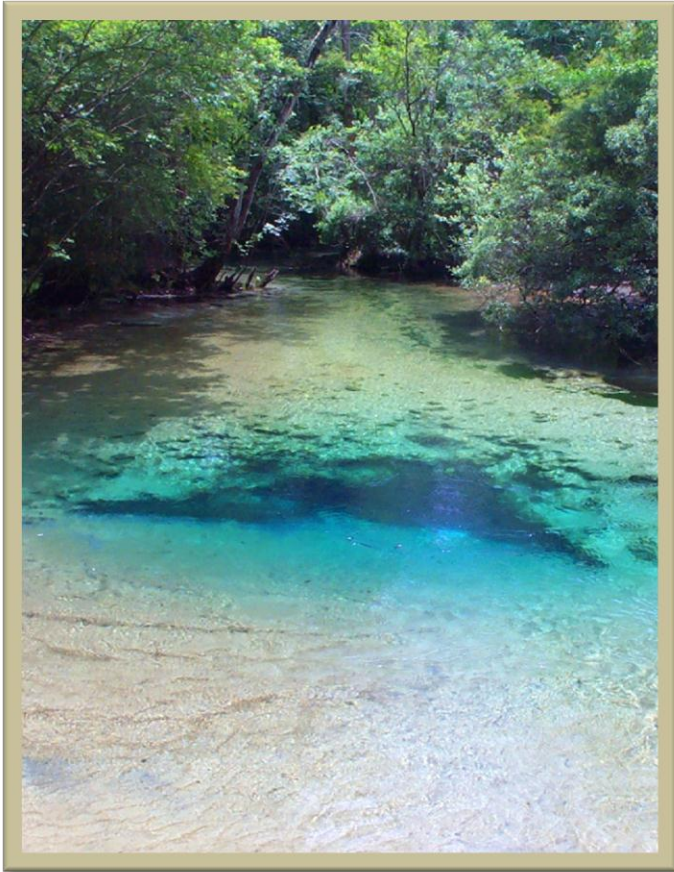


# Northwest Florida Water Management District



# Consolidated Annual Report

March 1, 2013  
Annual Report 2013-01

***NORTHWEST FLORIDA WATER MANAGEMENT DISTRICT***

**Consolidated Annual Report**  
**March 1, 2013**

***ANNUAL REPORT 2013-01***



**On the Cover:**

Clockwise, from upper left: Shrimp boat on Apalachicola Bay (John Crowe, 2008); Williford Spring on Econfina Creek (John Crowe, 2006); "The Pipes" shoreline restoration on the Perdido River (Tyler Macmillan, 2012)

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## Executive Summary

This Consolidated Annual Report fulfills the requirement of s. 373.036(7)(a), Florida Statutes (F.S.), that the Northwest Florida Water Management District (“NFWFMD” or “District”) annually prepare and submit a report on management of water resources to the Governor, the President of the Senate, the Speaker of the House of Representatives, and the Department of Environmental Protection (DEP). Copies are provided to the chairs of legislative committees with substantive or fiscal jurisdiction over water management districts and the governing boards of counties with jurisdiction or deriving funds for operations of the District. The report is also made available to the public.

The March 1, 2013, NFWFMD Consolidated Annual Report includes seven required reports, as specified in s. 373.036(7)(b), F.S. These are:

- The Strategic Water Management Plan Annual Report;
- The Minimum Flows and Levels Annual Priority List (s. 373.042(2), F.S.);
- The Annual Five-Year Capital Improvement Plan (s. 373.536(6)(a)3, F.S.);
- The Five-Year Water Resource Development Work Program (s. 373.536(6)(a)4, F.S.);
- The Alternative Water Supplies Annual Report (s. 373.1961(3)(n), F.S.);
- The Florida Forever Work Plan Annual Report (s. 373.199(7), F.S.); and
- The Mitigation Donation Annual Report (s. 373.414(1)(b)2, F.S.).

Also included is one optional element, a Surface Water Improvement and Management (SWIM) Program Summary Report that focuses on project implementation under the framework of the SWIM program.

Together, the reports that follow provide the status of Northwest Florida Water Management District programs including watershed restoration, minimum flows and levels, water resource development, alternative water supply development, and land management. The past year has been one of transition for District programs, with evolving water resource challenges and changes in strategic direction and budgetary resources. Among ongoing and emerging programmatic priorities, as specified by the Governing Board in the adopted fiscal year (FY) 2012-2013 budget and outlined in the preliminary FY 2013-2014 budget, are Apalachicola River and Bay watershed protection and restoration, minimum flows and levels, water resource and supply development, water resource monitoring and assessment, springs protection, habitat restoration, and flood protection and floodplain management. Among the recent accomplishments and ongoing initiatives described are the following.

- **Apalachicola-Chattahoochee-Flint Basin Technical Support** – District staff are providing technical support for the state’s efforts to engage federal agencies and adjoining states to address interstate water resource management needs within the Apalachicola-Chattahoochee-Flint (ACF) rivers basin. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report**)
- **Minimum Flows and Levels** – The NFWFMD FY 2012-2013 Minimum Flows and Levels (MFL) priority list and schedule were developed based on recommendations of a multi-disciplinary working group. (**Chapter 2 – Minimum Flows and Levels Annual Priority List**)
- **Regional Water Supply Planning** – The District completed an update to the Region II Regional Water Supply Plan (RWSP) in February 2012. (**Chapter Four – Water Supply**)
- **Water Supply Development** – With grant funding from the District and local funding, construction continued on major pipeline facilities connecting inland wellfields in Walton County

to the coastal service areas of South Walton Utility Company, Regional Utilities, and Destin Water Users. Additionally, the District continued to assist rural communities in the development of sustainable water supplies. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report; Chapter Four – Water Supply**)

- **Agricultural Best Management Practices** – The District continued cooperative assistance for the development and implementation of agricultural best management practices that promote water conservation and water quality protection, particularly within Jackson County. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report**)
- **Springs Protection and Restoration** - The \$1.3 million Econfina Springs Complex Phase I was completed and opened to the public. Planning and permitting are underway for Phase II, which will be focused on Williford Spring in Washington County. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report; Chapter 5 – Florida Forever Work Plan Annual Report**)
- **Habitat Restoration** - Extensive restoration activities were completed on District lands and other public lands across northwest Florida. These include streambank restoration, reforestation and groundcover habitat restoration, and hydrologic restoration. (**Chapter 5 – Florida Forever Work Plan Annual Report**)
- **Water Quality Protection and Restoration** - The District is working with local governments in the Apalachicola River and Bay and St. Andrew Bay watersheds to plan and initiate stormwater retrofit and other water quality improvement projects under the auspices of the SWIM program. (**Chapter 7, Surface Water Improvement and Management Program Summary Report**)
- **Water Resource Monitoring** - Significant enhancement for the District’s water resource monitoring network is in progress. This network is essential to accomplishing statutory responsibilities for water resource development, MFLs, and watershed protection and restoration. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report; Chapter 4, Water Supply**)
- **Flood Protection and Floodplain Management** - The District has launched a Flood Information Portal for all of northwest Florida at [portal.nwfwmdfloodmaps.com](http://portal.nwfwmdfloodmaps.com). The portal makes detailed flood information available down to the individual parcel level. This technology makes extensive data sources available to the public through an intuitive online interface. (**Chapter 1 – Strategic Water Management Plan Annual Work Plan Report**)

Together, these activities advance the protection, restoration, and sustainability of northwest Florida’s critical water and related resources. In the process, they also help sustain quality of life and the economic wellbeing of the region, which is closely linked to the health of the region’s water resources. Additional detail is provided in the following chapters. This report is also available online at [www.nwfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html](http://www.nwfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html).

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# Chapter One: Strategic Water Management Plan Annual Work Plan Report

## 1.1 Introduction

Section 373.036(2)(e), Florida Statutes (F.S.), gives the Governing Board the option of substituting an annual strategic plan for the five-year district water management plan (DWMP) and the DWMP annual report. The statute requires the strategic plan to include separately an annual work plan report on its implementation for the previous fiscal year, addressing success indicators, deliverables, and milestones. The Governing Board approved substitution of the Strategic Water Management Plan (SWMP) for the DWMP in November 2010 (NFWFMD 2011). The 2011-2015 SWMP was completed and posted in January 2011 ([www.nfwfmd.state.fl.us/pubs/swmp/swmp.html](http://www.nfwfmd.state.fl.us/pubs/swmp/swmp.html)).

The past year has been one of transition for District programs, reflecting changes in strategic direction and budgetary resources, along with emergent water resource challenges. To better address current and developing conditions and priorities, a comprehensive review and update of the SWMP is planned for FY 2012-2013. For the purposes of this report, however, ongoing and emerging programmatic priorities, as specified by the Governing Board in the District's adopted FY 2012-2013 budget and outlined in the District's preliminary FY 2013-2014 budget, are described below.

- **Apalachicola-Chattahoochee-Flint (ACF) Basin Technical Support** – Support for the state's efforts to engage federal agencies and adjoining states to address interstate water resource management needs within the ACF basin.
- **Minimum Flows and Levels** – Development of a statutorily required minimum flows and levels (MFLs) program, to be implemented in a realistic, technically sound, and achievable manner.
- **Springs Protection and Restoration** – Protection and restoration of northwest Florida's springs, including spring runs and interconnected springsheds and karst systems. Activities include Phase II of the Econfina Springs Complex Restoration project, focused on Williford Spring in Washington County, enhanced monitoring and resource assessment, and continued assistance for implementation of agricultural best management practices in the Jackson Blue Springs basin.
- **Water Resource Monitoring and Evaluation** – Increased development of the District's water resource monitoring network, which is essential to accomplishing statutory responsibilities for water resource development, MFLs, and watershed protection and restoration.
- **Water Supply Development Assistance** – Grant funding for local governments and utilities to support implementation of regional water supply plans (RWSPs) and to provide assistance to financially disadvantaged small local governments.
- **Water Resource Development** – Technical evaluation of major surface and ground water resources. Update of the districtwide water supply assessment, with corresponding updates to regional water supply plans.
- **Watershed Restoration and Enhancement** – Implementation of cooperative stormwater retrofit, water quality, and habitat restoration projects within the Apalachicola River and Bay, St. Andrew Bay, Choctawhatchee River and Bay, and St. Marks River watersheds. Additional watershed initiatives include spring restoration and development and implementation of agricultural best management practices (BMPs).



- **Land Management and Restoration** – Continued restoration and management of District lands, focused on protecting and restoring water resources and natural systems while keeping District lands and adjacent waters accessible for compatible public use.
- **Flood Protection and Floodplain Management** – Continued efforts in cooperation with the Federal Emergency Management Agency and local governments to develop and update digital flood maps, detailed topographic and hydrologic data, and to provide enhanced flood information to identify and minimize future flood risks.
- **Regional Wetland Mitigation** – Implementation of the District’s regional mitigation program and in-lieu fee mitigation program to serve Florida Department of Transportation (FDOT) wetland mitigation needs in areas outside of existing private mitigation bank service areas.

All of these priorities are also consistent with the broader state goal of enhanced water resource protection to promote Florida’s economic well-being and quality of life. Accomplishments and current objectives are organized below by statutory areas of responsibility (s. 373.036, F.S.). Where applicable, strategic priorities specified in the 2011 SWMP are indicated, as are quantitative indicators of progress.

## 1.2 Water Supply

Section 373.701, F.S., declares the state’s policy to promote the availability of sufficient water for all existing and future reasonable-beneficial uses and natural systems. To implement this policy, the District cooperatively implements a number of interrelated initiatives and programs focused on the water resources of northwest Florida. Among these are water resource development, water supply development assistance, regional water supply planning, regulation of wells and consumptive uses, and development of MFLs.

The NFWFMD is divided into seven regions for the purpose of evaluating current and anticipated water supply needs (Figure 1-1). RWSPs must be developed for regions where existing sources of water are considered inadequate for meeting water demands over a twenty-year planning horizon while also sustaining water resources and natural systems. These plans include water resource and water supply development components with supporting data and analysis, and they identify priority projects and funding strategies.



Figure 1-1. Water Supply Planning Regions

To date, the District has established three RWSPs: Region II (encompassing Santa Rosa, Okaloosa, and Walton counties), Region III (Bay County), and Region V (Gulf and Franklin counties). The major future water supply sources as identified in these plans are as follows:

Region II (Santa Rosa, Okaloosa, and Walton counties):

- Inland Sand and Gravel Aquifer (Santa Rosa County)
- Inland Floridan Aquifer (Walton County)
- Surface Water (Okaloosa County)
- Reclaimed Water

Region III (Bay County):

- Deer Point Lake Reservoir<sup>1</sup>
- Reclaimed Water

Region V (Gulf and Franklin counties):

- Surface Water from the St. Joe Fresh Water Canal (Gulf County)
- Inland Ground Water (Franklin County)
- Reclaimed Water

Additional water projected as being needed to meet the anticipated 2010-2030 increase in public supply demand includes approximately 24 million gallons per day (MGD) in Region II and 3 MGD in Region V. Considerable progress has been made in the development of new sources of supply in these regions, including inland ground water sources in Region II and a surface water supply source in Gulf County. In Region III, the need for an additional source or facility has been identified to ensure system reliability given the potential for contamination of the region’s sole source water supply reservoir or major hurricane impacts on the reservoir and associated dam structure. Figure 1-2 illustrates current progress by county and region toward meeting anticipated 2030 needs. The quantities identified as “Progress to Date” represent additional water currently available and permitted over the documented 2010 average day

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<sup>1</sup> The 2008 Region III RWSP lists inland wellfield development to serve as an emergency backup to the existing reservoir. New alternatives are being evaluated.

withdrawals (public supply). The quantities identified as “Additional 2030 Need” represent additional water supply needed over currently permitted quantities to meet projected 2030 public supply water demands (NFWFMD 2008a).

