

Strategic Water Management Plan



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NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



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Cover Photograph: Wakulla Spring (NWFWMMD)

1. Introduction

The Strategic Water Management Plan (SWMP or Strategic Plan) 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: to implement the provisions of Chapter 373, Florida Statutes (F.S.), in a manner that best ensures the continued welfare of the residents and water resources of northwest Florida. This guidance document is complementary to and implemented by the District’s annual budget.

The following provides a brief overview of the resources of the District, including a strengths and weaknesses assessment and general information on the strategic planning process. Section 2 summarizes the District’s strategic priorities and the strategies employed to accomplish these priorities. Also described are success indicators, funding sources, deliverables, milestones and associated activities planned over the five-year planning horizon. Section 3 provides the implementation schedule of major tasks from 2018-2022. The framework for monitoring and reporting is described in Section 4 and financial resources are outlined in Section 5.

About the Northwest Florida Water Management District

The NFWFMD is one of five water management districts established by the Florida Water Resources Act of 1972 (Chapter 373, F.S.). Its 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 governs the NFWFMD. The District works with federal, state, and local governments; water supply utilities; non-governmental stakeholders; and private citizens to accomplish its statutory areas of responsibility, as described below.

Mission

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.

Statutory Areas of Responsibility

Section 373.036, F.S., sets forth four interrelated areas of responsibility (AORs) for the water management districts: Water Supply, Water Quality, Flood Protection and Floodplain Management, and Natural Systems. Goals for each of these AORs are:

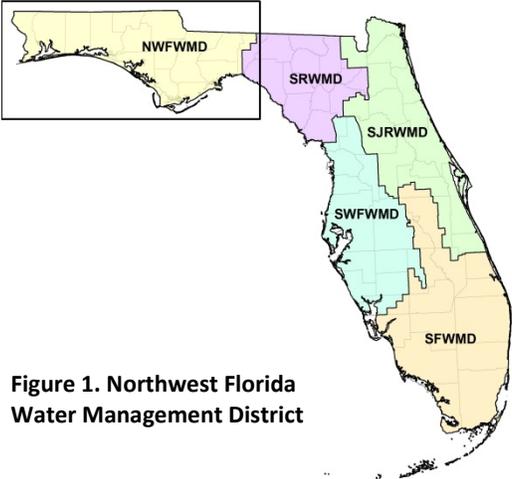


Figure 1. Northwest Florida Water Management District

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

Characteristics

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

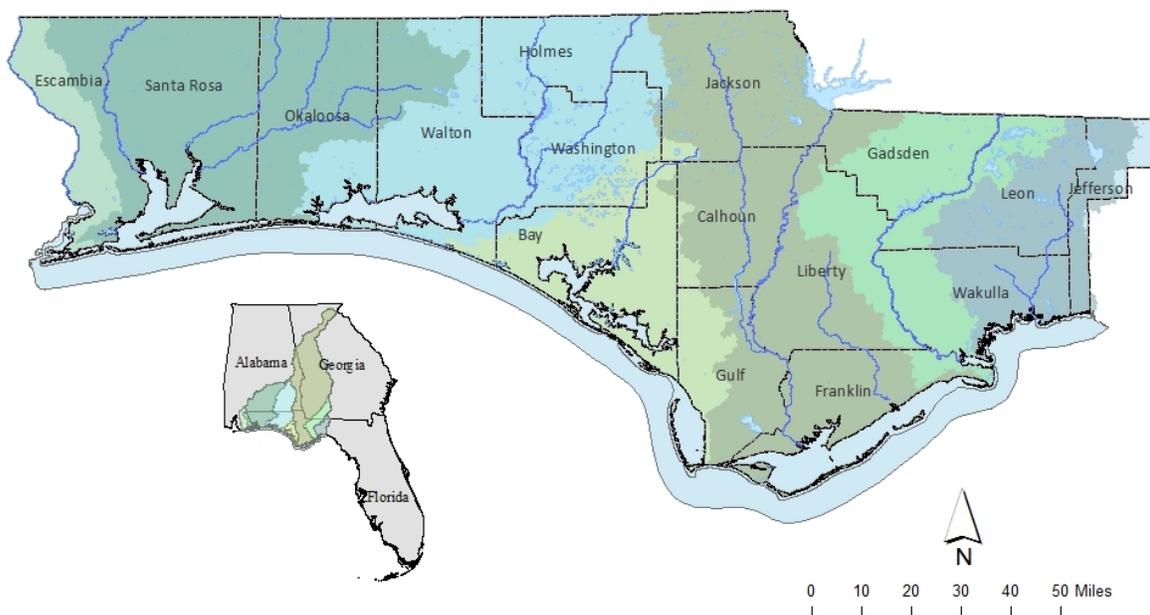


Figure 2. Northwest Florida Watersheds

The Floridan aquifer is the primary source of water supply across most of the District, while 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 and the City of Port St. Joe utilizes the Gulf County Fresh Water Supply Canal from the Chipola River to meet water supply needs.

