

# Strategic Water Management Plan

September 2018

Northwest Florida Water Management District  
Program Development Series 2018 | PDS 18-01



*Apalachicola River, May 2018*

# NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT



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# Table of Contents

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<b>INTRODUCTION</b>	<b>1</b>
<b>STRATEGIC PRIORITIES FOR 2019-2023</b>	<b>9</b>
<b>IMPLEMENTATION</b>	<b>21</b>
<b>MONITORING AND REPORTING</b>	<b>23</b>
<b>FINANCIAL RESOURCES</b>	<b>25</b>
<b>REFERENCES AND ADDITIONAL RESOURCES</b>	<b>26</b>

*Cover Photograph: Apalachicola River (NFWMD)*

# 1. Introduction

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

The following provides a brief overview of the resources of the District, including a strengths, opportunities, and challenges 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 2019-2023. 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:

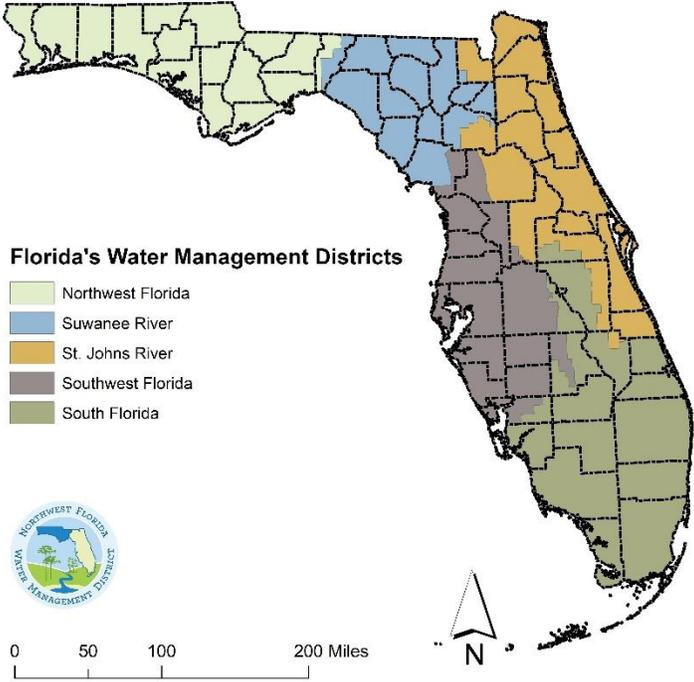
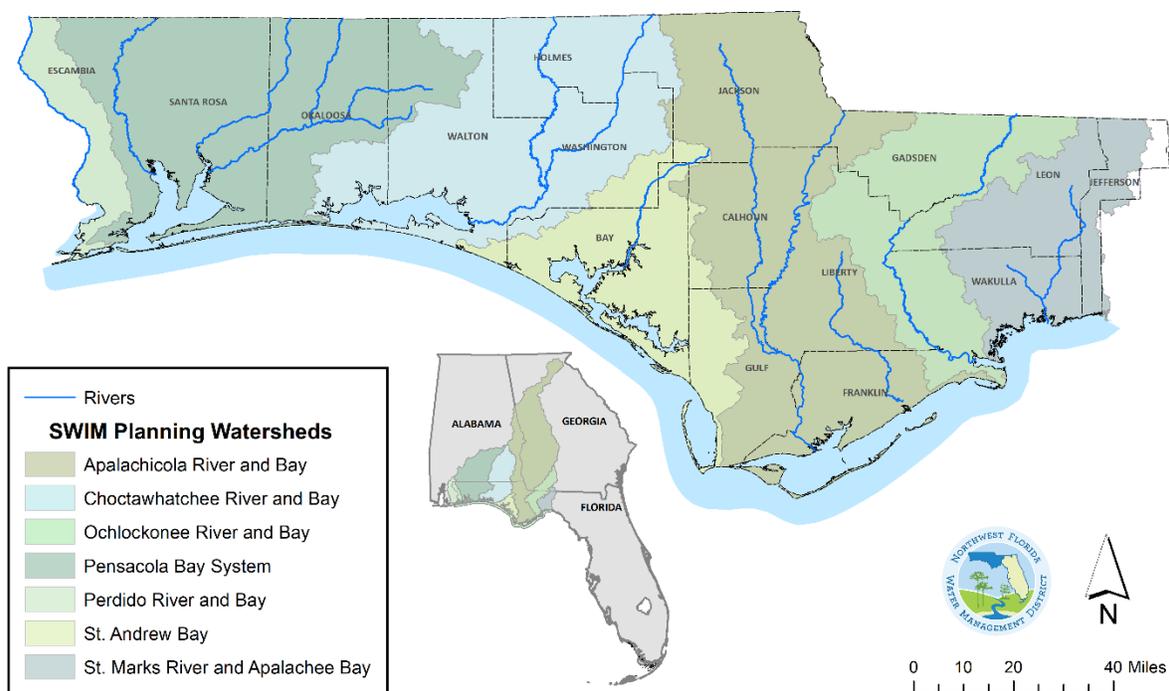


