



*STRATEGIC WATER
MANAGEMENT PLAN*
December 2016

NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



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Cover Art: Econfina Creek in Bay County (Photo: J. Crowe)

Executive Summary

The Strategic Water Management Plan (SWMP or Strategic Plan) describes statutory responsibilities of the Northwest Florida Water Management District (NFWFMD or District) and the agency’s current priorities. These responsibilities and priorities encompass the 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 natural systems of northwest Florida.

The District’s four areas of responsibility include water supply, water quality, flood protection and floodplain management, and natural systems. To meet these responsibilities, the District will implement the six strategic priorities listed below.

Strategic Priorities for Fiscal Years 2017-2021

- ◆ **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:** *Ensure sufficient water is available for all existing and future reasonable-beneficial uses and natural systems.*
- ◆ **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.*

A snapshot of major planned activities and implementation schedule within each strategic priority area are summarized below. Several activities achieve multiple priorities.

Activities	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Springs Protection and Restoration					
Econfina WMA Streambank Restoration Projects	Completion				
Holmes Creek WMA Streambank Restoration Projects	Completion				
Jackson Blue Spring Basin Agricultural BMPs	Ongoing		Completion		
Sod-Based Crop Rotation Demonstration Project	Ongoing			Completion	
Gainer, Cypress, and Jackson Blue Spring Land Acquisition	Completion				

Activities	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Claiborne Aquifer Investigation	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				
ACF Basin Management					
Interstate Coordination and Technical Support	Ongoing				
Apalachicola Bay Water Quality Projects	Ongoing		Completion		
Water Supply					
Groundwater and Surface Water Permitting	Ongoing				
Regulation of Wells	Ongoing				
Water Supply Assessment	Ongoing	Completion			
Regional Water Supply Planning	Region II RWSP update		Completion		
Western District Groundwater Model	Completion				
Central District Groundwater Model	Initiation			Completion	
Water Supply Development Assistance	Ongoing				
Reuse and Conservation Planning	Ongoing				
Watershed Protection and Restoration					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
SWIM Plan Updates	Ongoing	Completion			

Activities	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
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				

Progress on projects and assessment of success is reported in an annual performance review via the March 1 Consolidated Annual Report (www.nwfwater.com/data-publications/reports-plans/consolidated-annual-reports/).

1. Introduction

The Strategic Water Management Plan (SWMP or Strategic Plan) describes statutory responsibilities of the Northwest Florida Water Management District (NFWFMD or District) and the agency’s current priorities. 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 natural systems 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 strategies employed to accomplish these priorities and outlines success indicators, funding sources, deliverables, and milestones, as well as associated activities planned over the five-year planning horizon. Section 3 provides the implementation schedule of major tasks from 2017-2021, followed by monitoring and reporting of progress in Section 4, financial resources in Section 5 and a list of referenced information.

About the Northwest Florida Water Management District

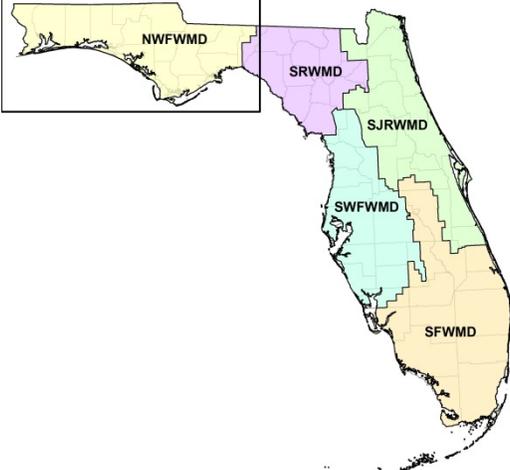
The NFWFMD is one of five water management districts established by the Florida Water Resources Act of 1972 (Chapter 373, F.S.). Its geographic region extends from the St. Marks River watershed in Jefferson County to the Perdido River in Escambia County (Figure 1).



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 natural systems 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:

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. Surface Water Improvement and Management (SWIM) Watersheds in the District

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 2015, there were an estimated 1,416,819 permanent residents in northwest Florida (University of Florida 2016), 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 1). Population is projected to grow to 1,706,239 by 2040 (University of Florida 2016), reflecting a 20 percent increase over 25 years.