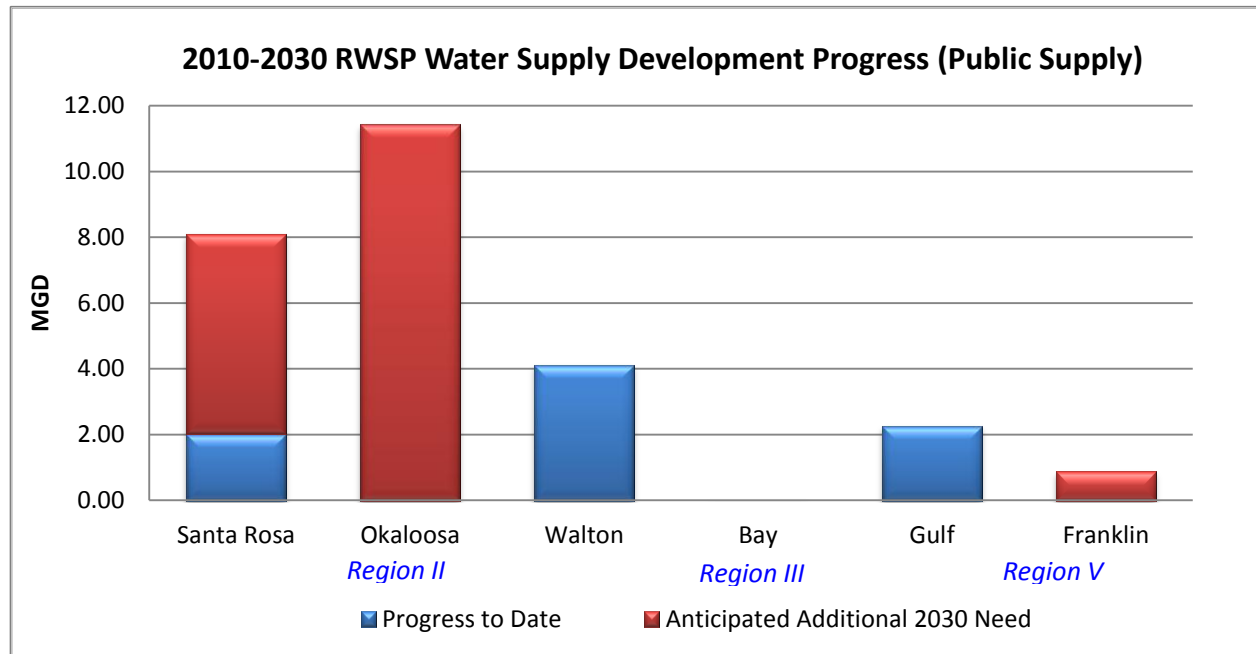


Figure 1-2. 2010-2030 Water Supply Development Progress

This discussion of the District’s water supply programs encompasses the *Alternative Water Supply Development, Coastal Utilities Interconnections, Consumptive Use Permitting, and Reuse of Reclaimed Water* strategic priorities and aspects of the *Cumulative Impacts Analysis* priority defined in the 2011 SWMP. Accomplishments from the past year and current activities are described below.

- As reported through statewide water management district performance metrics, approximately 67% of the increase in Public Supply water demand anticipated between 2010 and 2030 has thus far been realized and fully allocated through the permitting process.
- The District completed an update to the Region II RWSP in February 2012. This update provided a current evaluation and description of existing and anticipated water use demands and priority water supply development projects.
- The City of Freeport completed construction of a 12-inch potable water transmission pipeline along approximately 6.7 miles between Freeport and the community of Portland, on the north shore of Choctawhatchee Bay. The District awarded \$800,000 in grant funding for this project.
- A District contractor completed the draft final Basis of Design Report for the Coastal Water Systems Interconnect Project. Potential project priorities are identified to enhance coastal water system reliability by enabling transfer of water between utilities if necessary due to droughts or other water shortages. The work also included blending analyses, hydraulic network modeling, and development of preliminary designs and cost estimates. The final design phase, followed by permitting and construction, will occur in the future if additional funding becomes available.
- Regional Utilities of Walton County continued construction of pipeline facilities with District funding assistance. Through this project, the utility is extending water transmission lines along approximately five miles of U.S. Highway 98 in south Walton County. The District is providing

\$750,000 in grant funding, to be matched by over \$1.36 million in local funding. Project completion is anticipated during 2013.

- Construction continues on a major transmission pipeline from the inland wellfield in Walton County to the coastal service areas of South Walton Utility Company and Destin Water Users. The District provided a grant of \$2,500,000 for the project, matched by over \$19,000,000 in local funding. Completion of this project is also anticipated during 2013.
- The District continued to assist rural communities in the development of sustainable water supplies. With \$98,607 in District grant funding, Calhoun County completed engineering for an extension of water service from the City of Blountstown to the Pine Island unincorporated community. In Gadsden County, the City of Gretna completed construction of a water supply interconnection with the Town of Greensboro. Project expenditures were over \$1,377,000, for which the District contributed \$400,000 in grant funding.
- The City of Callaway completed water and sewer utility interconnections, respectively, with those of the Sandy Creek community. The District provided \$54,000 in grant funding, matched by the City.
- The District continues to encourage water conservation through outreach to utilities, local governments, and residents District-wide, with emphasis on RWSP regions. In FY 2011-2012, the District provided nearly 80,000 educational brochures and pamphlets encouraging water conservation practices to utilities and local governments for distribution to residents. In addition, as of September 2012, 38 hotels across the District were participating in the Conservation Hotel and Motel Program (CHAMP), a towel and linen reuse program that encourages guests to forego having linens changed daily and to hang up towels that do not need washing.
- District staff presented Enviroscope® watershed landscape models to public school science programs in 15 counties, helping middle and high school students learn basic concepts of watershed management and how they can conserve water and reduce personal pollution in their communities. District staff demonstrated the model to approximately 400 students, and teachers will continue using the model to teach thousands of middle and high school students across the District.
- The Governing Board awarded \$106,000 in grant funding to the City of Port St. Joe, to help the city replace the diesel engine serving the City's main surface water supply pump.
- The Governing Board awarded a grant of \$235,845 to the City of Blountstown, to match City funds for installing a new 12-inch water distribution main along State Road 20.
- The District continues to provide funding for the Northwest Florida Mobile Irrigation Laboratory. The laboratory supports water conservation within the Jackson Blue Spring basin and other agricultural areas. Piped agricultural irrigation systems are evaluated to estimate potential and actual water savings, and recommendations are provided as needed for repairs and retrofits. Results include improved water use efficiency and reduced costs. This program is supported cooperatively with the Florida Department of Agriculture and Consumer Services and the U.S. Department of Agriculture.
- With grant funding assistance from the District, University of Florida Institute of Food and Agricultural Sciences (IFAS) researchers are continuing efforts in Jackson County to refine and implement farming techniques that decrease irrigation demands, increase nitrogen use efficiency, reduce the incidence of plant pests, improve soil and water quality, diversity farm income, and provide economic risk management. Through these efforts, the sod based crop rotation system has demonstrated improved yields and reduced costs, while also reducing water and fertilizer use.

- District staff are working with DEP and the other four water management districts in an intensive effort to improve the statewide consistency of consumptive water use permitting. Goals of this effort, termed “CUPcon” (consumptive use permitting consistency), include making programs more predictable, ensuring equitable treatment statewide, providing consistent environmental protection, promoting streamlining and efficiency, and incentivizing behavior that protects water resources.
- In January 2012, the District furthered its commitment to serving the public in an efficient and convenient manner by releasing an updated Online Well Permitting Management Account (OWPMA). OWPMA offers services to the water well contractor community and is aimed at reducing the regulatory burden and preventing violations. The OWPMA portal, located on the District’s website, allows licensed water well contractors to submit and make payments for construction, repair, and abandonment permit applications online. Additionally, contractors can view application status and upcoming deadlines for completion reports, submit completion reports, extend the deadline of a permit, and file start of work notices. The OWPMA feature has allowed contractors to eliminate the time spent awaiting mail delivery of applications and permits, as well as reducing costs in time and fuel costs for traveling to and from District offices.
- Updates to the Region III and Region V RWSPs are pending results of the 2013 WSA update.
- The Consumptive Use Program (CUP) continues to improve service by helping permit applicants understand and navigate the permitting process. The District’s business practices include non-mandatory pre-application meetings and accelerated application reviews to identify issues early and communicate with the permittee to work toward resolution. Advances have also been made to enhance compliance by working closely with permittees, often through personal contact, to provide assistance in complying with permit terms and conditions. Staff ensure requirements are clear and consistent and that permit conditions are adapted to each permittee’s individual situation. Additionally, numerous reminders and notices are sent to permittees regarding compliance requirements prior to due dates. The District also sends permit renewal notices six months and one month prior to expiration. Larger permits receive renewal notification one year in advance.
- The CUP Program continued to make advances in the accessibility of historical permit information. Through electronic means, this vast repository of data is becoming more readily available, allowing staff to respond more quickly and efficiently to public information requests at a reduced cost.
- Work continues on development of a District-wide water reuse plan. The plan is intended to identify and prioritize opportunities for reuse of reclaimed water to provide water resource benefits such as improved water quality, offsets of ground and surface water withdrawals from potable supplies, recharge of regionally significant aquifers, and enhanced sustainability of water resources and related natural systems.
- Water supply planning priorities for fiscal years 2012-2013 and 2013-2014 include completion of an update to the districtwide WSA, with follow-on efforts to update RWSPs in regions III and V, as needed. During this timeframe, it is anticipated that the reuse plan will also be completed, complementing the WSA analysis.
- It is anticipated that increased grant funding will be made available to local governments during the coming year, consistent with statutory and District criteria. Priorities are expected to include continued assistance for financially disadvantaged small local governments and implementation of RWSP priorities.

### 1.3 Water Quality and Natural Systems

A number of District programs are focused on protection and restoration of water quality and aquatic, wetland, and riparian habitats. These programs include land acquisition and management, FDOT mitigation, the Surface Water Improvement and Management (SWIM) program, and the MFL program.

To date, the District has protected over 224,000 acres, primarily through fee simple acquisition. These lands support natural systems and protect wetland and floodplain functions, ground water recharge, surface and ground water quality, and fish and wildlife habitat. District-owned lands are all open to the public and are managed to sustain public access and enjoyment, as well as water resource quality. Management and restoration efforts, including prescribed burns, vegetation enhancement, and timber harvesting, continue across 212,371 managed acres. In addition, the District maintains and improves public access and recreational amenities, such as boat ramps, primitive campsites, and day use (swimming and picnic) areas.

District lands include the majority of the Escambia and Choctawhatchee river floodplains, as well as extensive lands along the Yellow, Shoal, Blackwater, Chipola, Perdido, and Apalachicola rivers; Holmes and Econfina creeks; Garcon Point; Live Oak Point; and Perdido Bay. The District has also acquired the majority of the recharge area for springs that discharge into Econfina Creek and form a major component of the water contribution to Deer Point Lake Reservoir. Additionally, the District helped Escambia County preserve Jones Swamp as a conservation and greenway area and has assisted with local government land acquisitions in Leon County.

The in-lieu fee mitigation program is implemented in conjunction with the Umbrella, Watershed-based Regional Mitigation Plan (UWRMP). This plan serves FDOT wetland mitigation needs in areas outside of existing mitigation bank service areas and is accessible at [nwfwmdwetlands.com](http://nwfwmdwetlands.com). The program includes projects such as the Sand Hill Lakes Mitigation Bank and Tate's Hell State Forest hydrologic restoration, among many others.

The SWIM program provides the planning framework, based on the District's major riverine-estuarine watersheds (Figure 1-3), for addressing watershed protection and restoration. Implementation is accomplished through a variety of projects, including stormwater retrofit for water quality improvement and flood protection, wetland and aquatic habitat restoration, resource assessments, floodplain mapping, and public outreach and awareness.

The SWIM program and approved plans are described in Chapter Seven of the Consolidated Annual Report, as well as at [www.nwfwmd.state.fl.us/rmd/swim/swimdesc.htm](http://www.nwfwmd.state.fl.us/rmd/swim/swimdesc.htm).

The accomplishments and ongoing activities described below encompass the *Restoration, Land Management, Environmental Resource Permitting, and No Net Loss of Wetland Function* strategic priorities and aspects of the *Cumulative Impacts Analysis* priority defined in the 2011 SWMP.

- The \$1.3 million Econfina Springs Complex Phase I was completed and opened to the public.
- District staff conducted a comprehensive review of the District's MFL program, resulting in a revised priority list and schedule. Twenty-five waterbodies were identified and prioritized based on an assessment by an internal, interdisciplinary working group.
- Prescribed burns were conducted over the past year on approximately 4,500 acres of District lands.

- Vegetation management (physical shrub reduction and/or herbicide) activities and habitat enhancements were conducted on approximately 1,044 acres of District lands.
- Multiple bank restoration projects were completed along approximately 530 feet of stream banks within District lands. One of these, at Pipes Landing in the Perdido River Water Management Area (WMA), was an innovative project that primarily used natural materials such as logs and root wads to stabilize an eroding riverbank at a popular recreation site. The project was designed and built by District staff with assistance from the U.S. Fish and Wildlife Service.



Figure 1-3. NFWMD Watersheds

- In its ongoing reforestation and groundcover habitat restoration program, the District completed hand planting of 1,059 acres of disturbed longleaf pine, wet pine flatwoods, and wiregrass habitats. These restoration activities enhance groundwater recharge and improve wetland functions, while also offsetting wetland losses caused by major transportation projects.
- Over 416,000 longleaf pine tubelings were planted in the Perdido River and Econfinia Creek WMAs and the Ward Creek West mitigation tract.
- The District also reestablished groundcover habitat, planting over 709,000 plugs of upland/wetland wiregrass, toothache grass, and mixed wet pine flatwood species on disturbed habitat sites in the Sand Hill Lakes Mitigation Bank and the Ward Creek West and Yellow River Ranch mitigation tracts. Approximately 154,880 wildflowers (three species) were also planted in the Sand Hill Lakes Mitigation Bank and the Ward Creek West mitigation tract.
- Seeds for many groundcover projects were collected from District land on Garcon Point and the Econfinia Creek WMA. The District continues to research, refine and establish new habitat restoration techniques that increase species diversity and ecosystem health.
- District staff completed draft updates to the mitigation plan to be compliant with mitigation banking and in-lieu fee rules under 40 CFR Part 230.