Figure 1. Northwest Florida Water Management District

<b>Water Supply</b>	Promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems.
<b>Water Quality</b>	Improve and protect the quality of the District’s water resources.
<b>Flood Protection and Floodplain Management</b>	Maintain natural floodplain functions and minimize harm from flooding.
<b>Natural Systems</b>	Enhance and protect 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, Choctawhatchee and Escambia rivers comprise three of Florida’s five largest rivers by volume of flow, with the Apalachicola River being the largest. The District contains more than 250 springs, including five first-magnitude springs: Wakulla Spring, Jackson Blue Spring, the Gainer Springs Group, St. Marks River Rise, and the submarine Spring Creek Springs Group.



**Figure 2. Northwest Florida Watersheds**

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.

As of 2017, there were an estimated 1.45 million permanent residents in northwest Florida (BEBR 2018), 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 2045, reflecting a 22.88 percent increase over 28 years (BEBR 2018).

Changes in land use and population present 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	2017 Population	2045 Population Projection <sup>1</sup>	Percent Change 2017-2045
Bay	168,852	178,820	225,100	25.88%
Calhoun	14,625	15,001	17,300	15.33%
Escambia	297,619	313,381	352,000	12.32%
Franklin	11,549	12,161	13,900	14.30%
Gadsden	46,389	48,263	50,900	5.46%
Gulf	15,863	16,297	18,500	13.52%
Holmes	19,927	20,210	21,800	7.87%
Jackson	49,746	50,418	52,800	4.72%
Jefferson <sup>2</sup>	10,417	10,311	11,009	6.77%
Leon	275,487	287,899	344,100	19.52%
Liberty	8,365	8,719	10,600	21.57%
Okaloosa	180,822	195,488	234,200	19.80%
Santa Rosa	151,372	170,835	250,900	46.87%
Wakulla	30,776	31,909	42,000	31.62%
Walton	55,043	65,301	109,100	67.07%
Washington	24,896	24,985	27,600	10.47%
<b>Total</b>	<b>1,361,748</b>	<b>1,449,998</b>	<b>1,781,809</b>	<b>22.88%</b>

<sup>1</sup> Medium growth scenario

<sup>2</sup> Estimated population within NFWFMD

Sources: 2010 estimates by U.S. Census Bureau; 2017 estimates and 2045 projections by UF BEBR 2018

## 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 out-of-state water withdrawals; water quality issues at some of the District’s springs; and rising demands for potable water for people, business, and agriculture. Current strengths, opportunities, and challenges are outlined in Table 3.