Much of the District’s non-urban land is devoted to forestry and agriculture, with areas of concentrated development corresponding to population centers. 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. In recent decades, substantial areas have been transformed from forested and rural in character to suburban and urban.

As of 2016, there were an estimated 1.4 million permanent residents in northwest Florida (University of Florida 2017), with much of the population concentrated along the coastal region from Escambia through Bay counties, as well as in Tallahassee and the surrounding area (Table 2). Population is projected to grow to nearly 1.8 million by 2040, reflecting a 17.4 percent increase over 29 years (University of Florida 2017).

Changes in land use and intensity and population growth presents potential water resource challenges, including increased demand for water supplies, stormwater Runoff and nonpoint source pollution, increased risks from flooding, reduced groundwater recharge, and fragmentation of wetlands and other sensitive habitats.

Table 2. Population and Growth by County

County	2010 Population	2016 Population	2040 Population Projection ¹	Percent Change 2016 2040
Bay	168,852	176,016	215,100	22.20%
Calhoun	14,625	14,580	15,700	7.68%
Escambia	297,619	309,986	342,200	10.39%
Franklin	11,549	11,916	12,900	8.26%
Gadsden	46,389	48,486	51,900	7.04%
Gulf	15,863	16,628	18,800	13.06%
Holmes	19,927	20,003	20,500	2.48%
Jackson	49,746	50,345	52,500	4.28%
Jefferson ²	10,417	10,236	10,656	4.10%
Leon	275,487	287,671	354,500	23.23%
Liberty	8,365	8,736	10,800	23.63%
Okaloosa	180,822	192,925	225,000	16.63%
Santa Rosa	151,372	167,009	235,300	40.89%
Wakulla	30,776	31,599	40,000	26.59%
Walton	55,043	62,943	100,300	59.35%
Washington	24,896	24,888	27,200	9.29%
Total	1,361,748	1,433,967	1,733,356	17.44%

¹ Medium growth scenario

² Estimated population within NFWFMD

Sources: 2010 estimates by U.S. Census Bureau; 2016 estimates and 2040 projections by UF BEBR 2017

Strengths, Opportunities, and Challenges

A strength of the District is the development of effective partnerships and cooperative relationships with other governmental and private organizations with complementary functions and authority. Another asset is its extensive water management lands that protect water quality; floodplains; water recharge areas; and ecosystem health and productivity. The District has also made substantial investment in developing alternative and inland water sources to meet water supply needs and interconnecting utilities for system reliability.

Many opportunities exist to: expand water conservation and efficiency; further develop reuse of reclaimed water and other alternative water supply sources; protect undeveloped floodplains and important recharge areas; and adopt new technology and data sources.

Northwest Florida faces continuing challenges with respect to water and related resources across all four AORs. Examples of such challenges are coastal saltwater intrusion, out-of-state water withdrawals, and nonpoint source pollution.

Current strengths, opportunities, and challenges are outlined in Table 3.

Table 3. NFWFMD Strengths, Opportunities, and Challenges

Strengths	<ul style="list-style-type: none"> • Partnership and cooperation with other governmental and private organizations with complementary functions and authority • Extensive water management lands and other public lands that protect water quality, floodplains, water recharge, and ecosystem health and productivity • Ability to leverage external funding • Technical capability and long-term outlook • Improved consumptive use permitting regulations for state-wide consistency and permit streamlining • Development of alternative water supplies
Opportunities	<ul style="list-style-type: none"> • MFL establishment for priority waterbodies; enhanced data collection and technical analyses • Continued development of alternative water supply sources • Potential to acquire floodplain and recharge areas to protect springs, surface waters and groundwater resources • Potential for reuse system development and expansion to meet nonpotable demands, provide beneficial aquifer recharge, and enhance water quality • Potential for additional water conservation • Federal and other external funding sources that can match and extend existing funds • New technology and data sources
Challenges	<ul style="list-style-type: none"> • Out-of-state water withdrawals and wastewater discharges • Diminished water quality at some of the District’s signature springs • Saltwater intrusion in some coastal population centers • Rising demands for potable water for people, business, and agriculture • Extreme weather events (e.g., droughts, floods, and tropical storms) • Nonpoint source pollution • Fragmentation of wetlands and other water-related habitats • Hydrologic and water quality data gaps • Infrastructure funding limitations, particularly on the part of financially disadvantaged small local governments

Strategic Planning Process

The SWMP reflects priorities of the Governing Board through a five-year planning horizon. The plan is implemented annually through the District’s adopted budget.

Annual Progress Review and Strategic Plan Update

The SWMP Annual Work Plan Report is incorporated in the Consolidated Annual Report, released each year by March 1. To meet the requirements of section 373.036, F.S., this report includes qualitative and quantitative evaluation of the success indicators, deliverables, and milestones identified in Section 2. The Strategic Plan is updated based on these results and in consideration of emerging issues and the District’s annual budget.

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. It is important to recognize that many of these activities are implemented through subordinate plans, adopted rules, and programs that directly execute the strategies outlined in the SWMP (Table 4). Thus, the SWMP reflects an integrated approach to the major water resource challenges facing the District.