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 1. Population and Growth by County

County	2010 Population Estimate	2015 Population Estimate	2040 Population Projection ¹	Percent Change 2015 - 2040
Bay	168,852	173,310	213,200	23%
Calhoun	14,625	14,549	16,100	11%
Escambia	297,619	306,944	333,600	9%
Franklin	11,549	11,840	12,300	4%
Gadsden	46,389	48,315	51,900	7%
Gulf	15,863	16,346	17,600	8%
Holmes	19,927	19,902	20,900	5%
Jackson	49,746	50,458	52,700	4%
Jefferson ²	10,417	10,246	10,939	7%
Leon	275,487	284,443	350,200	23%
Liberty	8,365	8,698	11,000	26%
Okaloosa	180,822	191,898	223,500	16%
Santa Rosa	151,372	162,925	226,600	39%
Wakulla	30,776	31,283	40,700	30%
Walton	55,043	60,687	96,700	59%
Washington	24,896	24,975	28,300	13%
Total	1,361,748	1,416,819	1,706,239	20.43%

¹ Medium growth scenario

² Estimated population within NFWFMD

Sources: 2010 estimates by U.S. Census Bureau; 2015 estimates and 2040 projections by UF BEBR 2016

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 2.

Table 2. NFWFMD Strengths, Opportunities, and Challenges

<p>Strengths</p>	<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 and inland and coastal interconnects
<p>Opportunities</p>	<ul style="list-style-type: none"> ● Continued development of alternative water supply sources ● Potential for additional water conservation ● Potential to acquire undeveloped floodplain and recharge areas ● Potential for reuse system development and expansion to meet nonpotable demands, provide beneficial aquifer recharge, and enhance water quality ● MFL establishment for priority waterbodies; enhanced data collection and technical analyses ● Federal and other external funding sources that can match and extend existing funds ● New technology and data sources
<p>Challenges</p>	<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 agency 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 3). Thus, the SWMP reflects an integrated approach to the major water resource challenges facing the District.

Table 3. 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:		
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
SWIM Plans (multiple)	Watershed protection, management, and restoration (373.451-459, F.S.)	Updated as needed
Hydrologic Monitoring Plan	Surface and ground water hydrologic and water quality monitoring (373.036; 373.451-459, F.S.)	Updated biennially
Minimum Flows and Levels (MFLs) Priority List	Priority list for development of MFLs (373.042, F.S.)	Updated annually
Annual Regulatory Plan	Compliance with statutory requirements and schedule for rulemaking, where applicable (120.74, F.S.)	Updated annually

Plan / Regulation	Purpose (Primary Statute)	Horizon (Updates)
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 2017-2021

Implementation of the District's strategic priorities is accomplished through coordinated activities within each of the agency's major divisions: Land Management and Acquisition, 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.

Springs Protection and Restoration

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

- Jackson Blue Spring Basin Agricultural Best Management Practices – 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), the Florida Department of Environmental Protection (DEP), and the Jackson Soil and Water Conservation District, are expected to continue conserving water and improving water quality without compromising production yields. Through FY 2015-2016, the program has assisted 43 producers and up to 30 more are anticipated by the end of FY 2017-2018.
- Sod-based crop rotation demonstration project – 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 11 years. With new grant funding from DEP received in FY 2016-2017, this project will be expanded into a pilot project providing funding for up to four producers to convert up to 160 irrigated acres and implement the sod-based rotation through a complete four-year rotation cycle. The goal of the project is to reduce water use (by up to 60%) and nutrient application rates (up to 50%) while increasing crop yields (by 15-40%) to lands within the Jackson Blue Spring basin.
- Land acquisition – The District has been awarded state grant funds for land acquisition to protect the Gainer Springs Complex and Cypress Spring. The Gainer Springs project includes a fee simple and less-than-fee acquisition of up to 982 acres and spring bank restoration at first magnitude springs complex along Econfina Creek in northern Bay County. The Cypress Spring project involves purchase of a conservation easement on up to 302 acres at a second magnitude spring along Holmes Creek in central Washington County.
- Septic to sewer retrofit projects for Wakulla Spring – The District continues partnerships with Leon and Wakulla counties for five major septic to central sewer retrofit projects in the Wakulla Spring groundwater contribution area. The Woodside Heights project in southern Leon County will connect a total of 200 homes to the City of Tallahassee's Advanced Wastewater Treatment (AWT) facility. The Magnolia and Wakulla Gardens projects in Wakulla County will connect up to 716 homes to central sewer services. The county is upgrading its Otter Creek WWTF to AWT as part of this project. The City of Tallahassee will complete a project to connect up to 130 homes to existing sewer service in the south-western portion of the city. Additionally, a project to design new central sewer service that connects the Woodville community in southern Leon County to the City of Tallahassee is planned. In total, these projects are estimated to reduce nitrogen loading to Wakulla Spring by 29,534 lbs/yr.