**Table 3. NFWFMD Strengths, Opportunities, and Challenges**

<p><b>Strengths</b></p>	<ul style="list-style-type: none"> <li>• Partnership and cooperation with other governmental and private organizations with complementary functions and authority</li> <li>• Extensive water management lands and other public lands that protect water quality, floodplains, water recharge, and ecosystem health and productivity</li> <li>• Ability to leverage external funding</li> <li>• Technical capability and long-term outlook</li> <li>• Improved consumptive use permitting regulations for state-wide consistency and permit streamlining</li> <li>• Development of alternative water supplies</li> </ul>
<p><b>Opportunities</b></p>	<ul style="list-style-type: none"> <li>• Establishment of Minimum Flows and Minimum Water Levels (MFLs) for priority waterbodies; enhanced data collection and technical analyses</li> <li>• Continued development of alternative water supply sources</li> <li>• Potential to acquire floodplain and recharge areas to protect springs, surface waters, and groundwater resources</li> <li>• Opportunities to provide additional spring and other sensitive resource protection through improved management and treatment of domestic wastewater</li> <li>• Potential for reuse system development and expansion to meet non-potable demands, provide beneficial aquifer recharge, and enhance water quality</li> <li>• Potential for additional water conservation</li> <li>• Dedicated funding resources to restore and protect Gulf of Mexico and related resources.</li> <li>• Other funding sources that can match and extend existing funds</li> <li>• New technology and data sources</li> </ul>
<p><b>Challenges</b></p>	<ul style="list-style-type: none"> <li>• Out-of-state water withdrawals</li> <li>• Water quality issues at some of the District’s springs</li> <li>• Saltwater intrusion in groundwater aquifers serving coastal populations</li> <li>• Rising demands for potable water for people, business, and agriculture</li> <li>• Nonpoint source pollution</li> <li>• Fragmentation of wetlands and other water-related habitats</li> <li>• Hydrologic and water quality data gaps</li> <li>• Infrastructure funding limitations, particularly on the part of financially disadvantaged small local governments</li> </ul>

**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 SWMP 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 SWMP 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**

Document or Report	Purpose	Periodicity	Due Date
Follow-up to Auditor General audit report	Status report to the Legislative Auditing Committee of corrective actions taken to address findings of the Auditor General operational audit (section 20.055(6)(h), F.S.)	Every three years	No later than 6 months after audit report
Annual Regulatory Plan	Annual plan listing laws enacted or amended during previous 12 months that create or modify duties or authority of the agency; also lists laws the agency plans to implement by rulemaking before the following July 1, except emergency rulemaking (section 170.74, F.S.)	Annual	October 1
Annual Wetlands Report	Summary for DEP of wetland impacts associated with permitting activities during each fiscal year (62-40.540(7), FAC)	Annual	October 10
Water Resource Development Work Program (WRDWP)	Draft work program for development of alternative sources within regional water supply planning areas (sections 373.536(6)(a)3 and 373.709, F.S.)	Annual	30-days from adopted budget
Strategic Water Management Plan (SWMP)	District-wide plan for water supply, flood protection, water quality, and natural systems; establishes strategic priorities for the next five-year period (section 373.036, F.S.)	Annual	November
Minimum Flows and Minimum Water Levels Priority List	Priority list for development of MFLs (section 373.042(2), F.S.)	Annual	November 15
Sand Hill Lakes Mitigation Bank Annual Monitoring Report	Annual report on implementation of the Sand Hill Lakes Mitigation Bank as required by FDEP Permit # 0227351-001	Annual	December