Table 4. Operational Documents

Plan / Regulation	Purpose (Primary Statute)	Horizon (Updates)
Strategic Water Management Plan	Establish strategic priorities for a next five-year period; District-wide plan for water supply, flood protection, water quality, and natural systems (373.036, F.S.)	Five years; updated annually
Incorporates:		
Adopted Budget	All planned revenues and expenditures of the District (373.536, F.S.)	Updated annually
Regional Water Supply Plans	Identify water sources, demands, and alternative water supply sources (373.709, F.S.)	20 years; updated every five years
Water Resource Development Work Program	Development of water sources within regional water supply planning areas (373.536; 373.709 F.S.)	Five years; updated annually
Water Supply Assessment	Estimates and projections of District-wide water demand and source assessments (373.036, F.S.)	20 years; updated every five years
Florida Forever Land Acquisition Work Plan	District-wide land acquisition plan (373.199, F.S.)	Five years; updated annually
Florida Forever Capital Improvements Plan	Short-range plan for implementation of approved capital improvement projects (373.199, F.S.)	Five years; updated annually
NFWFMD-FEMA Cooperating Technical Partner Risk MAP Business Plan	Risk Map, flood mapping and related activities plan for the Northwest Florida Water Management District (373.036, F.S.)	Five years; updated annually
Umbrella, Watershed-based Regional Mitigation Plan	District-wide wetland mitigation (373.4137, F.S.; 33 U.S.C. 1344); also incorporates the In Lieu Fee Program and Instrument and the Sand Hill Lakes Mitigation Bank	Updated annually
SWIM Priority List	Prioritize watersheds and waterbodies for SWIM plan development (373.453, F.S.)	Updated annually

Plan / Regulation	Purpose (Primary Statute)	Horizon (Updates)
SWIM Plans (multiple)	Watershed protection, management, and restoration (373.451-459, F.S.)	Updated as needed
Hydrologic Monitoring Plan	Surface and groundwater hydrologic and water quality monitoring (373.036; 373.451-459, F.S.)	Updated biennially
Minimum Flows and Minimum Water Levels (MFLs) Priority List	Priority list for development of MFLs (373.042, F.S.)	Updated annually
Five Year Capital Improvements Plan	Capital improvement plan for District activities (373.536(6)(a)(3), F.S.)	Updated annually
Annual Regulatory Plan	Compliance with statutory requirements and schedule for rulemaking, where applicable (120.74, F.S.)	Updated annually
Ch. 40A-1, FAC	General and Procedural (373.044, F.S.)	Continuous
Ch. 40A-2, FAC	Regulation of Consumptive Uses of Water (373.203-250, F.S.)	Continuous
Ch. 40A-3, FAC	Regulation of Wells (373.302-342, F.S.)	Continuous
Ch. 40A-6, FAC	Works of the District (373.084-087, F.S.)	Continuous
Ch. 40A-21, FAC	Water Shortage Plan (373.246(1), F.S.)	Continuous
Ch. 62-330, FAC	Environmental Resource Permitting (373.4131, F.S.)	Continuous

2. Strategic Priorities for 2018-2022

Implementation of the District's strategic priorities is accomplished through coordinated activities within each of the District's major divisions: Asset Management, Resource Management, Regulatory Services, and Administration. This section summarizes each of the strategic priorities, together with indicators, funding sources, milestones, and deliverables that support each goal within the planning horizon. Milestones are events or dates signifying important points in progress toward each goal, and deliverables are work products from individual tasks or projects.

Strategic Priorities for Fiscal Years 2018-2022

- ◆ **Springs Protection and Restoration:** *Protect and restore water quality and flows within the major spring systems of northwest Florida.*
 - ◆ **Minimum Flows and Minimum Water Levels (MFLs):** *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 freshwater inflow.*
 - ◆ **Water Supply:** *Plan and facilitate sustainable water supplies for future reasonable and beneficial uses.*
 - ◆ **Watershed Protection and Restoration:** *Protect and restore watershed resources and functions.*
 - ◆ **Flood Protection and Floodplain Management:** *Maintain natural floodplain functions and minimize harm from flooding.*
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A matrix of the six strategic priorities as they relate to the District's goals, activities, success indicators and milestones is included at the end of the section.

Springs Protection and Restoration

Springs protection and restoration is carried out through the District's Surface Water Improvement and Management (SWIM), MFL, Land Management and Acquisition, and Water Use Permitting programs. Current initiatives and priorities include the following:

- Jackson Blue Spring Agricultural BMP Cost Share Program – The District continues a major initiative to help agricultural producers in the Jackson Blue Spring basin integrate best management practices (BMPs) into their farming operations. These practices, implemented in cooperation with the Florida Department of Agriculture and Consumer Services (DACS), are expected to continue conserving water and improving water quality without compromising production yields. This cost share grant program provides 75 percent of the equipment costs with producers providing the remaining 25 percent. To date, the 48 of the 55 projects awarded have been completed and approximately 30 more are anticipated on an annual basis.
- Sod-Based Crop Rotation Program – The District has partnered with the University of Florida Institute of Food and Agricultural Sciences (IFAS) to complete evaluations and outreach on best

management practices for sod-based rotation systems for the last 12 years. Additionally, the District has received federal grant funding for a sod-based crop rotation pilot project which demonstrates the economic and environmental benefits of integrating beef cattle/perennial grass into a multi-crop production system using conservation technology and other BMPs. The pilot project will assess the effectiveness and productivity of sod-based crop rotation for up to four producers in the Jackson Blue Spring basin. The goal of the pilot project is to determine if these practices will reduce water irrigation demands and reduce nutrient and pesticide application rates while increasing crop yields under commercial farm conditions.