- During fiscal year 2011-2012, the District used Florida Department of Transportation funds to purchase 31.32 wetland credits from the private Nokuse Plantation Mitigation Bank to mitigate wetland impacts caused by improvements to US 331 (SR 83) in Walton County.
- At the Dutex site (Escambia County), six low water crossings were installed in July 2012, and a 481 acre prescribed fire is planned for spring 2013.
- At the Lafayette Creek tract (Walton County), a late summer herbicide treatment was completed to further reduce shrub cover. A fall burn (2012) was subsequently conducted to stimulate the seed bank.
- Loblolly pines were thinned to less than 200 trees per acre within hydric pine flatwoods at the 67 acre Perdido II restoration site (Escambia County). Ten acres of wet prairie were also restored, and 18 acres of hydric pine flatwoods were burned in fall 2012 to hinder encroaching hardwoods. A supplemental tree planting also occurred in late 2012 in the 27-acre forested wetland area.
- Focused data collection and analysis were initiated during 2013 for the St. Marks River Rise in Leon County and the Floridan Aquifer in coastal Franklin County.
- With funding assistance from the District and other partners, the Blueprint 2000 Intergovernmental Agency has progressed toward completion of the Cascades Park Watershed Restoration Project. Components under construction include major stormwater ponds, retaining walls, utility relocations, landscaping to support littoral vegetation, and stream reconstruction, all within the St. Marks River watershed.
- The Yellow River Ranch mitigation site in Santa Rosa County continues progress towards success. The 60 acre hydric pine flatwoods restoration area was planted with 290,000 wiregrass tubelings in winter 2011/2012 to restore native vegetation and allow fire to move more easily across the returning hydric pine flatwoods. Exotic species control is ongoing within 120 acres of former pasture.
- The District continued efficient implementation of the Environmental Resource Permitting (ERP) program. Two hundred and eighty permit applications requiring action were received during FY 2011-2012. Of these, three were transferred to DEP, none were denied, and 18 were withdrawn. The remainder met conditions for issuance and received permits. None fell outside of the 90 day period, signifying the program continues to be implemented in an efficient and effective manner.
- Maintenance and monitoring continued on 20 mitigation projects associated with the Umbrella Regional Mitigation Plan. Sites are evaluated for wetland community development, hydrologic condition, exotic species control, and wildlife usage. All sites successfully met restoration objectives.
- In January 2013, the Governing Board agreed to assist Washington County in funding stream bank restoration and protection measures and repairs and improvements to Hightower, Spurling and Live Oak Landings on the Holmes Creek WMA.
- District staff are providing technical support for the state's efforts to engage federal agencies and adjoining states to address interstate water resource management needs within the ACF basin. These activities include hydrologic modeling, technical support, and coordinating with the ACF Stakeholders initiative in the development of a basinwide sustainable water management plan. District staff are also assisting in the state's review of the U.S. Army Corps of Engineers' proposed revision to the ACF water control manual and coordinating with state agencies in the development and implementation of recovery strategies for Apalachicola Bay.
- The Ward Creek West (Bay County) and the Sand Hill Lakes Mitigation Bank (Washington County) continue to be sites for cooperative research conducted by University of Florida graduate



students. The research provides insights into wet flatwood soil and seed bank composition. More broadly, this partnership furthers the District's mitigation and restoration goals through development of a deeper understanding of restoration needs for this common habitat type and improvement of restoration techniques for numerous projects.

- Hydrologic restoration activities are continuing within Tates Hell State Forest within the Doyle Creek, Juniper Creek, and Whiskey George Creek basins. Ongoing construction includes ten hardened low water crossings, twenty-four earthen ditch plugs, and ten culvert modifications. This work is expected to be complete in March 2013.
- Additional restoration within the Whiskey George Creek basin of Tates Hell Swamp is expected to begin in 2013. This will include elimination of one-half mile of dirt logging roads and adjacent ditches, together with construction of eight low water crossings, ten earthen ditch plugs, one flashboard riser, and three culvert modifications.
- Detailed designs for Econfina Springs Restoration, Phase II (Williford Spring) have been completed. Public workshops are planned for 2013-2014. Construction is anticipated, subject to final budget approval, following public review and comment.
- The District, as described in the Water Supply section, continues to work with IFAS to develop and implement agricultural BMPs in the springshed for Jackson Blue Springs.
- With funding from the MOEX Offshore, LLC, settlement related to the 2010 Deepwater Horizon Oil Spill, District staff are developing designs for stormwater retrofit projects within the Choctawhatchee Bay and St. Andrew Bay watersheds. Construction will be coordinated by DEP.
- District staff are developing a basinwide screening of Apalachicola River and Bay retrofit and restoration needs. Completion of the assessment and identification and prioritization of conceptual projects are expected during FY 2012-2013. Initiation of additional stormwater retrofit activities is expected during FY 2013-2014.
- District staff are working with local governments in the St. Andrew Bay watershed to plan and initiate stormwater retrofit and other water quality improvement projects under the auspices of the St. Andrew Bay SWIM plan.
- During FY 2013-2014, the District plans to restore 1,295 acres of longleaf pine forest within the Econfina WMA.

## **1.4 Flood Protection and Floodplain Management**

In 2003, the NFWFMD accepted delegation and responsibility for modernizing flood hazard maps into a digital format for all of its jurisdictional area through a Cooperating Technical Partner (CTP) agreement with the Federal Emergency Management Agency (FEMA).

As a result of this partnership and associated efforts, all of northwest Florida now has digital flood insurance rate maps (DFIRMs). FEMA has also initiated the Risk Mapping, Assessment, and Planning (Risk MAP) program, which is the focus of the District's current effort. 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. The general goal of the program is to foster informed risk management decisions and actions that mitigate flood risk through a consistent approach to assessing potential vulnerability and losses.

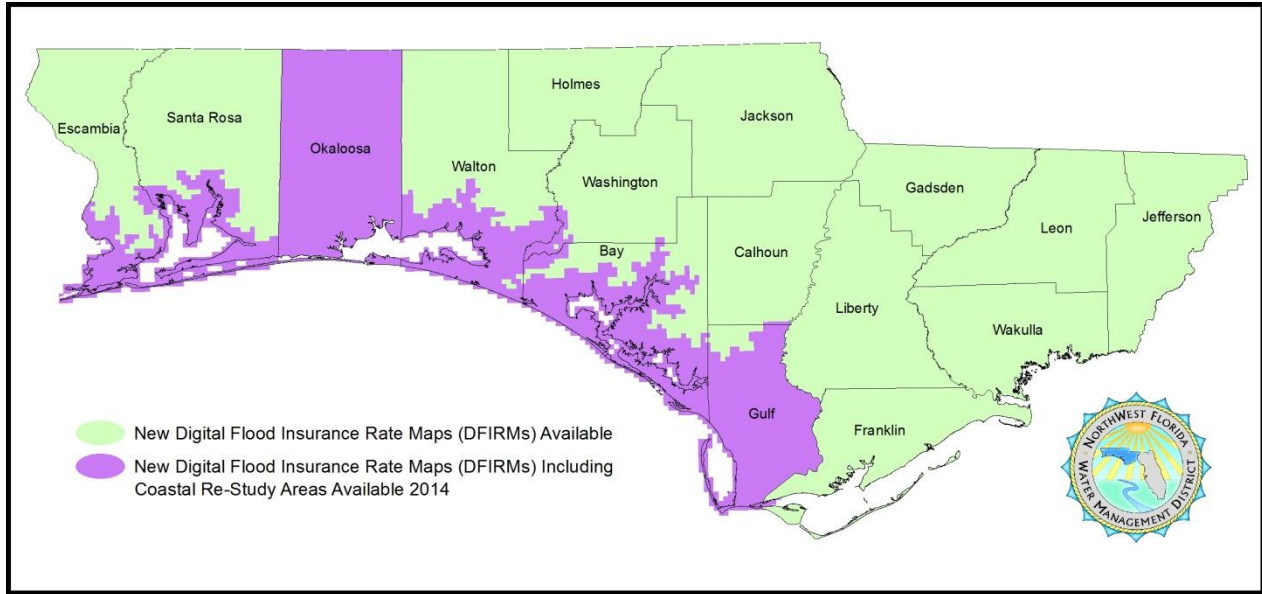


Figure 1-4. Floodplain Mapping Status

This discussion of Flood Protection and Floodplain Management accomplishments and objectives encompasses the *Flood Hazard Mapping* priority defined in the 2011 SWMP.

- DFIRMs have now been developed through the Map Modernization process for all of the counties of northwest Florida. Final effective DFIRMs have been completed for Escambia, Santa Rosa, Bay, Gulf, Walton, Gadsden, Leon, Holmes, Washington, and Jackson counties. Preliminary DFIRMs have been completed for Calhoun, Liberty, Franklin, Wakulla, and Jefferson counties. Approximately 85 percent of the 1,254 DFIRM map panels completed have thus far been adopted by local governments. Additional coastal re-studies are in progress across several counties to further update and enhance available data (Figure 1-4).
- The District's Flood Information Portal is live online for all of northwest Florida at [portal.nwfwmdfloodmaps.com](http://portal.nwfwmdfloodmaps.com). The portal makes detailed flood information available down to the individual parcel level. This technology makes extensive data sources available to the public through an intuitive online interface.
- The District, together with FEMA, the National Oceanic and Atmospheric Administration, the Florida Division of Emergency Management and Leon County, has completed acquisition and processing of Light Detection and Ranging (LiDAR) data for all of northwest Florida. LiDAR makes detailed topographic data available for the first time throughout the region.
- The District launched a public website providing detailed LiDAR-based elevation and surface feature data for properties across northwest Florida. The data provided is ten times more detailed than most previous topographic maps. This provides an important tool for many of the District's water resource management and flood protection functions. Residents and technical experts can also use the data to plan for activities including landscaping, resource protection, flood risk evaluation, and construction. The website is at [www.nwfwmdlidar.com](http://www.nwfwmdlidar.com).
- Work continues on the Risk MAP program funded by FEMA through a Cooperating Technical Partner agreement.
- Detailed coastal remapping studies continue for Escambia, Santa Rosa, Okaloosa, Walton, Bay and Gulf counties. Additionally, county-wide mapping, floodplain mapping, assessment, and planning

evaluations at the watershed level are on-going for the Lower Ochlockonee River, Apalachicola River, New River, Chipola River, Pensacola Bay, Perdido Bay, and Perdido River watersheds. This nonstructural effort contributed greatly to the accomplishment of the District's floodplain management and protection area of responsibility. It also enhances the District's ability to protect and manage floodplains without acquiring land or making structural modifications.

- An agreement with the City of Tallahassee and Leon County to continue a stormwater flow monitoring program was renewed in September. The program includes operation of 54 surface water and rainfall data collection stations. The initiative also provides for a real-time telemetry flood warning network in cooperation with the National Weather Service that identifies developing flood conditions for emergency management staff.
- To improve the regional ability to respond to dynamic flooding conditions, the District is monitoring 33 new real-time stage and rainfall monitoring stations within Leon, Jefferson, Wakulla, Franklin, and Gulf counties. This work is funded by FEMA through a state hazard mitigation grant.

## **Chapter Two: Minimum Flows and Levels Annual Priority List**

Section 373.042(1), F.S., requires each water management district to develop minimum flows and levels (MFLs) for specific surface and ground waters within their jurisdiction. The minimum flow or level for a given waterbody is the limit at which further withdrawals would be significantly harmful to the water resources or ecology of the area. MFLs are calculated using best available information and consider natural seasonal fluctuations; non-consumptive uses; and environmental values associated with coastal, estuarine, riverine, spring, aquatic, and wetlands ecology as specified in s. 62-40.473, Florida Administrative Code (F.A.C.).

Establishment of an MFL involves a series of steps ranging from identification of priority waterbodies to the adoption of District rules codifying each MFL. Adopted MFLs are considered when reviewing consumptive use permit applications. A recovery or prevention strategy must be developed for any waterbody where consumptive uses are currently or anticipated to result in flows or levels below an adopted MFL.

The NFWFMD FY 2012-2013 MFL priority list and schedule were developed based on recommendations of an internal, multi-disciplinary working group. The list represents an environmentally protective MFL program, scheduled to be implemented in a realistic, technically sound, and achievable manner. Twenty-five priority waterbodies were identified and prioritized based on the working group assessment. Final selection of the first two waterbodies also considered current fiscal resources and the need for staff to obtain experience developing MFLs.

The technical evaluation for each MFL is expected to require approximately five years of data collection and analysis. Data collection has begun and will occur concurrently for several waterbodies. Starting in 2018, one MFL assessment is expected to be completed annually. It is anticipated that the technical assessment for the St. Marks River Rise, a first magnitude spring in southeastern Leon County that shares a substantial portion of its springshed with Wakulla Springs, will be completed in 2018. The second assessment will be completed in 2019 for the Floridan Aquifer in coastal Franklin County. Completion of each technical assessment will be followed by a rulemaking process. The data and MFL developed for the St. Marks River Rise will also assist in establishing an MFL for Wakulla Springs and the Wakulla River.

The FY 2012-2013 priority list and timelines are subject to the availability of funds, data collection and analysis needs, climatic conditions, peer review, and rule challenges. The list and schedule will be re-evaluated annually, and adjustments will be made as appropriate. Other considerations notwithstanding, additional fiscal resources may facilitate a more ambitious schedule.

Table 2-1. Northwest Florida Water Management District MFL Priority List (2013)

Waterbody	Estimated Schedule		
	MFL Initiation <sup>1</sup>	Technical Assessment Complete <sup>2</sup>	Rule Adoption <sup>3</sup>
St. Marks River Rise	2013	2018	2020
Floridan Aquifer – Coastal Franklin County	2014	2019	2021
Floridan Aquifer – Coastal Region II	2015	2020	2022
Wakulla Springs	2016*	2021	2023
Sally Ward Spring	2016	2021	2023
Jackson Blue Spring	2017	2022	2024
Floridan Aquifer – Coastal Bay County	2018	2023	2025
Econfina Creek & Spring Complex	2019	2024	2026
Deer Point Lake	2020	2025	2027
Yellow River	2021	2026	2028
Floridan Aquifer – Inland Walton County	Technical Assessments will be completed after 2026		
Floridan Aquifer – Coastal Gulf County			
Floridan Aquifer – Inland Franklin County			
Inland Sand and Gravel Aquifer			
Morrison Spring			
Holmes Blue Spring			
Blue Hole Spring			
Ponce de Leon Spring			
Washington Blue & Potter Spring Complex			
Baltzell Spring Group/Upper Chipola Spring Complex			
Holmes Creek & Spring Complex			
Shoal River			
Telogia Creek			

Waterbodies Subject to Regulatory Reservations	
Apalachicola River	Reservations established 2006, expire 2016 (s. 40A-2.223, F.A.C.). The magnitude, duration and frequency of observed flows are reserved, essentially in total, all seasons for the protection of fish and wildlife of the Chipola River, Apalachicola River, associated floodplains and Apalachicola Bay.
Chipola River	

\* Wakulla Springs basin data collection initiated in 2013 as part of St. Marks River Rise MFL development.

Footnotes

<sup>1</sup> Priority list and schedule will be re-evaluated on an annual basis.

<sup>2</sup> It is anticipated that each proposed MFL will be submitted for scientific peer review following the technical assessment.