<b>Document or Report</b>	<b>Purpose</b>	<b>Periodicity</b>	<b>Due Date</b>
Preliminary Budget	Preliminary budget report prepared and submitted in accordance with section 373.536, F.S.	Annual	January 15
FEMA Risk MAP and Map Modernization Business Plan	Flood map modernization plan for the Northwest Florida Water Management District	Annual	January
Annual Agency Reuse Report	Report to the Department of Environmental Protection summarizing activities designed to utilize reclaimed water at facilities; with a summary of the amounts of reclaimed water used for beneficial purposes (section 403.0645, F.S.)	Annual	February 1
Umbrella, Watershed-based Regional Mitigation Plan	District-wide wetland mitigation plan for state transportation projects (section 373.4137, F.S., 33 U.S.C. 1344)	Annual	February and as needed
Consolidated Annual Report	Consolidated report on the management of water resources; compiles several statutorily required annual reports (section 373.036, F.S.)	Annual	March 1
SWMP Annual Work Plan Report	Within March 1st Consolidated Annual Report; annual report addressing SWMP implementation – including success indicators, deliverables, and milestones (section 373.036(2)(e)4, F.S.)	Annual	March 1
Final MFL Priority List	Within March 1st Consolidated Annual Report; final approved priority list (section 373.042(2), F.S.)	Annual	March 1
Annual Five-Year Capital Improvement Plan	Within March 1st Consolidated Annual Report; projected revenues and expenditures for capital improvements (section 373.536(6)(a)3, F.S.)	Annual	March 1
Final WRDWP	Within March 1st Consolidated Annual Report; final WRDWP update (section 373.536(6)(a)4, section 373.709, F.S.)	Annual	March 1
Alternative Water Supplies Annual Report	Within March 1st Consolidated Annual Report; annual report detailing projects, expenditures, and anticipated quantities of water made available (section 373.707(8)(n), F.S.)	Annual	March 1
Florida Forever Work Plan Annual Report	Within March 1st Consolidated Annual Report; annual report detailing approved land acquisition and capital improvement projects pursuant to the Florida Forever program (section 373.199(7), F.S.)	Annual	March 1

<b>Document or Report</b>	<b>Purpose</b>	<b>Periodicity</b>	<b>Due Date</b>
Mitigation Donation Annual Report	Within March 1st Consolidated Annual Report; annual report on cash donations accepted as mitigation (section 373.414(1)(b)2, F.S.)	Annual	March 1
Mail List	Survey of addresses on each publication mailing lists and disclose whether publications are available on the agency's website (section 283.55, F.S.)	Every odd numbered year	March 1
In Lieu Fee Instrument Annual Program Report	Annual program report prepared and submitted in accordance with the District's In-Lieu Fee Final Instrument and U.S. Army Corps of Engineers permit SAJ-2011-00287-TMF	Annual	March
Continuity of Operations Plan Update	Policy and guidance to ensure continuation of mission critical functions through emergency situations (section 252.365(3)(a), F.S.)	Annual	March
Annual Report on Habitat Impacts, Preservation, and Restoration	Cumulative summary of permitted wetland impacts together with a corresponding summary of wetlands and associated habitats restored and protected through District programs	Annual	May
District financial audit reports	Audits conducted pursuant to s. 218.39, F.S., section 215.97, F.S., federal requirements, and Auditor General rules are to be distributed per sections 373.536(6)(a) and 218.32(1)(d), F.S.	Annual	June 30
Tentative Budget Report	Tentative annual budget prepared and submitted in accordance with section 373.536, F.S.	Annual	August 1
Water Supply Assessment	Provides district-wide resource assessment and estimates and projections of water demand (section 373.036, F.S.)	Every five years	As scheduled
Regional Water Supply Plans	Regional plans that describe conditions and identify water sources, demands, and alternative water supply sources (section 373.709, F.S.)	Every five years	As scheduled
Surface Water Improvement and Management (SWIM) Priority List	Prioritization of watersheds and waterbodies for SWIM plan development (section 373.453(1)(a), F.S.); within the March 1st Consolidated Annual Report	Every five years	As needed
SWIM Plans	Watershed, management, restoration and protection (section 373.453(2), F.S.)	As needed	As needed

## 2. Strategic Priorities for 2019-2023

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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 2019-2023

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

Springs restoration and protection is carried out through the District's SWIM, MFL, Land Management and Acquisition, and Water Use Permitting programs. Current 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 (DACCS), 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 67 of the 83 projects awarded have been completed and approximately 30 more are anticipated on an annual basis.