- Claiborne Aquifer Evaluation – The District continues an investigation of the Claiborne aquifer within the Jackson Blue Spring groundwater contribution area. The project involves constructing test and monitoring wells; completing aquifer performance testing; and analyses and modeling to determine the aquifer’s viability as a potential water source to offset demand on the Floridan aquifer.
- Septic-to-Sewer Retrofit Projects – Implementation of seven major septic-to-sewer retrofit projects to protect and help reduce nutrient loading to Jackson Blue Spring and Wakulla Spring will continue in Jackson, Leon, and Wakulla counties.
 - Indian Springs Sewer Extension – grant to Jackson County to extend central sewer to the Indian Springs subdivision adjacent to Merritts Mill Pond, which receives flow from Jackson Blue Spring and other submerged springs.
 - Blue Springs Road Sewer Project – grant to Jackson County to extend central sewer service to the Jackson Blue Springs Recreation Area and residences around Jackson Blue Spring and Merritts Mill Pond in Jackson County.
 - Magnolia and Wakulla Gardens Sewer System Expansion – grant to Wakulla County for sewer expansion and connection of homes on septic systems to the county’s Advanced Wastewater Treatment (AWT) plant.
 - Tallahassee Septic-to-Sewer Connections – grant to the City of Tallahassee for the connection of properties on septic tanks to existing central sewer within the Wakulla Basin Management Action Plan (BMAP).
 - Woodside Heights Sewer Project – grant to Leon County for sewer expansion and connection of homes on septic systems to the City of Tallahassee’s AWT wastewater treatment system.
 - Woodville Sewer System Project – grant to Leon County for the design of a central sewer system to serve the Woodville Community.
 - Advanced Septic Treatment Systems Pilot Project – grants to Leon and Wakulla counties for the design and installation of advanced septic systems in neighborhoods within the Wakulla BMAP Priority Focus Area 1. The pilot project will provide information on feasibility, nutrient reduction, and costs associated with selected advanced septic systems. This effort is also in collaboration with the Florida Department of Health, the Florida Department of Environmental Protection, and stakeholders.
- Streambank Restoration and Protection – The District continues spring and water quality improvements at Econfina Blue Spring Campsite and Devil’s Hole Spring on Econfina Creek an MFL priority waterbody. The projects include shoreline restoration and protection, stormwater facilities, and public access improvements.
- Water Quality and Flow Monitoring – The District is continuing water quality monitoring at Wakulla, Jackson Blue, Pitt, Econfina Blue, and Williford springs and measuring spring flows at Jackson Blue, Sally Ward, and Wakulla springs and the Spring Creek springs group in coastal Wakulla County.

- Land Management – The Econfina Creek WMA is more than 43,000 acres of District-owned and managed land that protects groundwater recharge, spring flow, and water quality within the Econfina Creek springs complex, which includes first magnitude Gainer Springs. This in turn protects water supply and water quality in the downstream Deer Point Lake Reservoir, the main source of drinking and industrial water supply for Bay County.
- Water Use Permitting – Regulation of ground and surface water withdrawals is a tool for preventing significant impacts to the water resources contributing to spring systems and water supplies.

Strategic Priority 1: Springs Protection and Restoration. Improve water quality and flows within the major spring systems of northwest Florida.

Success Indicators:	(1) Project accomplishment (percent complete) (2) Trends in nitrate concentrations (3) Trends in spring flows
Funding sources:	(1) State Legislative Appropriations (2) Land Acquisition Trust Fund (3) General Fund Reserves (4) Florida Forever Trust Fund
Milestones:	(1) Completion of spring streambank restoration projects (2017-2018) (2) Implementation of funded BMPs for farmers in the Jackson Blue Spring basin and Mobile Irrigation Lab evaluations (2017-2018) (3) Completion of septic to sewer retrofit projects (2017-2019)
Deliverables:	(1) Mobile Irrigation Lab evaluation reports (2) Water quality data (3) Spring discharge data

Minimum Flows and Minimum Water Levels (MFLs)

Implementation of an effective 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 of water would be significantly harmful to the water resources or the ecology of the area. The MFL program complements other efforts, including water use permitting, regional water supply planning, and watershed management. During the next five years, MFL technical assessments will be completed for the St. Marks River Rise (2018), Sally Ward Spring (2020), Wakulla Spring (2020), the coastal Floridan aquifer in Walton, Okaloosa, and Santa Rosa counties (2020), and Jackson Blue Spring (2022). Enhanced data collection, groundwater and surface water modeling, and development of technical assessments will begin for the Shoal River system and Econfina Creek and Spring complex.