<sup>3</sup> Based on an estimated 18-24 months from completion of technical assessments to final rule adoption.



Figure 2-1. NFWMD MFL Priority Waterbodies (2012-2013 Schedule)

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## Chapter Three: Annual Five-Year Capital Improvements Plan

### 3.1 Introduction

The five-year capital improvements plan (CIP) includes projected revenues and expenditures for capital improvements from fiscal years 2012-2013 through 2016-2017. As directed by s. 373.536(6)(a)(3), Florida Statutes, the CIP has been prepared in a manner comparable to the fixed capital outlay format set forth in s. 216.043, Florida Statutes. The format for this plan is drawn from the standard budget reporting format prescribed by the Executive Office of the Governor. Capital improvement projects may be budgeted in either of two standard program categories. Those programs and their activities and sub-activities are represented below:

#### 2.0 Acquisition, Restoration and Public Works

- 2.1 Land Acquisition
- 2.2 Water Source Development
  - 2.2.1 Water Resource Development Projects
  - 2.2.2 Water Supply Development Assistance
  - 2.2.3 Other Water Source Development Activities
- 2.3 Surface Water Projects
- 2.4 Other Cooperative Projects
- 2.5 Facilities Construction & Major Renovations
- 2.6 Other Acquisition and Restoration Activities

#### 3.0 Operation and Maintenance of Lands and Works

- 3.1 Land Management
- 3.2 Works
- 3.3 Facilities
- 3.4 Invasive Plant Control
- 3.5 Other Operation and Maintenance Activities

The only activities and sub-activities under program *2.0 Acquisition, Restoration and Public Works* that may include capital improvement projects are: 2.1 Land Acquisition, 2.2.1 Water Resource Development Projects, 2.2.3 Other Water Source Development Activities, 2.3 Surface Water Projects, and 2.5 Facilities Construction and Major Renovations. The Northwest Florida Water Management District has projects in each of these categories.

The only activities under program *3.0 Operation and Maintenance of Lands and Works* that may include capital improvement projects are: 3.1 Land Management and 3.2 Works. Of these, the Northwest Florida Water Management District only has capital improvement projects in activity 3.1.

The CIP includes expenditures for basic construction costs (permits, inspections, site development, etc.) and other project costs (land, survey, existing facility acquisition, professional services, etc.).

A district's CIP contains only those projects that will be owned and capitalized as fixed assets by the district. The District does not capitalize construction projects having a total project cost of less than \$50,000.



### 3.2 Five-Year Capital Improvements Plan

The purpose of the Five-Year Capital Improvements Plan (CIP) is to project future needs and anticipate future funding requirements to meet those needs. The CIP includes expenditures for basic construction costs (permits, inspections, site development, etc.), other project costs (land, survey, existing facility acquisition, professional services, etc.) and anticipated changes in program costs, changes in maintenance costs and changes in utility costs. The development and construction of all capital projects are budgeted either under program heading *2.0 Acquisition, Restoration and Public Works* or under program heading *3.0 Operation and Maintenance of Lands and Works*.

The District's capital improvements projects are categorized according to the following activities:

- Land Acquisition;
- Surface Water Projects;
- Facilities Construction and Major Renovations; and
- Land Management.

The District's Florida Forever Work Plan, Land Acquisition Plan, Five-Year Water Resource Development Work Plan, Land Management Plan and Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan may also provide valuable insight to the District's long range capital improvements plan.

Table 3-1. NFWFMD Five Year Capital Improvements Plan, Fiscal Years 2013-2017

#### 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

##### 2.1 Land Acquisition

Revenues (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Water Management Lands Trust Fund	137,616	0	0	0	0
Florida Forever	0	0	0	0	0
Department of Defense REPI Funds	0	0	0	0	0
District Land Acquisition Reserve	0	0	0	0	0
Land Management Fund	0	53,415	75,000	75,000	75,000
<b>TOTAL</b>	<b>137,616</b>	<b>53,415</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>

Expenditures (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Florida Forever - Land Acquisitions	0	0	0	0	0
Land Acquisition	0	0	0	0	0
Nokuse Plantation CE (Eglin AFB Buffer)	0	0	0	0	0
Water Management Lands Trust Fund	137,616	0	0	0	0
Land Management Fund	0	53,415	75,000	75,000	75,000
<b>TOTAL</b>	<b>137,616</b>	<b>53,415</b>	<b>75,000</b>	<b>75,000</b>	<b>75,000</b>

**2.2 Water Source Development**

Revenues (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Florida Forever	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>00</b>

Expenditures (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Florida Forever - Land Acquisitions	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

**2.3 Surface Water Projects**

Revenues (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
DOT Mitigation Funds	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
<b>TOTAL</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>

Expenditures (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
DOT Mitigation	1,500,000	1,500,000	1,500,000	1,500,000	1,500,000
<b>TOTAL</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>	<b>1,500,000</b>

**2.5 Facilities Construction and Major Renovations**

Revenues (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Florida Forever	0	0	0	0	0
Water Management Lands Trust Fund	0	0	0	0	0
Land Management Fund	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

Expenditures (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
None Projected	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

#### 3.1 Land Management

Revenues (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Water Management Lands Trust Fund	0	0	0	0	0
Florida Forever	0	0	0	0	0
Land Management Fund	125,000	2,125,000	150,000	50,000	450,000
<b>TOTAL</b>	<b>125,000</b>	<b>2,125,000</b>	<b>150,000</b>	<b>50,000</b>	<b>450,000</b>

Expenditures (\$)	Fiscal Year				
	2012-13	2013-14	2014-15	2015-16	2016-17
Canoe/Small Boat Launch(s)	0	0	0	0	0
ESC - Spring Restoration & Protection Project; Phase II - Williford Spring	0	2,000,000	100,000	0	0
Streambank Restoration & Public Recreation – Cooperative with Local Governments	100,000	100,000	0	0	200,000
Public Access Road Construction	0	0	0	0	0
Streambank and Solution Hole Restoration and Protection	25,000	25,000	50,000	50,000	50,000
<b>TOTAL</b>	<b>125,000</b>	<b>2,125,000</b>	<b>150,000</b>	<b>50,000</b>	<b>450,000</b>

<b>TOTAL CAPITAL EXPENDITURES (\$)</b>	<b>1,762,616</b>	<b>3,678,415</b>	<b>1,725,000</b>	<b>1,625,000</b>	<b>2,025,000</b>
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### 3.3 Project Descriptions

The following pages provide a brief description of each capital improvements plan activity.

**PROGRAM:** 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

**ACTIVITY:** 2.1 LAND ACQUISITION

**Project Title:** Save Our Rivers, Preservation 2000 and Florida Forever Land Purchases - No land acquisitions are anticipated in FY 2012-2013.

**Type:** Unimproved Land

**Physical Location:** Undetermined - Within the District's 16-county boundaries

**Square Footage/Physical Description:** N/A

**Expected Completion Date:** N/A

**Historical Background/Need for Project:** To protect and preserve the water resources within the District's 16-county boundaries.

**Plan Linkages:** Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** None

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Purchase price of land is unknown at this time.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** Land acquisition ancillary costs are unknown at this time.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** N/A

**Anticipated Additional Operating Costs/Continuing:** Varied. Maintenance costs to be determined based on the locations and types of lands ultimately acquired.

**PROGRAM:** 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

**ACTIVITY:** 2.2 WATER SOURCE DEVELOPMENT

**Project Title:** Save Our Rivers and Florida Forever Land Purchases - No land acquisitions are anticipated in FY 2012-2013.

**Type:** Unimproved Land

**Physical Location:** Undetermined - Within the District's 16-county boundaries

**Square Footage/Physical Description:** N/A

**Expected Completion Date:** N/A

**Historical Background/Need for Project:** To protect and preserve the water resources within the District's 16-county boundaries.

**Plan Linkages:** Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** None

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Purchase price of land is unknown at this time.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** Land acquisition ancillary costs are unknown at this time.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** N/A

**Anticipated Additional Operating Costs/Continuing:** Varied. Maintenance costs to be determined based on the locations and types of lands ultimately acquired.

**PROGRAM:** 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

**ACTIVITY:** 2.3 SURFACE WATER PROJECTS

**Project Title:** Regional Mitigation for DOT Wetlands Impacts

**Type:** Wetlands, waterbodies and buffers that qualify as mitigation for DOT wetland impacts

**Physical Location:** Various locations - Watersheds within the District

**Square Footage/Physical Description:** Land purchases, land management restoration activities (shrub reduction, herbicide, vegetative planting, etc.), and/or construction of various capital restoration structures (e.g. bridges, low water crossings, water control structures, etc.).

**Expected Completion Date:** Program is ongoing, year-to-year.

**Historical Background/Need for Project:** Section 373.4137, Florida Statutes, provides that the districts mitigate for DOT wetland impacts that are not within the service area of a private mitigation bank or when credits from a mitigation bank are not deemed appropriate.

**Plan Linkages:** Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan, Florida Forever Work Plan, SWIM plans.

**Area(s) of Responsibility:** Water Quality, Flood Protection and Natural Systems.

**Alternative(s):** Specific projects may be excluded from the mitigation plan, in whole or in part, upon the election of the DOT, a transportation authority if applicable, or the District.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Unknown at this time. Multiple projects. Costs are determined by project type (land acquisition, bridge construction, low water crossing, etc.).

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** An amount equal to 15 percent of the total construction and land acquisition costs are estimated for engineering design work, surveying, land appraisals, environmental audits, etc.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** Unknown at this time. Multiple projects. Costs are determined by project type (land acquisition, bridge construction, low water crossing, etc.).

**Anticipated Additional Operating Costs/Continuing:** Unknown at this time. Multiple projects. Costs are determined by project type (land acquisition, bridge construction, low water crossing, etc.).

**PROGRAM:** 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

**ACTIVITY:** 2.5 FACILITIES CONSTRUCTION AND MAJOR RENOVATIONS

**Project Title:** No facilities construction or major renovations are anticipated in FY 2012-2013

**Type:**

**Physical Location:**

**Square Footage/Physical Description:**

**Expected Completion Date:**

**Historical Background/Need for Project:**

**Plan Linkages:** Florida Forever Work Plan, District Water Management Plan, District Budget

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):**

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):**

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):**

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):**

**Anticipated Additional Operating Costs/Continuing:**

**PROGRAM:** 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

**ACTIVITY:** 3.1 LAND MANAGEMENT

**Project Title:** Public Waterway Access

**Type:** Canoe/Small Boat Launch(s)

**Physical Location:** TBD

**Square Footage/Physical Description:** TBD

**Expected Completion Date:** TBD

**Historical Background/Need for Project:** Suitable public waterway access, especially in sensitive riparian, lacustrine and floodplain areas on District lands.

**Plan Linkages:** District's Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** NFWFMD could delay potential projects when sites are identified, especially sites that are causing adverse stormwater and streambank impacts, especially erosion, siltation and sedimentation issues which would adversely impact water quality in stream, lakes and rivers.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** N/A

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** N/A

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** N/A

**Anticipated Additional Operating Costs/Continuing:** N/A



**PROGRAM:** 3.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

**ACTIVITY:** 3.1 FACILITIES CONSTRUCTION AND MAJOR RENOVATIONS

**Project Title:** Econfina Springs Complex - Spring Restoration & Protection Project; Phase II - Williford Spring. Construction on the proposed project has been deferred until FY 2013-2014.

**Type:** Spring Restoration and Protection Project

**Physical Location:** Econfina Creek Water Management Area

**Square Footage/Physical Description:** Proposed restoration and protection of Williford Spring, a 2<sup>nd</sup> magnitude spring. Engineer designs, include, but are not limited to the following: 1) Spring sediment removal; 2) Springbank restoration and protection utilizing geotechnical materials and native vegetation; 3) Enhanced spring/spring run protection with the construction of an elevated boardwalk which provides access to a canoe dock/gangway for use by canoeists/kayakers; 4) Associated stormwater facilities to prevent sediment from entering the spring pool; 5) spring entry steps/limestone terrace; 6) trail construction in sensitive karst areas to protect water resources and provide public access; 7) island /streambank restoration; 8) associated public access/recreation facilities, including pavilions, a composting toilet, parking area, boardwalks, view decks, connector trails, etc. and; 9) native landscape restoration at all sites. Ninety-nine (99) percent of designs are almost complete and final designs/permitting/bid preparation/bidding for Phase II are anticipated to be completed by on or before September 30, 2013. Construction of Phase II is scheduled to begin on October 1, 2013.

**Expected Completion Date:** N/A

**Historical Background/Need for Project:** Project will prevent erosion/sedimentation/water quality impacts/protect natural systems due to recreation/stormwater issues at a significant 2<sup>nd</sup> magnitude spring.

**Plan Linkages:** District's Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** NFWFMD could delay the project, which would adversely impact Williford Spring and the water quality of Econfina Creek (a Class I Waterbody).

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** None in FY 2012-2013.

[Two million dollars preliminarily budgeted in FY 2013-2014, subject to final architecture/engineering design, permitting and bidding.]

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** \$85,000 for bid preparation, bidding, construction oversight, etc. in FY 2012-2013.

[\$22,500 proposed in FY 2013-2014 for surveying and protective fencing and \$100,000 proposed in FY 2014-2015 for resource protection, public safety and interpretive signage]

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** None

**Anticipated Additional Operating Costs/Continuing:** N/A

**PROGRAM:** 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

**ACTIVITY:** 3.1 LAND MANAGEMENT

**Project Title:** Streambank Restoration and Protection and repairs and Improvements to Hightower, Spurling and Live Oak Landings – Cooperative Local Government Agreement (Washington County).

**Type:** Streambank Restoration and Protection and Public Access/Recreation

**Physical Location(s):** Hightower, Spurling and Live Oak Landings (Washington County) – Choctawhatchee River/Holmes Creek WMA.

**Square Footage/Physical Description:** The restoration and protection of approximately 500 feet of eroded streambank at three boat launch locations along Holmes Creek utilizing geotextile bags to create a vegetative retaining wall, as well as the repair and improvement of these boat launch sites, including but not limited to: 1) the construction of four stormwater facilities; 2) the demolition, regarding and construction of a boat launch at Live Oak Landing; 3) access road improvements; 4) parking area improvements at all three sites; 5) the construction of a bank fishing pier at Live Oak Landing; 6) a short boardwalk/spring observation deck at Hightower Landing spring; 7) the installation of protective wooden rail fencing at all sites and; 8) the development of picnic areas and four primitive campsites at Spurling Landing.