The District continues to partner with the University of Florida's Institute of Food and Agricultural Sciences (IFAS) for continued research and public outreach on grass-based crop rotation efforts. Activities include evaluations of non-traditional crops for effectiveness in

reducing water and nutrient use. In addition, the District is working on a federal 319(h) grant project to provide cost-share grants to agriculture producers for implementation of grass-based crop rotation practices. As of June 2018, seven contracts with agricultural producers have been executed and two additional contracts are under final review. This program is part of the District's Agriculture BMP and mobile irrigation lab programs that work to restore and protect the quality and quantity of water within the Jackson Blue Spring groundwater contribution area.

- Septic-to-Sewer Retrofit Projects – Implementation of five 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) area.
  - Malone High School Sanitary Sewer Connection Project- Connect Malone HS to the Malone WWTP, abandoning 10 septic systems in the process.
- 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. The projects include shoreline restoration and protection, stormwater facilities, and public access improvements. Project planning for restoration work at Horn Spring in eastern Leon County is also underway.
- 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 water supply for Bay County.
- Water Use Permitting – Regulation of ground and surface water withdrawals is a tool for preventing impacts to water resources contributing to both public water supplies and natural systems such as springs, rivers, lakes, wetlands, and estuaries.

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

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Success Indicators: (1) Project accomplishment (percent complete)  
(2) Trends in nitrate concentrations  
(3) Trends in spring flows

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Funding sources: (1) State Legislative Appropriations  
(2) Land Acquisition Trust Fund  
(3) General Fund Reserves  
(4) Florida Forever Trust Fund

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Milestones: (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 (2019-2023)

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Deliverables: (1) Mobile Irrigation Lab evaluation reports  
(2) Water quality data  
(3) Spring discharge data

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### Minimum Flows and Minimum Water Levels

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 would be significantly harmful to the water resources or 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, MFLs will be completed for the St. Marks River Rise (2019), Sally Ward Spring (2021), Wakulla Spring (2021), the coastal Floridan aquifer in Walton, Okaloosa, and Santa Rosa counties (2021), and Jackson Blue Spring (2023). Enhanced data collection, groundwater and surface water modeling, and development of technical assessments continues for the Shoal River System and several springs in Bay and Washington counties.

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/](http://www.nfwfwater.com/water-resources/minimum-flows-levels/).

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

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Success Indicators: (1) MFL technical assessment accomplishment (percent complete per the approved schedule)  
(2) Waterbodies meeting their adopted MFLs (number and percentage)

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Funding sources: (1) General Fund Reserves  
(2) State Legislative Appropriations

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Milestones: (1) Completion of MFLs for the St. Marks River Rise (2019), Wakulla Spring (2021), Sally Ward Spring (2021), the coastal Floridan aquifer in Region II (2021), and Jackson Blue Spring (2023).

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

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## 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:

- Agricultural Best Management Practices – To both conserve water and to restore and protect water quality, the District is working with agricultural producers, DACS, DEP, and the Natural Resources Conservation Service to implement enhanced agricultural BMPs in Florida’s portion of the basin. These efforts include the Agricultural BMP Cost Share and Grass-Based Crop Rotation programs described above and the Northwest Florida Mobile Irrigation Laboratory (MIL). The MIL 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 public on water conservation, irrigation planning, and irrigation management.
- Septic-to-Sewer Retrofit Projects – Implementation of major septic-to-sewer retrofit projects to help reduce nutrient loading to and protect Jackson Blue Spring. This includes:
  - 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.
  - Malone High School Sanitary Sewer Connection Project- Connect Malone HS to the Malone WWTP, abandoning 10 septic systems in the process.
- Water Quality and Flow Monitoring – The district continues to monitor water quality and measuring spring flow in Jackson County to ensure the health of the resources.
- Water Use Permitting – Regulation of ground and surface water withdrawals is a tool for preventing impacts to the water resources contributing to spring systems, rivers, lakes, wetlands, water supplies, and other water systems.
- 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.
  - City of Carrabelle Lighthouse Estates Phases I-II: 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.
  - City Apalachicola Stormwater Retrofit Project – Low-impact design practices and other infrastructure improvements to improve the quality of waters entering the bay.