The MFL program is implemented according to the MFL priority list and schedule, which is updated annually and submitted to DEP for review. The current schedule may be found online at www.nfwfwater.com/water-resources/minimum-flows-levels/.

Strategic Priority 2: Minimum Flows and Minimum Water Levels (MFLs). Develop and implement science-based MFLs that protect water resources and associated natural systems.

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) Completion of technical assessments for the St. Marks River Rise (2018), Wakulla Spring (2020), Sally Ward Spring (2020), the coastal Floridan aquifer in Region II (2020), and Jackson Blue Spring (2022)

Deliverables: (1) Completed MFL technical assessments according to the approved schedule

Apalachicola-Chattahoochee-Flint (ACF) River Basin

An ongoing District priority is working with state agencies and local governments to protect the economic and ecological viability of the Apalachicola River and Bay and its surrounding watershed in Florida. Priorities over the current five-year period include continued technical assistance to the Governor and DEP in the ongoing legal case between the states of Florida and Georgia over freshwater allocation in the ACF river basin and implementation of several cooperative water quality improvement projects in coastal Franklin County. The agricultural BMP program, springs restoration projects, and land acquisition projects to improve the health of Jackson Blue Spring also support longstanding water conservation and water quality protection efforts. In addition to technical assistance, continuing initiatives and priorities include:

- Northwest Florida Mobile Irrigation Laboratory (MIL) – The District continues to support the MIL, particularly in Jackson County. This effort includes on-site evaluations of agricultural irrigation systems to evaluate system efficiency and generate recommendations for improvements and BMPs. These recommendations are designed to increase irrigation efficiency and minimize over-watering, benefitting both the grower and the environment. The MIL also works to educate agricultural customers and the general public on water conservation, irrigation planning, and irrigation management.
- Apalachicola Bay Water Quality Improvement Projects – The District continues to partner with the Apalachicola, Carrabelle and other local governments and utilities to complete projects that will improve the quality of water entering Apalachicola Bay. Septic-to-sewer retrofit projects that remove onsite sewage treatment and disposal systems will help reduce nutrients and other nonpoint source pollution from flowing to the river and bay.

Strategic Priority 3: Apalachicola-Chattahoochee-Flint River Basin. Protect Apalachicola River and Bay water quality and freshwater inflow.

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) Land Acquisition Trust Fund (3) General Fund Reserves
Milestones:	(1) Completion of Apalachicola Bay water quality projects (2019) (2) Continued participation in supporting state ACF Basin issues (2018-2022)
Deliverables:	(1) Grant project completion reports

Water Supply

The District facilitates sustainable water supplies for future reasonable and beneficial uses through coordinated resource planning and regulation efforts. These include the following:

- Water Use Permitting (WUP) – The Division of Regulatory Services oversees review, issuance, renewal, and enforcement of 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 – The Division of Regulatory Services coordinates the review, issuance, and enforcement of 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.
- Districtwide Water Supply Assessment – This assessment encompasses a periodic District-wide evaluation of current and future water demands and the sustainability and sufficiency of water supply sources. The assessment is updated on a five-year basis, with updates to regional water supply plans following the updated data and analysis.
- Regional Water Supply Planning – This activity provides for development and implementation of focused plans, developed in cooperation with regional stakeholders, to identify and develop alternative water supply sources to meet long-term water supply needs while also sustaining water resources and natural systems. Related planning activities include completion of the annual water use report and continued coordination with DACS on statewide agricultural water use estimates and projections.
- Water Resource Development – The District implements regional-scale projects that increase the availability of water supplies to meet long-term water supply needs. Examples of such projects include planning for water reuse and conservation, data collection, and source modeling and evaluation. Upcoming efforts include development and refinement of groundwater flow models in the western and eastern district; and continued efforts in support of the statewide expansion of alternative water sources.
- Grant funding for Bay County for a major collaborative wastewater reuse pipeline project with Gulf Power Company and Panama City. The grant will go toward construction of one component of a larger initiative to reduce wastewater discharges and improve water quality of St. Andrew Bay, while also providing potable water offset to utility and industrial users.

Strategic Priority 4: Water Supply. Plan and facilitate sustainable water supplies for future reasonable and beneficial uses.

