply) by District
<i>Natural Systems</i>
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