**Expected Completion Date:** September 30, 2013 for all permitted and upland facilities (Phase I)

**Historical Background/Need for Project:** Significant streambank erosion is occurring at all three sites and lack of stormwater treatment facilities are causing significant siltation and sedimentation issues at all three sites, especially a Hightower and Live Oak Landings. In addition, the boat launch at Live Oak Landing cannot be used properly during low water periods, limiting public access and recreation. Enhanced public access and recreation facilities are also needed, especially at Live Oak and Spurling Landings.

**Plan Linkages:** District's Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** NFWFMD could delay the project and streambanks will continue to erode; stormwater will continue to the impact the water resources of Holmes Creek; the public will have difficulty accessing Holmes Creek and adjacent District lands for recreation purposes and; public recreation opportunities will be diminished.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Phase I in FY 2012-2013 is \$100,000.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** N/A.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** None

**Anticipated Additional Operating Costs/Continuing:** County responsibility.

**PROGRAM:** 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

**ACTIVITY:** 3.1 LAND MANAGEMENT

**Project Title:** No Public/Land Management Access Road Construction (Materials Only) Project(s) are anticipated in FY 2012-2013 due to lack of adequate funds.

**Type:** Single or Double Lane Paved Public Access Road (Approx. 30-foot wide)

**Physical Location(s):** St. Andrew's Tract - Section 9 (Hwy. 167, SW Jackson Co.); Altha Tract - Johnny Boy Landing and Look And Tremble Roads (Calhoun County) and; Beaverdam Creek Tract - Harry Donar Road (Liberty County).

**Square Footage/Physical Description:** – TBD, approx. \_\_\_\_\_ square feet

**Expected Completion Date:** N/A

**Historical Background/Need for Project:** \_\_\_\_\_ Road(s) is (are) currently sand or clay that experience(s) considerable stormwater impacts (erosion/wetland habitat sedimentation and siltation) during heavy rainfall events. Paving the road(s) will lessen stormwater impacts and provide enhanced public/land management access to a portion of the \_\_\_\_\_ WMA(s).

**Plan Linkages:** District's Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** NFWFMD could delay the project, which would allow the road to continue to erode and impact adjacent water resources, hinder vehicular access by the public to District lands, etc.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Cooperative project(s) [Local Govt. Agreements] with Calhoun, Jackson or Liberty Counties – Funding for asphalt only. Counties will provide all labor and equipment. Zero dollars in FY 2012-2013 and beyond due to lack of adequate funds.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** N/A.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** None

**Anticipated Additional Operating Costs/Continuing:** County responsibility.

**PROGRAM:** 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

**ACTIVITY:** 3.1 LAND MANAGEMENT

**Project Title:** Streambank and Solution Hole Restoration and Protection

**Type:** Streambank and Solution Hole Restoration and Protection

**Physical Location:** Devil's Hole, a swallet located near Econfina Creek in the Econfina Creek Water Management Area

**Square Footage/Physical Description:** Solution Hole bank restoration and protection utilizing geotextile bags and providing for public access while protecting water resources, subject to engineering design and permitting.

**Expected Completion Date:** September 30, 2013

**Historical Background/Need for Project:** Devil's Hole is experiencing significant bank erosion and sedimentation due to adverse impacts caused by unregulated public use on sensitive slope areas. The project will stabilize highly erodible slopes while providing public access and recreational at this site on the Econfina Creek WMA.

**Plan Linkages:** District's Florida Forever Work Plan

**Area(s) of Responsibility:** Water Supply, Water Quality, Flood Protection and Natural Systems

**Alternative(s):** District could delay the project, which may lead to further degradation of Devil's Hole, which may cause these areas to be closed to public use.

**Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other):** Estimated at \$25,000 for materials only.

**Other Project Costs (includes land, survey, existing facility acquisition, professional services, other):** The District will utilize in-house staff for engineering design services.

**Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses):** \$0

**Anticipated Additional Operating Costs/Continuing:** \$1,000 + annually for site cleanup and maintenance

## **3.4 Appendix**

**Water Management District Standard Format Program Definitions** for Programs and Activities Found in the Northwest Florida Water Management District’s Capital Improvements Plan.

### **2.0 Acquisition, Restoration and Public Works**

This program includes the development and construction of all capital projects (except for those contained in Program 3.0), including water resource development projects/water supply development assistance, water control projects, and support and administrative facilities construction; cooperative projects; land acquisition (including Save Our Rivers/Preservation 2000/Florida Forever) and the restoration of lands and water bodies.

2.1 Land Acquisition: The acquisition of land and facilities for the protection and management of water resources. This activity category does not include land acquisition components of “water resource development projects,” “surface water projects,” or “other cooperative projects.”

2.2 Water Source Development: The acquisition of land and facilities for the protection and management of water resources. This activity category includes land acquisition components of “water resource development projects,” “water supply development assistance projects,” or “other water source development activities.”

2.3 Surface Water Projects: Those projects that restore or protect surface water quality, flood protection, or surface-water related resources through the acquisition and improvement of land, construction of public works, and other activities.

2.5 Facilities Construction and Major Renovations: Design, construction, and significant renovation of all district support and administrative facilities.

### **3.0 Operation and Maintenance of Lands and Works**

This program includes all operation and maintenance of facilities, flood control and water supply structures, lands, and other works authorized by Chapter 373, Florida Statutes.

3.1 Land Management (P2000/Save Our Rivers/Florida Forever): Maintenance, custodial, public use improvements, and restoration efforts for lands acquired through Save Our Rivers, Preservation 2000, Florida Forever or other land acquisition programs.

## Chapter Four: Water Supply

### 4.1. Five-Year Water Resource Development Work Program: FY 2012-2013 Update

#### Introduction

In 1997, the Florida Legislature amended the Florida Water Resources Act (Chapter 373, F.S.) to provide direction to the state's five water management districts on regional water supply planning. This amendment provided a two-step process that involves: (1) dividing the jurisdictions of each water management district into water supply planning regions and assessing the water supply needs and sources of each region; and (2) developing regional water supply plans for those regions identified as either having, or being likely to develop, future water supply constraints.

Each water management district is required by s. 373.536(6)(a)4, Florida Statutes (F.S.), as amended in 2012, to prepare a Five-Year Water Resource Development Work Program to describe the District's implementation strategy and funding plan for the water resource, water supply, and alternative water supply development components of each approved regional water supply plan (RWSP) developed or revised under s. 373.709, F.S. In accordance with the statute, the Work Program is submitted to the Governor, the President of the Senate, the Speaker of the House of Representatives, the Secretary of the Department of Environmental Protection, the chairs of legislative committees with substantive or fiscal jurisdiction over the districts, and the governing boards of counties constituting each of the five districts. The Department of Environmental Protection (DEP) then conducts a review of the Work Program, to include a "written evaluation of the program's consistency with the furtherance of the district's approved regional water supply plans, and the adequacy of proposed expenditures."

Water resource, water supply, and alternative water supply development are complementary components of the RWSP. Water resource development projects are typically regional and broad in scope, while water supply development projects are more localized and address water treatment, storage, and delivery to end users. Water resource development supports and facilitates future alternative water supply development, which provides for the development of non-traditional water sources. Water management districts are statutorily responsible primarily for water resource development, while water supply development is primarily the responsibility of local governments, water supply authorities, and utilities. The districts do, however, also provide technical and financial assistance for water supply development. Alternative water supply and water resource development projects supplement dedicated regulatory efforts to ensure the long-term sustainability of water resources.

#### Regional Water Supply Planning in Northwest Florida

The Northwest Florida Water Management District (NFWFMD or "District") established seven water supply planning regions in 1996 (Figure 1). The initial District Water Supply Assessment (WSA) (NFWFMD 1998) evaluated whether supplies would be sufficient to meet demands through 2020, and it was determined that only Region II (Santa Rosa, Okaloosa, and Walton counties) required a RWSP. The primary resource concern identified in Region II is a pronounced drawdown in the coastal Floridan Aquifer caused by long term pumping.

In 2006, the NFWFMD Governing Board determined that the need for planning alternative surface water development in Gulf County and Franklin County (Region V) warranted development of a RWSP.

Similarly, in 2008, the Governing Board concluded that the need for additional source redundancy and sustainability warranted development of a RWSP for Region III (Bay County).

A District-wide WSA update was completed in 2008 (approved May 2009), extending water demand projections and an evaluation of sources through 2030. The update confirmed that no additional RWSPs were required and that water supply planning and implementation efforts should continue in regions II, III, and V (NFWFMD 2008a). The WSA is scheduled to be updated again in 2013.

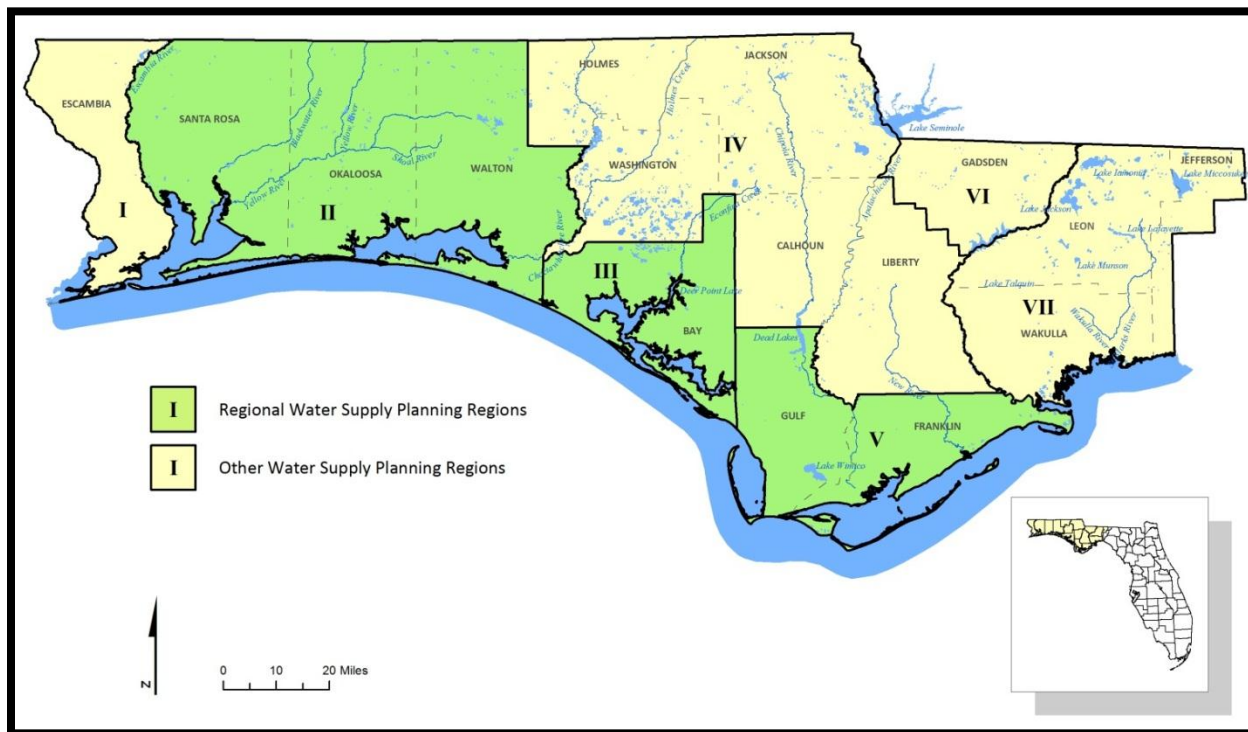


Figure 4-1. Water Supply Planning Regions

As required by s. 373.709(2)(a)1, F.S., the RWSP level of certainty planning goal is to identify and meet existing and future reasonable-beneficial water needs during a 1-in-10 year drought event. While water supply sources can become constrained during drought conditions, demands can increase for certain uses, such as agricultural irrigation and outdoor water use. District RWSPs include strategies to help drought-proof northwest Florida communities through alternative water supply development, the interconnection of water systems, the reuse of reclaimed water, and water conservation. A more thorough discussion of the quantification of 1-in-10 year drought demands may be found in the 2008 Water Supply Assessment Update (NFWFMD 2008a).

Implementation of the strategies detailed in the Water Resource Development Work Program (WRDWP) will make additional water available to meet future needs in a timely manner for reasonable-beneficial uses through the planning period. Sources of water include the inland Floridan Aquifer, Sand-and-Gravel Aquifer, reclaimed water, and surface waters. Water conservation is emphasized to improve water use efficiency and long-term water resource sustainability. It should be noted that future water demands, including consideration of 1-in-10 year drought and seasonal demand fluctuations, are also addressed through the consumptive use permitting program.

Public supply continues to be the largest use category for the District, representing 47 percent of the demand in 2005 and projected to grow to 52 percent by 2030 (NFWFMD 2008a). This increasing trend

is generally true for Regions II, III, and V and has been a focus of the projects developed through the regional water supply planning process, as discussed below.

### **Funding for Water Resource and Supply Development**

The state constitution limits the NFWFMD to 1/20th (.05 mills) of the ad valorem taxing authority afforded the other four water management districts. The District's FY 2012-2013 ad valorem tax millage rate, as set by the Governing Board, is .04. To fulfill legislatively mandated water supply planning and water resource development activities under this revenue constraint, the District looks to other sources of funding, as available, including the following:

- Water Management Lands Trust Fund (no legislative funding since FY 2010-2011);
- Water Protection and Sustainability Program Trust Fund (no legislative funding since FY 2008-2009);
- Legislative special appropriations (no water supply funding since FY 2008-2009);
- Florida Forever (no appropriations since FY 2010-2011);
- District General Fund;
- Federal grants; and
- Local government and water supply utility cost-sharing.

Water resource development in northwest Florida has depended primarily on funding from the Water Management Lands Trust Fund (WMLTF). Appropriations from the WMLTF for water resource and supply development have been eliminated since FY 2010-2011. The District is implementing priority projects to the extent possible using previously encumbered funds and reserves. The District, however, has no ability to replenish reserve funds when expended.

The Water Protection and Sustainability Program Trust Fund (WPSPTF), established by the 2005 Florida Legislature, allowed the District to provide cost-share assistance for construction of alternative water supply development projects and priority water resource development and springs protection activities. Projects funded under the WPSPTF are listed in Appendix A and are described in the March 1 Consolidated Annual Report. No funding has been appropriated for the WPSPTF since FY 2008-2009.

The Florida Forever Trust Fund has supported acquisition of important recharge lands within the Econfina Recharge Area. Additionally, Florida Forever has been a potential source of construction funding for reclaimed water storage facilities. Florida Forever funding, however, has not been appropriated since FY 2010-2011.