Success Indicators:	(1) RWSP public supply water demands met (volume [MGD] and percentage) (2) Public supply uniform gross per capita water use (GPCD and trend) (3) Public supply uniform residential per capita water use (GPCD and trend) (4) Alternative water supply made available (volume [MGD] and trend)
Funding sources:	(1) Ad Valorem Tax Revenue (2) General Fund Reserves (3) Water Protection and Sustainability Program Trust Fund (4) State Legislative Appropriations
Milestones:	(1) Completion of local government water supply development grant projects (2018-2019) (2) District-wide Water Supply Assessment Update (2017-2018) (3) Region II RWSP Update (2018-2019) (4) Completion of western groundwater model (2018) and eastern model (2018)
Deliverables:	(1) Water use data (2) District-wide water supply assessment updates (3) RWSP updates (4) Grant project completion reports

Watershed Protection and Restoration

- 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.
- Seven Runs Streambank Restoration – The District continues restoration and protection project will be completed at Seven Runs within the Choctawhatchee River Water Management Area. The project will create a natural vegetative retaining wall, stormwater improvements, and public access enhancements.
- Land Management – The District has acquired 211,152 acres of land critical to the protection of water quality, flood protection and floodplain management, natural systems, and water supply. In addition to protecting water and related resources, these lands provide for public access and recreation.
- Environmental Resource Permitting (ERP) – The ERP program integrates stormwater management and treatment and wetland permitting. Implementation of the program protects multiple watershed and wetland functions including water quality, fish and wildlife habitat, flood protection, shoreline stability, and aquifer recharge.
- Florida Department of Transportation (FDOT) Mitigation – In accordance with section 373.4137, F.S., the District assists FDOT in developing wetland mitigation for transportation infrastructure development in service areas not covered by private mitigation banks. In the process, wetland resources and functions are protected and restored on a landscape scale. Detailed information on the District’s wetland programs and mitigation projects, as well as information on private mitigation bank options, is available at www.nwfwmdwetlands.com.

- Spring Restoration and Protection – Activities described above for spring restoration and protection are major priorities for watershed management in northwest Florida.

As demonstrated by the set of priority activities described, watershed protection and restoration efforts address the full range of the District’s AORs. As such, there is significant overlap among the projects, indicators, deliverables, and milestones with the other strategic priorities described.

Strategic Priority 5: Watershed Protection and Restoration. Protect and restore watershed resources and functions.

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 project (2017-2018) (2) Completion of updated SWIM plans (2017)
Deliverables:	(1) Annual Regional Wetland Mitigation Plan and Mitigation Monitoring Reports (2) Draft and updated SWIM plans (3) Grant project completion reports

Flood Protection and Floodplain Management

Flood protection and floodplain management are essential components of watershed protection. Several current initiatives and programs address flood protection. These include:

- Flood Hazard Mapping, Assessment and Planning – The District continues to work in cooperation with the Federal Emergency Management Agency (FEMA) on flood map modernization and the Risk Mapping, Assessment, and Planning (MAP) program. This effort includes collaboration with state and local agencies to deliver quality data to increase public awareness of and support for actions that reduce flood-related risks. Risk MAP projects for the lower Ochlockonee River, Apalachicola River, New River, Chipola River, Pensacola Bay, and Perdido River and Bay, Apalachee Bay – St. Marks River, and the lower Choctawhatchee watersheds are underway. In the near term, the District expects to complete detailed coastal remapping studies for Santa Rosa, Okaloosa, Walton and Gulf counties. More information about the District’s flood map modernization and Risk MAP programs may be found at <http://nwfwmdfloodmaps.com/>.
- 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 – 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 landscape scale through implementation of the District’s regional wetland mitigation program for FDOT.

Strategic Priority 6: Flood Protection and Floodplain Management. Protect floodplain functions for the benefit of human communities and natural systems.

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) DFIRM completion incorporating coastal remapping studies for Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties

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

Table 5. NFWFMD Strategic Priorities Matrix (2018-2022)

Strategic Priorities	Applicable Goals	Activities	Success Indicators	Milestones
<p>Springs Protection and Restoration</p> <p><i>Improve water quality and flows within the major spring systems of northwest Florida</i></p>	<p>Natural Systems Protect and enhance natural systems.</p> <p>Water Quality Protect and improve the quality of the District’s water resources.</p>	<p>Cooperative project implementation; MFL development; watershed planning; land management and acquisition; data collection; water use permitting; well regulation</p>	<p>(1) Project accomplishment (percent complete) (2) Trends in nitrate concentrations (3) Trends in spring flows</p>	<p>(1) Completion of spring streambank restoration projects (2018-2019) (2) Implementation of funded BMPs for farmers in the Jackson Blue Spring basin and Mobile Irrigation Lab evaluations (2018-2019) (3) Completion of septic to sewer retrofit projects (2018-2022)</p>
<p>Minimum Flows and Minimum Water Levels (MFLs)</p> <p><i>Develop and implement science-based MFLs that protect water resources and associated natural systems.</i></p>	<p>Water Quality Protect and improve the quality of the District’s water resources.</p> <p>Water Supply Promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.</p>	<p>Data collection, groundwater and surface water modeling, technical assessments; rule making</p>	<p>(1) MFL technical assessment accomplishment (percent complete per the approved schedule) (2) Waterbodies meeting their adopted MFLs (number and percentage)</p>	<p>(1) Completion of technical assessments for the St. Marks River Rise (2018), Wakulla Spring (2020), Sally Ward Spring (2020), the coastal Floridan aquifer in Walton, Okaloosa, and Santa Rosa counties (2020), and Jackson Blue Spring (2022)</p>
<p>Apalachicola-Chattahoochee-Flint River Basin</p> <p><i>Protect Apalachicola River and Bay water quality and freshwater inflow</i></p>	<p>Water Quality Protect and improve the quality of the District’s water resources.</p> <p>Natural Systems Protect and enhance natural systems.</p>	<p>Technical assistance to the State of Florida; cooperative water quality projects; modeling; hydrologic restoration; agricultural BMPs; MIL; springs restoration; land acquisition</p>	<p>(1) Project accomplishment (percent complete) (2) Area restored/treated (acres) (3) Pollutant load reduction (pounds per year)</p>	<p>(1) Completion of Apalachicola Bay water quality projects (2019) (2) Continued participation in supporting state ACF Basin issues (2018-2022)</p>