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

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Success Indicators:	(1) Project accomplishment (percent complete) (2) Area restored or treated (acres) (3) Pollutant load reduction (pounds per year)
Funding sources:	(1) State Legislative Appropriations (2) Natural Resources Damages Act Restoration Program (3) Land Acquisition Trust Fund (4) General Fund Reserves
Milestones:	(1) Completion of Apalachicola Bay water quality projects (2019-2021) (2) Continued participation in supporting state ACF Basin issues (2019-2023)
Deliverables:	(1) Grant project completion reports

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### 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.

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

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Success Indicators: (1) RWSP public supply water demands met (volume Million Gallons per Day [mgd] and percentage)  
(2) Public supply uniform gross per capita water use (Gallons Per Capita Per Day [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)

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Funding sources: (1) Ad Valorem Tax Revenue  
(2) General Fund Reserves  
(3) Water Protection and Sustainability Program Trust Fund  
(4) State Legislative Appropriations

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Milestones: (1) Completion of local government water supply development grant projects (2018-2019)  
(2) Completion of North Bay Wastewater Reuse project (2019-2020)  
(3) Region II RWSP Update (2018-2019)

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

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## Watershed Restoration and Protection

- Gulf of Mexico Restoration – The District continues to work in cooperation with DEP, the Florida Fish and Wildlife Conservation Commission (FWC), and other stakeholders in Gulf of Mexico restoration. These activities help to implement the federal RESTORE Act and to effectively use civil penalty funding from settlements and the Natural Resources Damages Assessment (NRDA) process to mitigate damages incurred from the 2010 Deepwater Horizon oil spill.
- Perdido River Paddling Trail Project – The District will construct improvements at five recreation sites within the Perdido River WMA. Improvements consist of construction of camping shelters; road work; bank protection; and installation of ramps, composting toilets, signs, and campsite amenities. This work will complement comparable projects to be completed on other lands along the Perdido River owned by Escambia County and The Nature Conservancy.
- City of Port St. Joe Stormwater Project – The City of Port St. Joe will construct stormwater retrofit facilities within the 280-acre Forest Park basin and develop a stormwater master plan for the city.
- Seven Runs Streambank Restoration – The District continues a restoration and protection project which will be completed at Seven Runs within the Choctawhatchee River Water Management Area. The project will create a natural vegetative retaining wall, stormwater improvements, and public access enhancements.
- Land Management – The District has acquired 223,783 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 improves and 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 restored and protected 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 <https://www.nfwwater.com/Water-Resources/Regional-Wetland-Mitigation-Program>.
- 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 restoration and protection 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.

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**Strategic Priority 5: Watershed Restoration and Protection.** Restore and protect watershed resources and functions.

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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 (2018-2019) (2) Completion of Gulf of Mexico restoration projects (2020-2021)
Deliverables:	(1) Annual Regional Wetland Mitigation Plan and Mitigation Monitoring Reports (2) Grant project completion reports

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### **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, Perdido River and Bay, Apalachee Bay – St. Marks River, and the Pea river 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. 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.