- Septic to sewer retrofit projects for Jackson Blue Spring – A project underway in Jackson County will extend central sewer service in the Indian Springs neighborhood for up to 125 septic tanks in the Jackson Blue Spring and Merritt’s Mill Pond groundwater contribution area. A new project in Jackson County will extend central sewer service from Marianna up to the Jackson Blue Spring Recreation Area, eliminating a septic tank at the spring head and up to 56 homes along the spring run. Both these projects are in partnership the City of Marianna WWTF. Combined, these septic-to-sewer projects are estimated to reduce nitrogen loading to first magnitude springs by 2,986 lbs/yr.
- Advanced septic systems pilot project – The District is partnering with the Florida Department of Environmental Protection, the Florida Department of Health, Leon County, Wakulla County and stakeholders to develop up to two advanced septic system pilot projects within the Wakulla Spring BMAP priority focus areas. This project will focus on rural neighborhoods where septic-to-sewer connections are not feasible.
- Bay County Restoration – A three-acre acquisition along Econfina Creek was completed in 2016. Shoreline restoration including non-structural protection measures to reduce erosion and improve shoreline habitats will be completed in 2017.
- Devil’s Hole Spring Streambank Restoration – Also in the Econfina Creek WMA, the Devil’s Hole spring public access site has experienced bank erosion due to intensive use. The project involves stabilizing the east and west banks of Econfina Creek in the area of Devil’s Hole Spring. Visitor facilities will be constructed to direct use to boardwalks, a canoe dock, and an overlook in order to protect a unique geologic formation and prevent streambank degradation.
- Holmes Creek Streambank Restoration – Three restoration sites are located along Holmes Creek in Washington County within the Choctawhatchee River and Holmes Creek WMA. Streambank restoration and protection activities are planned at Hightower Springs and Spurling landings. Each site will receive vegetated retaining walls utilizing geotextiles and native vegetation, stormwater facilities, access road and parking improvements, and protective fencing. Restoration activities at Live Oak Landing include construction of a fishing pier in cooperation with Washington County.
- Cotton Landing Streambank Restoration – Also in the Holmes Creek WMA, a project at Cotton Landing public access site will stabilize approximately 125 linear feet of shoreline to reduce erosion and provide stormwater treatment. Streambank stabilization will be accomplished using primarily natural materials and techniques, such as vegetated retaining walls and native material revetments. Boardwalks and access points will be installed to prevent future water quality and habitat impacts while facilitating public access and compatible use.
- Blue Spring Campsite Restoration – The District has been awarded funding to complete public access improvements and shoreline restoration at second magnitude Econfina Blue Spring on Econfina Creek. The project is anticipated to be completed in FY 2017-2018.
- Claiborne Aquifer Evaluation – The District is continuing an investigation into feasibility of increased utilization of the Claiborne aquifer within the Jackson Blue Spring contribution area. The project involves constructing test and monitoring wells and modeling to determine the aquifer’s viability as a potential alternative water source to offset demand in the Floridan aquifer, making additional water available to springs.

- Water Quality and Flow Monitoring – The District is continuing water quality monitoring at Wakulla, Jackson Blue, Pitt, Econfina Blue, and Williford springs and measuring continuous 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.
- Groundwater and Surface Water Regulation – 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.