Strategic Priorities	Applicable Goals	Activities	Success Indicators	Milestones
<p>Water Supply</p> <p><i>Plan and facilitate sustainable water supplies for future reasonable and beneficial uses</i></p>	<p>Water Supply</p> <p>Promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.</p>	<p>Regional water supply assessments and planning; water use permitting; well regulation; modeling; water resource development projects; cooperative projects with local governments and utilities; conservation; land management</p>	<p>(1) RWSP public supply water demands met (volume [MGD] and percentage)</p> <p>(2) Public supply uniform gross per capita water use (GPCD and trend)</p> <p>(3) Public supply uniform residential per capita water use (GPCD and trend)</p> <p>(4) Alternative water supply made available (volume [MGD] and trend)</p>	<p>(1) Completion of local government water supply development grant projects (2018-2019)</p> <p>(2) Completion of Western District Groundwater Model (2018)</p> <p>(3) District-wide Water Supply Assessment Update (2018)</p> <p>(4) Region II RWSP Update (2019)</p> <p>(5) Completion of Central District Groundwater Model (2019)</p>
<p>Watershed Protection and Restoration</p> <p><i>Protect and restore watershed resources and functions.</i></p>	<p>Natural Systems</p> <p>Protect and enhance natural systems.</p> <p>Water Quality</p> <p>Protect and improve the quality of the District's water resources.</p>	<p>SWIM program; cooperative projects with local governments and watershed organizations; shoreline restoration; land management; ERP; FDOT mitigation; and spring restoration and protection</p>	<p>(1) Balance of released mitigation credits</p> <p>(2) Cooperative project implementation (percent complete)</p> <p>(3) Area restored/area treated (acres)</p>	<p>(1) Completion of streambank restoration project (2017-2018)</p> <p>(2) Completion of updated SWIM plans (2018)</p>
<p>Flood Protection and Floodplain Management</p> <p><i>Protect floodplain functions for the benefit of human communities and natural systems</i></p>	<p>Flood Protection and Floodplain Management</p> <p>Maintain natural floodplain functions and minimize harm from flooding.</p>	<p>Flood hazard mapping, assessment and planning; land acquisition and management, ERP; regional wetland mitigation; flood information portal; and LiDAR data</p>	<p>(1) Area of floodplain protected land acquisition (acres)</p> <p>(2) Percent of the District with updated DFIRMs meeting FEMA standards and criteria</p>	<p>(1) DFIRM completion incorporating coastal remapping studies for Santa Rosa, Okaloosa, Walton and Gulf counties (2018-2019)</p>

Note: this matrix is representative and is not intended to include all District activities (including support services), indicators or milestones.

3. Implementation

Table 6 identifies major planned activities within each strategic priority area and outlines the anticipated schedule of implementation over the five-year planning horizon. Some activities will apply to more than one strategic priority but are only shown once under the primary strategic priority in the table below.

Table 6. Anticipated Schedule of Major Tasks

Activities	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Springs Protection and Restoration					
Econfina WMA Restoration Projects	Completion				
Jackson Blue Spring Basin Agricultural BMPs	Ongoing		Completion		
Sod-Based Crop Rotation Project	Ongoing			Completion	
Claiborne Aquifer Investigation	Completion				
Land Acquisition Projects	Ongoing		Completion		
Jackson County Septic-to-Sewer Retrofit Projects	Ongoing			Completion	
Leon County Septic-to-Sewer Retrofit Projects	Ongoing				Completion
Wakulla County Septic-to-Sewer Retrofit Projects	Ongoing				Completion
Minimum Flows and Minimum Water Levels					
Enhanced District-wide Monitoring	Ongoing				
St. Marks River Rise	Ongoing		Assessment Complete		
Wakulla Spring	Ongoing			Assessment Complete	
Sally Ward Spring	Ongoing			Assessment Complete	
Coastal Region II Floridan Aquifer	Ongoing			Assessment Complete	
Jackson Blue Spring	Ongoing				
Shoal River system	Initiation				
Econfina Creek and Springs Complex	Initiation				
Deer Point Lake				Initiation	
Floridan Aquifer, Coastal Bay County					Initiation
ACF Basin Management					
Interstate Coordination and Technical Support	Ongoing				
Apalachicola Bay Water Quality Projects	Ongoing		Completion		

Table 6. Anticipated Schedule of Tasks (Continued)