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

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Success Indicators: (1) Area of floodplain protected through land acquisition (acres)  
(2) Percent of the District with updated DFIRMs meeting FEMA standards and criteria

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Funding sources: (1) Federal Emergency Management Agency  
(2) State Legislative Appropriations  
(3) General Fund Reserves  
(4) FDOT Mitigation Funding

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Milestones: (1) DFIRM completion incorporating coastal remapping studies for Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties

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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

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**Table 5. NFWFMD Strategic Priorities Matrix (2019-2023)**

Strategic Priorities	Applicable Goals	Activities	Success Indicators	Milestones
<p><b>Springs Restoration and Protection</b></p> <p><i>Restore and protect water quality and flows within the major spring systems of northwest Florida</i></p>	<p><b>Natural Systems</b> Enhance and protect natural systems.</p> <p><b>Water Quality</b> Improve and protect 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 (2019-2023)</p>
<p><b>Minimum Flows and Minimum Water Levels (MFLs)</b></p> <p><i>Develop and implement science-based MFLs that protect water resources and associated natural systems.</i></p>	<p><b>Water Quality</b> Improve and protect the quality of the District’s water resources.</p> <p><b>Water Supply</b> 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 MFLs for the St. Marks River Rise (2019), Wakulla Spring (2021), Sally Ward Spring (2021), the coastal Floridan aquifer in Region II (2021), and Jackson Blue Spring (2023).</p>
<p><b>Apalachicola-Chattahoochee-Flint River Basin</b></p> <p><i>Protect Apalachicola River and Bay water quality and freshwater inflow</i></p>	<p><b>Water Quality</b> Protect the quality of the District’s water resources.</p> <p><b>Natural Systems</b> Enhance and protect 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 (2019-2021) (2) Continued participation in supporting state ACF Basin issues (2019-2023)</p>

Strategic Priorities	Applicable Goals	Activities	Success Indicators	Milestones
<p><b>Water Supply</b></p> <p><i>Plan and facilitate sustainable water supplies for future reasonable and beneficial uses</i></p>	<p><b>Water Supply</b></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 North Bay Wastewater Reuse project (2019-2020)</p> <p>(3) Region II RWSP Update (2018-2019)</p>
<p><b>Watershed Restoration and Protection</b></p> <p><i>Restore and protect watershed resources and functions.</i></p>	<p><b>Natural Systems</b></p> <p>Enhance and protect natural systems.</p> <p><b>Water Quality</b></p> <p>Improve and protect 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 (acres)</p>	<p>(4) Completion of streambank restoration project (2018-2019)</p> <p>(5) Completion of Gulf of Mexico restoration projects (2020)</p>
<p><b>Flood Protection and Floodplain Management</b></p> <p><i>Protect floodplain functions for the benefit of human communities and natural systems</i></p>	<p><b>Flood Protection and Floodplain Management</b></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 through 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 Escambia, Santa Rosa, Okaloosa, Walton, Bay, and Gulf counties</p>

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

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### 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 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
<b>Springs Restoration and Protection</b>					
Jackson Blue Spring Basin Agricultural BMPs	Ongoing				
Grass-Based Crop Rotation Project	Ongoing			Completion	
Land Acquisition Projects	Completion				
Jackson County Septic-to-Sewer Retrofit Projects	Ongoing			Completion	
Tallahassee Septic-to-Sewer Retrofit Projects	Ongoing			Completion	
Wakulla County Septic-to-Sewer Retrofit Projects	Ongoing			Completion	
<b>Minimum Flows and Minimum Water Levels</b>					
Enhanced District-Wide Monitoring	Ongoing				
St. Marks River Rise	Ongoing	Adopt MFL			
Wakulla Spring	Ongoing			Assessment Complete	
Sally Ward Spring	Ongoing			Assessment Complete	
Coastal Region II Floridan Aquifer	Ongoing			Assessment Complete	
Jackson Blue Spring	Ongoing			Assessment Complete	
Shoal River System	Ongoing				Assessment Complete
Gainer Springs Group	Initiation				
Williford Spring Group	Initiation				
Sylvan Spring Group	Initiation				
Econfina Blue Spring Group	Initiation				
Devils Hole Spring Group	Initiation				
Coastal Floridan Aquifer	Future				