Local government and utility funding participation is especially important for several types of water resource development projects. Aquifer storage and recovery, reuse of reclaimed water, and water conservation are examples. All projects require substantial local investment once they reach the water supply development stage.

Funding budgeted for water resource development is listed below in summary tables for Regions II, III, and V (Tables 2, 5, and 8, respectively). The proposed water resource development funding for FY 2013-2014 is \$709,200. The anticipated five year water resource development implementation cost (FY 2012-2013 - FY 2016-2017) is \$2,491,600. Additionally, the District expects to spend over \$7,400,000 during the planning period for alternative water supply development, augmenting local government and utility funding.



## Water Supply

Where enhanced monitoring and water resource development needs are identified, District reserve funds may support these activities during the short term. Over the longer term planning horizon, however, significant needs, including for alternative water supply development and resource monitoring and analysis, have been identified that exceed currently identified funding. Efforts will continue to secure adequate funding for long-term water resource and supply development.

### **Region II: Santa Rosa, Okaloosa, and Walton Counties**

Since the 1940s, Santa Rosa, Okaloosa, and Walton counties (Figure 2) have been characterized by rapid population growth and a concentration of development and water demands within coastal portions of the region. Long-term pumping of the coastal Floridan Aquifer in southern Santa Rosa, Okaloosa, and Walton counties has caused formation of a substantial cone of depression, causing a risk of significant salt water intrusion and damage to public supply wells. Resource regulation and water supply planning and development over the past two decades have focused on reducing coastal withdrawals, limiting coastal demand, and developing inland water supply sources as alternatives to coastal ground water.

Chapter 40A-2, Florida Administrative Code (F.A.C.), established the coastal Water Resource Caution Area (WRCA) across the southern reach of all three counties (Figure 2). Within the coastal WRCA, regulatory approaches to resource sustainability are applied, including stringent conservation and reporting requirements and the prohibition of new allocations of coastal Floridan Aquifer water for non-potable uses.

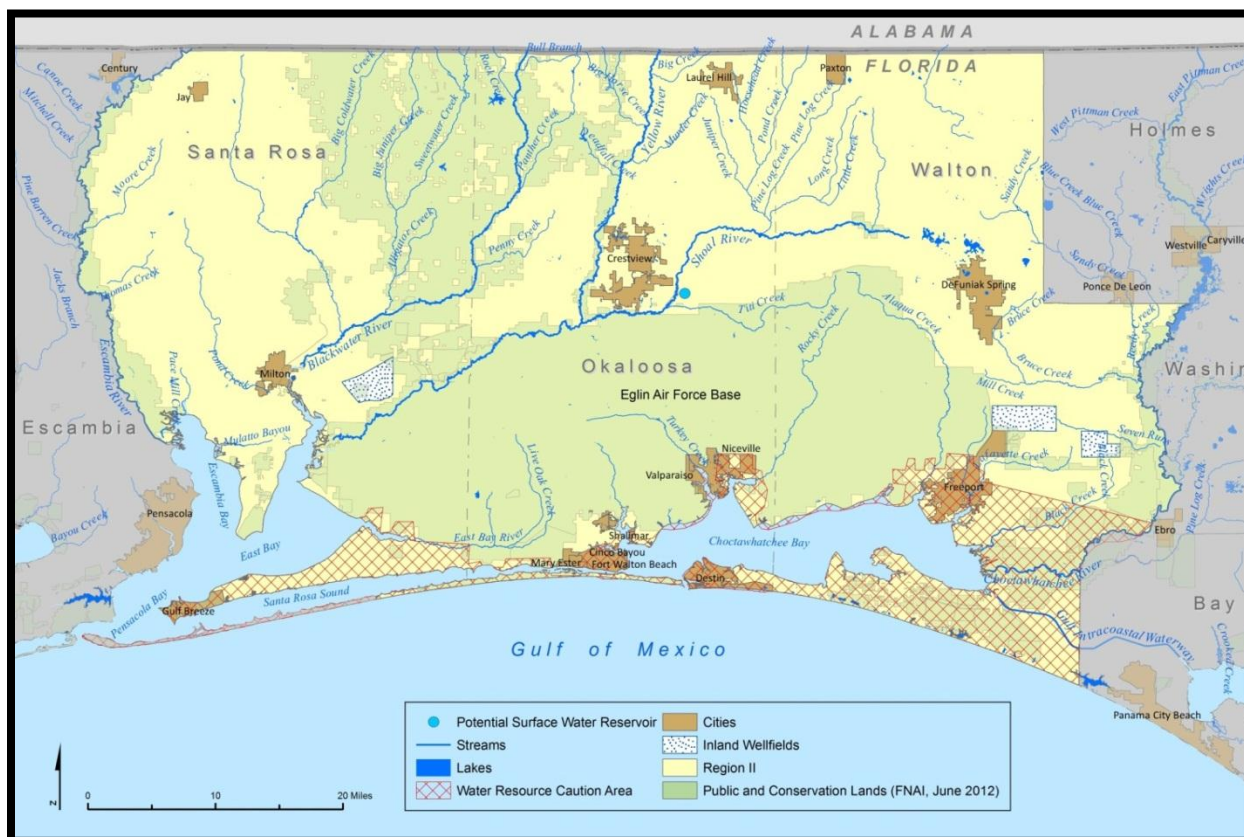


Figure 4-2. Water Supply Planning Region II

The District's first RWSP was approved by the Governing Board for Region II in February 2001 (NFWMD 2001). The Region II RWSP described the region's water supply needs, identified existing

and alternative water sources, and analyzed the ability of these sources to meet future demands to 2020. Updates to the plan were approved in 2006 (NFWFMD 2006) and again in 2012 (NFWFMD 2012b). In the process, water resource and water supply development components have been revised, progress on project implementation was described, and water demands were projected to 2030. Public supply water use in the region is currently projected to increase 53 percent from 46.08 million gallons per day (MGD) in 2010, to 70.71 MGD in 2030, with a large portion of this increase anticipated to serve demand in the coastal region.

## **Region II Water Resource Development**

The Region II RWSP includes ten water resource development projects encompassing strategies for developing water resources in support of alternative water supply development. These are summarized in Table 1. Descriptions of the strategies and their current progress follow.

Table 4-1. Region II Water Resource Development Projects

<i>Project</i>	<i>Activity</i>	<i>Water Identified or Made Available (MGD)</i>
Floridan Aquifer Sustainability Modeling	Development and application of a regional ground water flow model and salt water intrusion models.	30
Inland Sand-and-Gravel Aquifer Development and Sustainability	Development and application of a three-dimensional, transient ground water flow model.	18
Development of Surface Water Sources	Identification and development of feasible surface water sources and optimal facilities.	25
Aquifer Storage and Recovery Feasibility	Development of aquifer storage and recovery systems, primarily to support the reuse of reclaimed water.	2.125*
Water Reuse Coordination	Assistance in the development of reclaimed water to offset and conserve potable water resources.	5**
Water Conservation Coordination	Assistance to local governments and utilities in the conservation of potable water resources.	2.5**
Regional Water Supply Planning	Development and implementation of regional water supply plans.	N/A
Interconnection of Water Supply Conveyance Systems	Interconnection of coastal utility infrastructure to enhance the resilience of the coastal water systems.	N/A
Hydrologic Data Collection and Analysis	Collection and analysis of surface and ground water data throughout the region.	N/A
Abandoned Well Plugging	Assistance to local governments and utilities in the plugging of abandoned wells.	N/A

\* 50 percent potable water offset estimated.

\*\* Additional anticipated quantities to be determined.

### **Floridan Aquifer Sustainability Modeling**

Limiting further salt water intrusion into the coastal Floridan Aquifer and sustaining the aquifer as a viable water supply source is a primary focus of the RWSP. The Floridan Aquifer Sustainability Model was developed to include a western domain encompassing Santa Rosa and western Okaloosa counties and an eastern domain that includes eastern Okaloosa and Walton counties. The model has been used to evaluate long-term safe yields from the coastal aquifer, pumpage from consumptive use permits, and future withdrawal scenarios to evaluate cumulative impacts.

Model simulations have been run to predict the extent of salt water intrusion through 2100 for the eastern and western model domains. The simulations incorporated historical withdrawals and proposed future pumping rates. Results indicate that salt water intrusion into potable portions of the Floridan Aquifer continue to occur at a slow, manageable rate (HydroGeoLogic, Inc., 2005, 2007a). Principal pathways of saline water intrusion identified include lateral intrusion within the upper Floridan Aquifer from beneath the Gulf of Mexico, lateral intrusion from the lower to the upper Floridan Aquifer around the edge of the Bucatunna Clay confining unit, intrusion of saline waters where the Bucatunna Clay confining unit is absent (easternmost Choctawhatchee Bay area), and downward vertical leakage through the Intermediate System.

Under current pumping conditions, it is estimated that the coastal Floridan Aquifer is sustainable through 2050 and likely beyond (NFWFMD 2012b). Future model applications will be directed toward analysis of drawdown effects of increased pumping of the Floridan Aquifer in inland areas and alternative withdrawal scenario development.

### **Inland Sand-and-Gravel Aquifer Development and Sustainability**

Due to its high recharge rate, the inland Sand-and-Gravel Aquifer in Region II is capable of providing regionally-significant quantities of water. Through this project, a three-dimensional, transient ground water flow model has been developed to assess the volume of water sustainably available from the aquifer. The study area for this effort lies between the Blackwater and Yellow Rivers in Santa Rosa and Okaloosa counties. The model includes the transient response of the aquifer to drought and climatic variability. In previous years, considerable data were gathered, which involved constructing project-specific monitoring wells, determining aquifer hydraulic properties, mapping aquifer unit thicknesses, and measuring ground-water levels and stream discharge. The ground water flow model was subsequently developed and calibrated.

Development of an inland Sand-and-Gravel Aquifer wellfield was initiated in 1999 within the Santa Rosa County portion of the study area. Prior to the development of the wellfield, approximately one MGD were being withdrawn from the area for public supply. A pipeline from the inland Sand-and-Gravel Aquifer wellfield to the coastal area was completed in late 2003. Since then, potable water withdrawals from the wellfield and vicinity have increased to over five MGD. Water from the wellfield is being conveyed south to alleviate pumping demand from the Floridan Aquifer along the coast.

Modeling results to date indicate that an additional 13 MGD may be drawn from the inland Sand-and-Gravel Aquifer study area for a ground water production total of approximately 18 MGD. The ability of the aquifer to sustain a production of 18 MGD and avoid or minimize impacts to natural resources will depend on the management of withdrawals. Withdrawals can be managed by the proper placement of wells, variable pumping scenarios, and limiting drawdown in wells.

Preliminary mapping of the extent and quality of wetlands in the study area has been completed. Further investigation is needed to verify wetland quality and assess potential impacts to seepage wetlands and

streams sourced by Sand-and-Gravel Aquifer ground water. The District has completed development of backwater models of the Yellow and Blackwater Rivers, which are useful for accurately delineating floodplains of these rivers. The District is assisting Santa Rosa County in its wellhead/wellfield protection efforts by using the existing inland Sand-and-Gravel Aquifer ground water flow model to delineate capture zones for wells in the wellfield area. It is anticipated that the model will be applied to the resource assessment portion of the WSA update. Additional application and assessment, including evaluation of potential wetland effects from future withdrawals, may also be conducted depending on funding availability

### **Development of Surface Water Sources**

The Region II RWSP has identified surface water as an alternative water supply source to meet potable water demands beyond 2020, particularly within Okaloosa County. In 2006, the District and its water supply consultants prepared an analysis of potential surface water supply sources in Okaloosa County, presented in the report “Conceptual Alternative Water Supply Development Projects and Planning Level Cost Estimates” (PBS&J 2006). This study reviewed various technically and economically feasible alternatives, including direct river withdrawal and riverbank filtration. The District also concurrently reviewed an evaluation of a proposed Yellow River Reservoir and concluded that the proposal is not economically feasible and that its implementation would cause significant environmental impacts and mitigation requirements.

Currently, the Shoal River, east of Crestview in Okaloosa County, is being considered along with an offline pumped storage reservoir with a target of dependably delivering 25 MGD of surface water. Water would be pumped directly from the Shoal River to a reservoir located on an upstream tributary behind an earthen dam. District and Okaloosa County staff have performed preliminary feasibility studies, investigated land acquisition potential, and evaluated river water withdrawal methods and offline tributary surface impoundments for this project. Funding for the next fiscal year and beyond has been allocated to continue to assist Okaloosa County in project development once a preferred alternative is selected. Associated with this strategy, the District anticipates evaluating needs and opportunities for watershed resource protection and wetland and stream mitigation.

### **Aquifer Storage and Recovery Feasibility**

Aquifer storage and recovery (ASR), depending on the particular hydrogeologic and economic considerations of an area, has the potential to support storage of large quantities of water more effectively and at a lower cost than above ground storage. Aquifer storage and recovery systems have not been developed on a widespread basis within Region II due to hydrogeologic conditions, economic feasibility, the need for water quality evaluations, and other technical constraints. Destin Water Users has recently developed an ASR system that is permitted for a 2.125 MGD annual average daily flow capacity. The system consists of seven wells for storage of reclaimed water in the Sand and Gravel Aquifer. This reclaimed water is available to meet irrigation demands, helping to conserve potable water resources.

The use of ASR in the future for storage of reclaimed water or, perhaps, as a salinity barrier may require a regional approach, since water introduced into a geologic formation could affect the ground water beneath jurisdictions or service areas of multiple utilities. In coordination with evaluations of surface water supply and reclaimed water alternatives and if additional funding becomes available, the District may conduct preliminary ground water model analyses of the feasibility of additional ASR activities within Region II. A cooperative approach between utilities, the District, and DEP will be sought for any project development.

### **Water Reuse Coordination**

As of 2011, 22 facilities in Region II were permitted for public access reclaimed water, producing an estimated 9.28 MGD for public access reuse (DEP 2012). These facilities supported landscape irrigation for approximately 1,927 residences, 19 golf courses, eight parks, three schools, and one cemetery.

In response to regulatory and cooperative planning efforts, significant investments in reuse have been made in the region, particularly for golf course irrigation in coastal areas. Most of the utilities serving coastal Santa Rosa, Okaloosa, and Walton counties provide some public access reuse water that offsets potable demand. Additionally, the District has provided technical assistance and funding for several reclaimed water projects. Among recent projects, the City of Freeport constructed a wastewater reuse system intended to provide approximately 0.47 MGD of reclaimed water to irrigate a future residential subdivision and golf course. Construction to expand Okaloosa County's Bob Sikes Water Reclamation Facility has also been completed. Approximately 1.0 MGD of reclaimed water is available from this facility for public access irrigation in the vicinity of Crestview.