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
Milestones:	(1) Completion of spring streambank restoration projects (2016-2017) (2) Implementation of funded BMPs for farmers in the Jackson Blue Spring basin and Mobile Irrigation Lab evaluations (2017-2018) (3) Completion of Leon, Wakulla and Jackson County 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 integrates other efforts, including consumptive use permitting, regional water supply planning, and watershed management. The District has developed work plans and initiated enhanced data collection efforts toward completion of MFL technical assessments. 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), and the coastal Floridan aquifer (2020) in Walton, Okaloosa, and Santa Rosa counties. Enhanced data collection, groundwater and surface water modeling, and development of technical assessments will continue for Jackson Blue Spring and the Shoal River system, and data collection will be initiated to support MFL development for the Econfina Creek and Springs 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.

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), and the coastal Floridan aquifer in Walton, Okaloosa, and Santa Rosa counties (2020)

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 District has developed an updated hydrodynamic model for Apalachicola River and Bay, including a freshwater flow model for the Apalachicola River and delta and Tates Hell Swamp, to help support resource assessments and evaluations of potential actions. Additionally, the District has completed several hydrologic restoration projects in Tates Hell Swamp to enhance the quality, quantity and timing of freshwater inflows to Apalachicola Bay. 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 best management practices. 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 City of Apalachicola to complete three stormwater retrofit projects that will improve the quality of water entering Apalachicola Bay. The projects will improve the water quality of stormwater from 175 acres in the downtown area, while also providing flood relief to the community.

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

Indicators:	(1) Cooperative project implementation (number and percent complete) (2) Area restored (acres) (3) Stormwater treatment area (acres)
Funding sources:	(1) State Legislative Appropriations (2) Land Acquisition Trust Fund (3) General Fund Reserves
Milestones:	(1) Completion of three cooperative water quality improvement projects: U.S. 98 and 16 th Street, Prado Outfall, and Avenue I stormwater retrofits (2016-2017) (2) Completion of Apalachicola Bay water quality projects (2019) (3) Continued participation in supporting state ACF Basin issues (2017-2021)
Deliverables:	(1) Grant project completion reports

Water Supply

The District works to ensure availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems through coordinated resource planning and regulation efforts. These include the following:

- **Consumptive Use Permitting** – 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.
- **Regulation of Wells** – 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.
- **District-wide 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, central, and eastern district; and continued efforts in support of the statewide expansion of alternative water sources.

- Water Supply Development Assistance – Financial and technical assistance is provided to local governments and utilities for water supply development. This effort includes grant funding designed to meet local challenges, such as water loss in aging and small systems, while also accomplishing regional priorities for resource management.
- Land Management – Protection, restoration, and management of water management lands is a major component of the District’s effort to ensure the long-term sustainability of the region’s water supplies. For example, the Econfina Creek WMA was acquired to secure the primary recharge area for Floridan aquifer springs that provide substantial base flow to Econfina Creek, which is the major tributary of Deer Point Lake Reservoir – the primary source of potable water for Bay County.

Strategic Priority 4: Water Supply. Ensure sufficient water is available for all existing and future reasonable-beneficial uses and natural systems.

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)
 (5) Project accomplishment (percent complete)

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 (2016-2019)
 (2) Completion of Western District Groundwater Model (2017)
 (3) District-wide Water Supply Assessment Update (2017-2018)
 (4) Region II RWSP Update (2018)
 (5) Completion of Central District Groundwater Model (2019)

Deliverables: (1) Water use data
 (2) District-wide water supply assessment updates
 (3) RWSP updates
 (4) Grant project completion reports

Watershed Protection and Restoration

Through the SWIM program, the District follows a watershed-based, cooperative approach to protect and restore water and habitat quality for regionally significant waterbodies. Currently, the District is focusing efforts on water and habitat quality within Apalachicola and St. Andrew bays. Efforts also continue to address priority needs for watersheds across northwest Florida. Among current initiatives and priorities are:

- Gulf of Mexico Restoration – The District continues to work in cooperation with DEP, the Florida Fish and Wildlife Conservation Commission (FWC), and other regional stakeholders in Gulf of Mexico restoration. These activities help to implement the federal RESTORE Act and to effectively use civil penalty funding from MOEX Offshore, LLC (MOEX) settlement to mitigate damages incurred from the 2010 Deepwater Horizon oil spill. In addition and through grant funds from the National Fish and Wildlife Foundation, the District will complete updates to its SWIM plans for all seven watersheds in late 2017. This effort will help prioritize projects within each watershed as well as provide a useful tool for local governments.