Activities	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Water Supply					
Water Use Permitting	Ongoing				
Well Regulation Program	Ongoing				
Water Supply Assessment	Completion				
Regional Water Supply Planning	Region II RWSP update		Completion		
Regional Water Supply Planning	Region III RWSP update		Initiation	Completion	
Western District Groundwater Model	Completion		Model Refinement		
Eastern District Groundwater Model	Completion		Model Refinement		
Water Supply Development Assistance	Ongoing		Completion		
Region III Reclaimed Water Projects	Ongoing	Completion			
Reuse and Conservation Planning	Ongoing				
Watershed Protection and Restoration					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
Seven Runs Streambank Restoration	Completion				
Perdido River Paddling Trail	Initiation	Completion			
SWIM Plan Updates	Completion				
Flood Protection and Floodplain Management					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
Land Management	Ongoing				
Flood Hazard Mapping, Assessment and Planning	Ongoing				
Updated DFIRMs	Ongoing				
Coastal Remapping Studies	Completion				

4. Monitoring and Reporting

Annual Work Plan Report

As required by section 373.036, F.S., the Strategic Plan provides for an annual performance review and identification of milestones and deliverables to assess implementation. The review is incorporated as Chapter One of the NFWMD March 1st Consolidated Annual Report (www.nfwwater.com/data-publications/reports-plans/consolidated-annual-reports/). Elements of the Strategic Plan addressed in the report are:

- a) Evaluation of progress toward accomplishing strategic priorities;
- b) Evaluation of indicators specified in Section 2;
- c) Accomplishment of milestones and deliverables; and
- d) Project-based accomplishments from the past fiscal year.

The evaluation of indicators serves several purposes within a strategic plan. Beyond providing an assessment of program implementation, identification and evaluation of indicators helps to further an understanding of resource conditions and to clarify objectives and intended results. Evaluating measures and indicators provides internal and external feedback for ascertaining whether a given project or program is achieving intended results and whether the underlying strategy is appropriate or should be revised.

Additional Periodic Reporting

The Consolidated Annual Report also includes several other annual reports on District programs:

- a) Minimum Flows and Levels Annual Report;
- b) Annual Five Year Capital Improvement Plan;
- c) Five Year Water Resource Development Work Program Annual Report;
- d) Alternative Water Supplies Annual Report;
- e) Florida Forever Work Plan Annual Report;
- f) Mitigation Donation Annual Report;
- g) Surface Water Improvement and Management (SWIM) Priority List; and
- h) Five-Year Water Projects Work Plan.

In addition to the annual reporting described above, each of the state's water management districts completes and submits data for a set of common metrics on a quarterly basis to the Florida DEP. These metrics focus extensively on process efficiency, while also including a limited set of measures intended to reflect resource conditions and management (Table 7):

Table 7. Statewide Water Management District Performance Metrics

Permitting – CUP, ERP
For closed applications within the CUP and ERP permitting areas, median and mean time to process by permit type and total
For closed applications within the CUP and ERP permitting areas, the median and mean 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 > 2 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
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 2015-2035 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
MFL Priorities List Table

5. Financial Resources

The state constitution limits the NFWWMD 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 17-18 ad valorem tax millage rate, as set by the Governing Board, is 0.0353 mills. To meet its areas of responsibility, the District must rely on other sources of funding, when available, including the following:

- State legislative appropriations – management of District-owned lands, Environmental Resource Permitting, programmatic operations, water supply planning and development, research and data collection, watershed restoration and management, spring protection and restoration, and other state priorities
- Land Acquisition Trust Fund – land acquisition, management and restoration of natural systems, enhancement of public access and recreational opportunities on District-owned lands
- Florida Forever – land acquisition and capital improvements for watershed restoration
- Dedicated reserves – water supply development, land management, and regional wetland mitigation
- Federal grants – leverage District and state funding
- Local government and water supply utility cost sharing – cooperative project implementation

The District's budget is adopted annually in September. The budget is submitted at a preliminary level in January of each year and as a proposed budget as the August 1 Tentative Budget Submission. The District's current adopted budget, as well as the Preliminary and Tentative budget submissions may be found online at www.nfwwater.com/business-finance/district-budget/.

6. References and Additional Documents

University of Florida. (2017). *Projections of Florida Population by County 2020-2045, with Estimates for 2016*. Volume 50, Bulletin 177. Gainesville, FL: UF Bureau of Economic and Business Research, April 2017.

U.S. Census Bureau. (2012). *Census 2010*. Summary File 2. Washington, D.C.: U.S. Census Bureau. <http://factfinder2.census.gov>.

Additional Documents

Annual Strategic Water Management Plans

<http://www.nfwwater.com/Data-Publications/Reports-Plans/Water-Management-Plans>

Surface Water Improvement and Management Plans

<http://www.nfwwater.com/Water-Resources/SWIM>

Water Supply Assessments and Regional Water Supply Plans

<http://www.nfwwater.com/Water-Resources/Water-Supply-Planning>

District Budget and Financial Information

<http://www.nfwwater.com/Business-Finance/District-Budget>

Other District Reports and Publications

<http://www.nfwwater.com/Data-Publications/Reports-Plans>