The Region II RWSP previously identified approximately five MGD of new beneficial reuse to offset demands on the coastal Floridan Aquifer within Region II. Work toward updating this estimate is ongoing as part of development of a District-wide reuse plan. The plan will identify needs and opportunities, as well as conceptual future projects to support RWSP implementation and to enhance the sustainability of water resources throughout northwest Florida. Results will include estimates of ground water offsets and reductions of surface water discharges. Work is well underway on multiple components of the plan and associated applications.

### **Water Conservation Coordination**

A significant effort at water conservation has been underway in Region II for some time, substantially due to regulatory requirements and incentives established within the coastal WRCA. As a result, the estimated potential for additional potable water conservation within the coastal portion of the region is relatively low (estimated previously at 2.5 MGD) (PBS&J 2000a). Water conservation remains a priority, however, to build upon current water use efficiency and resource sustainability.

Under Chapter 40A-2, F.A.C., new withdrawals from the Floridan Aquifer for non-potable uses are not permitted within the coastal WRCA. Additionally, in response to resource limitations, cooperative planning, and regulatory requirements and incentives, numerous utilities implement water conservation measures that include inclining block rates, conservation plans, and the reuse of reclaimed water. The goal for utility conservation measures is to reduce the annual average residential per capita water consumption to 100 gallons per day or lower and to reduce water leakage to 10 percent or less of the water withdrawn.

District staff promote water conservation education and awareness through such activities as the distribution of water conservation brochures and information to Region II utilities. To date 54,350 brochures have been provided. In FY 2004-2005 and in coordination with DEP, the District initiated the Water Conservation Hotel and Motel Program (Water CHAMP), with a focus on Region II. This is a towel and linen reuse program through which hotel guests are asked to forego having linens changed daily and to hang up towels that do not need washing. As of September 2012, 38 hotels were participating in the program, including 16 in Region II.

In cooperation with other water management districts, the District participated in the statewide study of the effects of water rate pricing structures on public supply water demand (Whitcomb 2005). The

NFWFMD coordinates distribution of the associated water rates model in cooperation with the author. Since 2005, requests for the model have been referred to Dr. Whitcomb for 33 utilities.

### **Regional Water Supply Planning**

Development and refinement of regional strategies, project planning and development, and RWSP updates are essential components of water resource development. Related activities include technical support and coordination with local governments and utilities to ensure a regional focus in the planning and development of alternative water supply projects. Associated administrative activities include project and funding management, coordination with DEP and other agencies, and progress reporting.

The District provides assistance with hydrogeology and related technical evaluations for development of new and alternative water sources, including the inland Floridan Aquifer, the Sand-and-Gravel Aquifer, surface water, and reclaimed water. The District has also assisted local governments and utilities in development of water transmission facilities extending from inland wellfields to the coastal WRCA. District staff may also work with local governments and state and regional agencies to enhance coordination of land use and water supply planning. District staff previously distributed guidelines and provided technical assistance to local governments for preparing water supply comprehensive plan amendments and water supply facilities work plans.

During the past year, the District completed an update to the Region II RWSP. Additional activities included coordination of program funding sources and grant agreements. The 2011-2012 WRDWP Annual Report was completed and incorporated into the March 1, 2012, Consolidated Annual Report.

### **Interconnection of Water Supply Conveyance Systems**

A District priority is the coastal water systems interconnection initiative. The goal of the initiative is to enhance the resilience of the coastal water systems by enabling transfer of water between utilities should the need arise due to droughts or other contingencies. Multi-jurisdictional and regional water conveyance systems will better ensure water will be available for emergency response and disaster recovery in the event of water shortages, natural disasters, environmental emergencies, or system failures. This is a cooperative effort with local utilities.

The Coastal Water Systems Interconnect assessment includes a comprehensive Basis of Design Report (BODR) to evaluate potential interconnections that would serve multiple utilities. Existing interconnections were evaluated to determine their capacity and ability to meet the emergency needs of the interconnected utilities. The evaluation was conducted for current and future conditions (2030) and relied on the utility emergency production capacities and demands.

The evaluation identified two priority major interconnections that would significantly enhance emergency water supplies for coastal communities. An interconnection between southern Walton and Bay counties would improve emergency water system reliability for customers of Bay County Utilities and Regional Utilities in Walton County. A second interconnection between the Fairpoint Regional Utility System in Santa Rosa County and the Okaloosa County West water system would enhance emergency water supply reliability in coastal Santa Rosa and Okaloosa counties.

### **Hydrologic Data Collection and Analysis**

The District has a hydrologic data collection network of rainfall gauges, stream gauges, and monitoring wells throughout Region II. Ground and surface water monitoring capabilities have been enhanced by continuing cooperation with the U.S. Geological Survey surface water gauging network and development

## *Water Supply*

of an expanded monitoring network for the Sand-and-Gravel and Floridan aquifers where new water sources have been developed or are planned. In addition, the District will continue to monitor conditions within the coastal WRCA for salt water intrusion and aquifer sustainability. The monitoring network is essential for ensuring that long-term water supply initiatives are successful and sustainable, as well as for refining groundwater models and analyses needed to make future management decisions and to further develop water management strategies.

Details of monitoring conducted as part of the Water Resource Development Work Program, as well as other work programs, may be found in the Hydrologic Monitoring Plan (Barrios et al., 2011), available at: [www.nfwmd.state.fl.us/pubs/hydrologic\\_monitoring\\_plan/hydrologic\\_monitoring\\_plan.html](http://www.nfwmd.state.fl.us/pubs/hydrologic_monitoring_plan/hydrologic_monitoring_plan.html).

The need has been identified to further expand and enhance the District's water resource monitoring network to support resource sustainability and cumulative impact assessments, to develop alternative water supplies, and to establish minimum flows and levels (MFLs). Among the enhancements planned are additional water level, water quality, and rainfall stations, and substantially increased monitoring frequency. Detailed plans for an expanded hydrologic and water quality monitoring network will be completed and implemented during the current year.

### **Abandoned Well Plugging**

The District's resource regulation program includes an active effort to plug abandoned artesian wells. The overall goal of the program is to protect available ground water resources from aging, uncontrolled, or improperly constructed wells that are no longer in use. The District achieves proper abandonment of such wells through two methods: requiring contractors to plug abandoned wells found on site during new well construction, or initiating a well abandonment contract with a well owner or local government.

District staff also provide technical assistance and funding to utilities in the plugging of abandoned wells identified as having the potential to adversely affect ground water quality. Well abandonment is an ongoing effort and is likely to continue as more wells are identified for plugging in the future. The District will continue to implement this project through regulatory programs, where feasible. This project supports District efforts to sustain coastal water supply sources. To date, the District has facilitated the plugging of 4,614 abandoned wells within Region II. During FY 2011-2012, the District's well plugging activity occurred in other Planning Regions.

**Funding Summary: Region II Water Resource Development Projects**

Table 2 displays past year expenditures, current year budget, and anticipated future expenditures for water resource development within Region II.

Table 4-2. 2013-2017 Region II WRDWP Project Funding

<i>Water Resource Development Projects</i>	<i>FY 11-12* Expenditures</i>	<b>Anticipated Five Year Work Program</b>					<i>FY13-FY17 Cost Estimate</i>
		<b>FY 12-13 Budget**</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	
Floridan Aquifer Sustainability	\$2,453	\$0	\$0	\$0	\$0	\$0	<b>\$0***</b>
Inland Sand-and-Gravel Aquifer	\$91,055	\$34,900	\$50,000	\$40,000	\$40,000	\$40,000	<b>\$204,900</b>
Surface Water Sources	\$84,073	\$22,400	\$50,000	\$100,000	\$50,000	\$30,000	<b>\$252,400</b>
Aquifer Storage and Recovery	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
Water Reuse	\$36,712	\$14,100	\$20,000	\$20,000	\$20,000	\$20,000	<b>\$94,100</b>
Water Conservation	\$5,609	\$4,700	\$5,000	\$5,000	\$5,000	\$5,000	<b>\$24,700</b>
Regional Water Supply Planning	\$85,805	\$26,100	\$20,000	\$20,000	\$20,000	\$50,000	<b>\$136,100</b>
Interconnect	\$116,229	\$12,700	\$15,000	\$20,000	\$0	\$0	<b>\$47,700</b>
Hydrologic Data	\$75,555	\$64,200	\$287,000	\$176,000	\$176,000	\$176,000	<b>\$879,200</b>
Abandoned Well Plugging	\$0	\$0	\$0	\$0	\$0	\$0	<b>\$0</b>
<b>TOTAL</b>	<b>\$497,491.00</b>	<b>\$179,100</b>	<b>\$447,000</b>	<b>\$381,000</b>	<b>\$311,000</b>	<b>\$321,000</b>	<b>\$1,639,100</b>

\*\* FY 2012-2013 figures based on adopted budget.

\*\*\*Funding for application of the Floridan Aquifer Sustainability Model during the Water Supply Assessment (WSA) update and subsequent evaluations is captured within budget listed for the Regional Water Supply Planning project.

The budget for FY 2012-2013 reflects a decrease in anticipated spending as compared to budgets of previous years. The major contractual expenses for development of the coastal interconnect BODR were completed during the previous fiscal year. Development of the Floridan Aquifer Sustainability Model is complete, with expenses for application of the model for the WSA update being captured within the Regional Water Supply Planning project. Additionally, technical work to assist Okaloosa County in potential reservoir evaluation was completed during FY 2011-2012, was an update to the Region II RWSP. It is anticipated that expenditures will increase beginning in FY 2013-2014. This in particular reflects efforts to further expand and enhance the District's water resource monitoring network, as described above.



**Region II Water Supply Development**

Water supply development strategies of the Region II RWSP, including preferred alternative water supply development projects, are listed in Table 3.

Table 4-3. Region II Water Supply Development Projects

<i>Project</i>	<i>Activity</i>	<i>Planning Level Cost Estimate</i>	<i>Water Made Available or Anticipated (MGD)</i>
Inland Floridan Aquifer Alternative Water Supply	Development of the inland Floridan Aquifer wellfield and transmission infrastructure to bring inland ground water to serve coastal utilities in Walton County.	\$47,088,331	15*
Inland Sand and Gravel Aquifer Alternative Water Supply	Development of the Inland Sand and Gravel Aquifer wellfield and associated infrastructure to bring inland ground water to serve coastal utilities in Santa Rosa County.	\$18,800,000	14**
Surface Water Supply Development	Development of alternative surface water supply source for Okaloosa County; to include facilities for storage, conveyance, and conjunctive use.	\$86,159,000	25
Water Reuse Facilities	Assist utilities and local governments in the development of reclaimed water to achieve potable water offset.	TBD	5
Water Supply Management Projects	Development of conveyance and interconnection facilities, facilitating development of alternative water supplies.	\$42,700,000	N/A

\* Approximately 13 MGD currently permitted.

\*\* 18 MGD including current pumpage. Approximately six MGD currently permitted.

Major water supply development projects completed to date have included inland ground water sources for coastal utilities in all three counties. These include the inland Sand and Gravel Aquifer wellfield in Santa Rosa County, inland Floridan Aquifer wells and transmission facilities in Okaloosa County, and an inland Floridan Aquifer wellfield and transmission facilities in Walton County. Current construction projects include transmission and interconnection facilities in Walton County.

To date, Region II water supply development projects have made approximately 19 MGD of water available for the region, including 13 MGD from the inland Floridan Aquifer and six MGD from the inland Sand and Gravel Aquifer. An additional 42 MGD is estimated to be available for future development, including 12 MGD from the inland Sand and Gravel Aquifer, 25 MGD from surface water, and at least 5 MGD from reclaimed water. These water supplies, together with traditional water supply sources, are anticipated to be sufficient to meet projected demands through 2030 under both normal and 1-in-10 year drought conditions. Additional detail is available in the 2012 Region II RWSP update (NFWFMD 2012b).

### Region III: Bay County

The Governing Board approved a RWSP for Region III (Figure 3) in August 2008 (NFWMD 2008b). The plan describes concerns about the long-term sustainability of water supply resources within the region and presents strategies to diversify supplies and minimize their vulnerability to a major hurricane storm surge. The region currently depends on Deer Point Lake Reservoir as the primary public supply source of water. A future major storm surge has been identified as a potential threat to the resource given the possibilities of saline water entering the reservoir and of damage to or loss of the impoundment structure.



Figure 4-3. Water Supply Planning Region III

Existing and reasonably anticipated surface water supplies within the region are considered adequate to meet existing and reasonably anticipated future average water demands and demands for a 1-in-10 year drought through 2030, while sustaining water resources and related natural systems (NFWFMD 2008a). However, the surface water supply is the sole source of potable water for more than 90 percent of Region III. The NFWFMD will continue to work with local governments and utilities in the region to ensure the long-term reliability and sustainability of potable water resources.

**Region III Water Resource Development**

The Region III RWSP includes three water resource development strategies. These are summarized in Table 4. Descriptions of the strategies and their current progress follow.

Table 4-4. Region III Water Resource Development Projects

<i>Project</i>	<i>Activity</i>	<i>Water Identified or Made Available (MGD)</i>
Hydrologic and Water Quality Data Collection, Monitoring, and Analysis	Hydrologic data collection, analysis, and modeling to identify baseline conditions and trends to support alternative water supply development.	TBD
Water Reuse and Conservation Assistance	Assistance to local governments and utilities in developing reclaimed water and to enhance water conservation efforts.	TBD
Regional Water Supply Coordination and Technical Assistance	Technical assistance, support for utility interconnections, and development and update of the regional water supply plan.	TBD

**Hydrologic and Water Quality Data Collection, Monitoring, and Analysis**

Implementation of this project provides the water resource data collection, analysis, and modeling needed for characterizing baseline conditions and subsequently identifying and evaluating future alternative water supply sources. The data collection and analysis developed will also facilitate the long-term monitoring needed to ensure future withdrawals are managed to protect water resources and associated natural systems.

In cooperation with Bay County, the District continues implementation of the Deer Point Lake Watershed Hydrologic Monitoring program. This effort includes operation of stream stage/discharge and rainfall monitoring stations that provide a continuous record of precipitation and surface water flows during both dry weather and storm conditions. The District also operates additional ground water level, stream flow, and lake level monitoring sites within the county, all intended to characterize water resource conditions and trends within the region.