- SWIM Program – The SWIM program provides the planning framework for watershed management, protection, and restoration District-wide. Plans have been approved for major riverine-estuarine watersheds from Pensacola Bay through the St. Marks River watershed. Current projects underway are to implement stormwater retrofits in cooperation with the cities of Apalachicola and Carrabelle. As noted above, current plans for each of the District’s major watersheds will be completed by 2017.
- Seven Runs Streambank Restoration – A streambank 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.nfwmdwetlands.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.

Indicators:	(1) Balance of released mitigation credits, reflective of net functional lift achieved under the District’s Umbrella Mitigation Plan (credits) (2) Cooperative project implementation (percent complete) (3) Area restored (acres) (4) Stormwater treatment area (acres)
Funding sources:	(1) State Legislative Appropriations (2) General Fund Reserves (3) FDOT Mitigation Funding (4) RESTORE Act and settlement funds (5) Florida Forever Trust Fund
Milestones:	(1) Completion of three cooperative stormwater retrofit projects in the Apalachicola River and Bay watershed: US 98 and 16th Street basin, Prado Outfall basin, Avenue I basin (2016-2017) (2) Completion of streambank restoration project (2017) (3) 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, are underway. In the near term, the District expects to complete detailed coastal remapping studies for Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties.
- 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.

- Flood Information Portal – The District provides internet access to digital flood maps throughout northwest Florida through the Flood Information Portal: portal.nwfwmdfloodmaps.com.
- Light Detection and Ranging (LiDAR) data – The District continues to provide the public with high-resolution topographic elevation data for properties across northwest Florida.

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

Indicators:	<ul style="list-style-type: none"> (1) Area of floodplain protected through fee or less-than-fee acquisition (acres) (2) Percent of the District with updated DFRIMs meeting FEMA standards and criteria
Funding sources:	<ul style="list-style-type: none"> (1) Federal Emergency Management Agency (2) State Legislative Appropriations (3) General Fund Reserves (4) FDOT Mitigation Funding
Milestones:	<ul style="list-style-type: none"> (1) DFIRM completion incorporating coastal remapping studies for Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties (2017-2018)
Deliverables:	<ul style="list-style-type: none"> (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

3. Implementation

Table 4 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 4. Anticipated Schedule of Major Tasks

Activities	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Springs Protection and Restoration					
Econfina WMA Streambank Restoration Projects	Completion				
Holmes Creek WMA Streambank Restoration Projects	Completion				
Jackson Blue Spring Basin Agricultural BMPs	Ongoing		Completion		
Sod-Based Crop Rotation Demonstration Project	Ongoing			Completion	
Gainer, Cypress, and Jackson Blue Spring Land Acquisition	Completion				
Claiborne Aquifer Investigation	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				
ACF Basin Management					
Interstate Coordination and Technical Support	Ongoing				
Apalachicola Bay Water Quality Projects	Ongoing		Completion		

Table 4. Anticipated Schedule of Tasks (Continued)

Activities	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21
Water Supply					
Groundwater and Surface Water Permitting	Ongoing				
Regulation of Wells	Ongoing				
Water Supply Assessment	Ongoing	Completion			
Regional Water Supply Planning	Region II RWSP update		Completion		
Western District Groundwater Model	Completion				
Central District Groundwater Model	Initiation			Completion	
Water Supply Development Assistance	Ongoing				
Reuse and Conservation Planning	Ongoing				
Watershed Protection and Restoration					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
SWIM Plan Updates	Ongoing	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 5):

Table 5. 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 water body 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 NFWMD to 1/20th (.05 mills) of the ad valorem taxing authority afforded to the other four water management districts. The District's current ad valorem tax millage rate, as set by the Governing Board, is 0.0366 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. (2016). *Projections of Florida Population by County 2020-2045, with Estimates for 2015*. Volume 49, Bulletin 174. Gainesville, FL: UF Bureau of Economic and Business Research, January 2016.

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>