**Table 6. Anticipated Schedule of Tasks (Continued)**

Activities	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23
<b>ACF Basin Management</b>					
Interstate Coordination and Technical Support	Ongoing				
Apalachicola Bay Water Quality Projects	Ongoing		Completion		
<b>Water Supply</b>					
Water Use Permitting	Ongoing				
Well Regulation Program	Ongoing				
Regional Water Supply Planning	Region II RWSP update				
Western District Groundwater Model		Model Refinement			
Eastern District Groundwater Model		Model Refinement			
Water Supply Development Assistance	Completion				
Region III Reclaimed Water Projects	Ongoing	Completion			
Reuse and Conservation Planning	Ongoing				
<b>Watershed Restoration and Protection</b>					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
Seven Runs Streambank Restoration	Completion				
Perdido River Paddling Trail	Initiation			Completion	
Port St. Joe Stormwater Project	Initiation			Completion	
<b>Flood Protection and Floodplain Management</b>					
Environmental Resource Permitting	Ongoing				
Regional Wetland Mitigation	Ongoing				
Land Management	Ongoing				
Flood Hazard Mapping, Assessment and Planning	Ongoing				
Updated DFIRMs	Ongoing				

## 4. Monitoring and Reporting

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### Annual Work Plan Report

As required by section 373.036, F.S., the SWMP provides for an annual performance review and identification of milestones and deliverables to assess implementation. The review is incorporated as Chapter One of the NFWFMD March 1<sup>st</sup> Consolidated Annual Report ([www.nfwfwater.com/data-publications/reports-plans/consolidated-annual-reports/](http://www.nfwfwater.com/data-publications/reports-plans/consolidated-annual-reports/)). Elements of the SWMP 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 SWMP. 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**

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***Permitting – CUP, ERP***

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For closed applications within the CUP and ERP permitting areas, median time to process by permit type and total

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For closed applications within the CUP and ERP permitting areas, the median time in house by permit type and total, including those applications under legal challenge

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Within the CUP and ERP permitting areas, percentage of individually-processed open applications with greater than two Requests for Information (RAIs)

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Within the CUP and ERP permitting areas, average number of RAIs for individually processed applications that closed in the last twelve months

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Within the CUP and ERP permitting areas, percentage of individually processed open applications that have been in-house six months or longer

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Within the CUP and ERP permitting areas, cost to process for all permit types

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Within the CUP and ERP permitting areas, application to staff ratio for all permit types

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Number of Closed Applications (CUP only)

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Permit Process Time for Legislative Extensions and Emergency Orders (ERP only)

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Cost to Process Legislative Extensions and Emergency Orders (ERP only)

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***Mission Support***

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Administrative costs as a percentage of total expenditures

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***Water Supply***

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District-wide, the quantity [mgd] and percentage of the 2010-2030 Public Supply increase in demand that has been met separately by non-water conservation projects, and by water conservation (only) projects

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Uniform gross per capita water use (Public Supply) by District

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Uniform residential per capita water use (Public Supply) by District

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***Natural Systems***

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Number of MFLs and Reservations, by waterbody type, established annually (fiscal year) and cumulatively

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Number and percentage of water bodies meeting their adopted MFLs

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For water bodies not meeting their adopted MFLs, the number and percentage of those water bodies with an adopted recovery or prevention strategy

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MFL Priorities List table

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## 5. Financial Resources

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The state constitution limits the NFWMD to 1/20th (.05 mills) of one mill, significantly less than the ad valorem taxing authority afforded to the other four water management districts. The District's FY 18-19 ad valorem tax millage rate, as set by the Governing Board, is 0.0338 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 restoration and protection, 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/](http://www.nfwwater.com/business-finance/district-budget/).

## 6. References and Additional Resources

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### References

University of Florida. (2018). *Projections of Florida Population by County 2020-2045, with Estimates for 2017*. Volume 51, Bulletin 180. Gainesville, FL: UF Bureau of Economic and Business Research, January 2018.

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

### Additional Documents and Resources

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>