Details of monitoring conducted as part of the Water Resource Development Work Program, as well as other work programs, may be found in the Hydrologic Monitoring Plan (Barrios et al., 2011), available at: [www.nfwfmd.state.fl.us/pubs/hydrologic\\_monitoring\\_plan/hydrologic\\_monitoring\\_plan.html](http://www.nfwfmd.state.fl.us/pubs/hydrologic_monitoring_plan/hydrologic_monitoring_plan.html).

### **Water Reuse and Conservation Assistance**

The reuse of reclaimed water is an important regional strategy, given its potential for reducing and constraining potable water demand, improving water use efficiency, and supporting sustainable long-term management. District staff coordinate with DEP as that agency carries out its reuse regulation responsibilities. As of 2011, an estimated 3.55 MGD of reclaimed water were used for public access reuse in Region III (DEP 2012). This includes irrigation of an estimated 1,049 residences, three golf courses, four parks, and two schools.

As described above, work continues on development of a District-wide reuse plan that will identify conceptual projects to support RWSP implementation and thus help enhance water resource sustainability. The plan will provide an inventory of reclaimed water systems, projected wastewater flows for utilities in Region III through 2035, and geographic information systems (GIS) data. Work on these components is well underway.

Enhanced water conservation efforts may reduce current water use and limit long-term demand. Application of conservation rate structures, conservation measures in local building codes and ordinances, consumptive use permitting conditions, water loss prevention and correction efforts, and public outreach and education are expected to be especially important. The District's Water CHAMP program, described earlier, has 11 participating hotels in Bay County. Since 2004, the District has distributed approximately 6,150 water conservation brochures to utilities and local governments in the region.

### **Regional Water Supply Coordination and Technical Assistance**

Through this strategy, the District provides technical assistance to local governments and water suppliers. Local governments in regions subject to a RWSP must address statutory requirements to effectively coordinate land use and water supply planning. Such local governments are required to amend their comprehensive plans as necessary to include a Water Supply Facilities Work Plan and to otherwise ensure water supplies are planned and developed to meet future growth in a manner consistent with the RWSP.

The coastal water systems interconnection initiative described above also considers interconnections within Region III. Utility interconnections, in concert with continued development of alternative water supply sources, enhance the resilience of water supplies within the coastal regions in the face of droughts, major storms, and other possible events. The initial evaluation included three utilities within Bay County. Continuing work includes development of alternative preliminary designs and cost estimates.

It is anticipated that an update to the RWSP for Region III will be developed during 2013. Through this process, the allocation of alternative water supply development funding will be further evaluated based on an updated assessment of the optimal strategies for addressing water resource needs identified in the RWSP and WSA.

### **Funding Summary: Region III Water Resource Development Projects**

Table 5 displays past year expenditures, current year budget, and anticipated future expenditures for water resource development within Region III.

Table 4-5. 2013-2017 Region III WRDWP Project Funding

<i>Water Resource Development Projects</i>	<i>FY 11-12* Expenditures</i>	<i>Anticipated Five Year Work Program</i>					<i>FY13-FY17 Cost Estimate</i>
		<i>FY 12-13 Budget**</i>	<i>FY 13-14</i>	<i>FY 14-15</i>	<i>FY 15-16</i>	<i>FY 16-17</i>	
Hydrologic and Water Quality Data Collection, Monitoring, and Analysis	\$32,263	\$38,500	\$73,200	\$61,000	\$61,000	\$61,000	<b>\$294,700</b>
Water Reuse and Conservation Assistance	\$5,211	\$11,200	\$8,000	\$8,000	\$8,000	\$8,000	<b>\$43,200</b>
RWS Coord. and Technical Assist.	\$3,585	\$16,500	\$60,000	\$40,000	\$20,000	\$20,000	<b>\$156,500</b>
<b>TOTAL</b>	<b>\$41,059.00</b>	<b>\$66,200</b>	<b>\$141,200</b>	<b>\$109,000</b>	<b>\$89,000</b>	<b>\$89,000</b>	<b>\$494,400</b>

\*\* FY 2012-2013 figures based on adopted budget.

The additional funding indicated in Table 5 reflects an anticipated RWSP update and technical assistance to local governments and utilities in the planning region, as well as an increased focus on identifying potential reuse projects within the region and for continuing to develop the District’s hydrologic monitoring network. Funding is expected to increase beginning in FY 2013-2014, in particular to support an enhanced monitoring network in support of cumulative impact evaluations and resource sustainability monitoring.

**Region III Water Supply Development**

Water supply development strategies identified in the Region III RWSP are listed in Table 6.

Table 4-6. Region III Water Supply Development Projects

<i>Project</i>	<i>Activity</i>	<i>Planning Level Cost Estimate*</i>	<i>Water Made Available or Anticipated (MGD)</i>
Inland Ground Water Source Development and Water Supply Source Protection	Develop inland alternative water supply source to meet future demands and abate risks of salt water intrusion and extreme drought.	TBD	TBD
Utility Interconnections and Infrastructure Enhancements	Assist with delivery system interconnections and facility Improvements.	\$26,000,000**	TBD
Water Reuse Facilities	Construction of water reuse facilities to provide reclaimed water for landscape irrigation and other beneficial uses.	TBD	TBD

\* Planning level cost estimates and anticipated quantities of water to be made available will be re-evaluated during the update to the Region III RWSP, scheduled for completion in 2013.

\*\* Preliminary estimated cost of Walton/Bay County Interconnection.

From 2009-2012, the District provided water supply development assistance to the City of Callaway for extending a potable water transmission main within the Allanton Peninsula and for a water and sewer systems interconnection with Sandy Creek Utility Services, Inc.

## **Region V: Gulf and Franklin Counties**

The Region V RWSP was approved by the Governing Board in January 2007 (NFWMD 2007). The primary concern described is salt water intrusion into the coastal Floridan Aquifer, which has implications for the long-term sustainability of coastal ground water supplies within both Franklin and Gulf counties. Although public supply demands are relatively small, they represent two-thirds of the total projected demand for 2030. To meet projected demands associated with permanent and seasonal population growth, a surface water supply source has been developed for the City of Port St. Joe and its vicinity in Gulf County, and the inland Floridan Aquifer has been evaluated as a long-term source for coastal Franklin County. Given the completion of the alternative water supply project, the need to continue regional water supply planning for Region V will be re-evaluated based on the 2013 Water Supply Assessment update.



Figure 4-4. Water Supply Planning Region V

## **Region V Water Resource Development**

The Region V RWSP includes four water resource development projects encompassing strategies supporting alternative water supply development. These are summarized in Table 7. Descriptions of the strategies and their current progress follow.

Table 4-7. Region V Water Resource Development Projects

<i>Project</i>	<i>Activity</i>	<i>Water Identified or Made Available (MGD)</i>
Hydrologic and Water Quality Data Collection, Monitoring, and Analysis	Water resource data collection, analysis, and modeling to support future alternative water supply development.	3
Regional Water Supply Coordination, Source Protection, and Engineering and Technical Assistance	Technical assistance to help local governments and utilities meet water supply-related source protection, project design, and engineering requirements.	6
Water Reuse and Conservation Coordination Assistance	Coordination and assistance to utilities and local governments for development of reclaimed water for beneficial uses.	TBD
Regional Water Supply Plan Implementation	Planning and tracking project implementation, grant administration, fulfilling statutory reporting requirements, and related activities.	N/A

**Hydrologic and Water Quality Data Collection, Monitoring, and Analysis**

This activity provides for water resource data collection, analysis, and modeling to determine the location and distribution of potential future production wells and other water supply sources to serve Region V communities. Tasks include ground water modeling, water quality sampling and analysis, and hydrologic monitoring and analysis. Long-term emphasis includes water quality and hydrologic monitoring to identify and evaluate trends.

The District conducted significant data collection and analysis to evaluate the feasibility of an inland ground water source within Franklin County. The work included test well development, water quality analysis, and aquifer testing. It was estimated that up to three MGD of sustainable water supply may be identified and supported through inland ground water source development for Franklin County.

The District has also assisted the Eastpoint Water and Sewer District (EPWSD) in test well development and aquifer testing. This effort led to the development of a new water supply production well, located further inland from the immediate coastal area. Expected outcomes include reduced withdrawals from the coastal aquifer and a resulting reduced threat to water supply wells from salt water intrusion.

**Regional Water Supply Coordination, Source Protection, and Engineering and Technical Assistance**

This project provides for technical assistance to help local governments and utilities meet water supply-related source protection, project design, and engineering requirements. The District helps support regional coordination and planning on the part of regional water supply utilities and local governments. Assistance is focused on protecting ground and surface water sources, water resource engineering, intergovernmental coordination, and other technical assistance.

The District’s coastal water systems interconnection initiative extends to Gulf County. Such interconnections are intended to enhance the resilience of water supplies within the coastal areas in the face of droughts, major storms, and other possible events.

In addition to providing funding assistance to the City of Port St. Joe for construction of its new surface water supply facility (described below), the District has provided additional assistance for improvements to the city's potable water distribution system.

With District assistance, the City of Carrabelle completed an engineering analysis of a potential interconnection with the Alligator Point Water Resources District. Completion of this interconnection would assist in regional drought-proofing and in ensuring system reliability through summer and holiday heavy use periods. The City of Carrabelle has enacted a conservation-oriented rate structure as part of this effort, thereby improving water use efficiency, particularly for new development. Technical and financial assistance has previously been provided to the City of Wewahitchka for test well development.

### **Water Reuse and Conservation Coordination Assistance**

Water reuse is an important component of the long-term regional water supply strategy and is pursued where feasible as a means of providing non-potable water for beneficial uses, thereby offsetting potable demand, and constraining long-term potable demand. The District's role in developing water reuse includes coordination among utilities, inventorying existing and potential reuse sources and beneficial uses, and providing technical and financial assistance for specific reuse projects. As of 2011, an estimated 0.12 MGD of public access reclaimed water was reused in Region V (DEP 2012). This includes irrigation of one golf course and a greywater system at the Franklin County Correctional Institution.

As described previously, work continues on development of a District-wide reuse plan that will identify water reuse needs and opportunities to support RWSP implementation and enhance the sustainability of water resources throughout northwest Florida. The plan will provide an inventory of reclaimed water systems, projected wastewater flows for selected utilities in Region V through 2035, and GIS data.

Other conservation assistance provided by the District to Region V has been distribution of the water rates model (Whitcomb 2005) to two utilities in the region. The District has distributed 1,201 water conservation brochures to utilities in the region in the past year. The Water CHAMPS program in Region V has two hotels in Port St. Joe participating as of September 2012.

### **Regional Water Supply Plan Implementation**

Implementing the RWSP for Region V encompasses planning and tracking project implementation, grant administration, reporting, and related activities. During the past year, the District continued RWSP implementation tracking, project planning and coordination of program funding sources and contracts. The WRDWP Annual Report and March 1 Consolidated Annual Report were completed. An update to the Region V RWSP has been deferred pending the WSA update in 2013.

While this project does not directly provide water, the efforts encompassed do support the long-term development of alternative water supply sources, including the approximately nine MGD estimated to be available across the region through development of alternative surface water and inland ground water sources.

### **Funding Summary: Region V Water Resource Development Projects**

Table 8 displays past year expenditures, current year budget, and anticipated future expenditures for water resource development within Region V. The five-year funding estimates indicated above are based on continued RWSP development and implementation in Region V, with an update to the plan following completion of the District-wide WSA. Funding is expected to increase beginning in FY 2013-2014, in



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particular to support an enhanced monitoring network in support of cumulative impact evaluations and resource sustainability monitoring.

Table 4-8. 2013-2017 Region V WRDWP Project Funding

<i>Water Resource Development Projects</i>	<i>FY 11-12* Expenditures</i>	<b>Anticipated Five Year Work Program</b>					<i>FY13-FY17 Cost Estimate</i>
		<b>FY 12-13 Budget**</b>	<b>FY 13-14</b>	<b>FY 14-15</b>	<b>FY 15-16</b>	<b>FY 16-17</b>	
Hydrologic and Water Quality Data Collection and Analysis	\$7,548	\$7,000	\$89,000	\$49,000	\$49,000	\$49,000	<b>\$243,000</b>
Coord., Source Protection, Eng. and Tech. Assist.	\$8,879	\$3,300	\$10,000	\$10,000	\$10,000	\$10,000	<b>\$43,300</b>
Water Reuse and Conservation Coord. Assist.	\$1,929	\$1,000	\$7,000	\$7,000	\$7,000	\$7,000	<b>\$29,000</b>
Regional Water Supply Plan Implementation	\$2,297	\$3,800	\$15,000	\$8,000	\$8,000	\$8,000	<b>\$42,800</b>
<b>TOTAL</b>	<b>\$20,653.00</b>	<b>\$15,100</b>	<b>\$121,000</b>	<b>\$74,000</b>	<b>\$74,000</b>	<b>\$74,000</b>	<b>\$358,100</b>

\*\* FY 2012-2013 figures based on adopted budget.

## **Region V Water Supply Development**

Water supply development strategies within the Region V RWSP are listed in Table 9.

Table 4-9. Region V Water Supply Development Projects

<i>Project</i>	<i>Activity</i>	<i>Planning Level Cost Estimate</i>	<i>Water Made Available or Anticipated (MGD)</i>
Inland Ground Water Source Development and Water Supply Source Protection	Engineering analysis, facility construction, source protection, and hydrologic restoration.	\$1,000,000	3.0
Alternative Surface Water Treatment and Transport Facility Development	Construction of water treatment and transmission facilities, specifically including alternative water supply development in Gulf County.	\$16,737,000	6.0
Utility Interconnections and Infrastructure Enhancements	Assist with delivery system interconnections and facility improvements.	TBD	TBD
Reclaimed Water Use	Construction of water reuse facilities to provide reclaimed water for landscape irrigation and other beneficial uses.	TBD	<1.0

With funding assistance and cooperation from the District, the City of Port St. Joe constructed a six MGD surface water treatment plant as an alternative water source to reduce reliance on coastal ground water (Appendix A). Development of the new treatment facility enabled the City to shift its public water supply from naturally constrained ground water sources to surface water derived from the Chipola River via an

existing fresh water canal. This will enable the city to meet projected future demands while reducing the stress on local ground water resources. In addition to meeting municipal needs, the city may in the future be able to make this resource available for nearby areas outside of the city limits.

Funding and technical assistance provided to the Eastpoint Water and Sewer District has led to development of a water supply production well located further inland from previously existing water supply wells. Withdrawals in the immediate coastal area and the threat of salt water intrusion are, as a result, being reduced.

### **District-wide Initiatives**

As noted above, a district-wide WSA update is scheduled for completion during 2013. This assessment will incorporate updated water demand projections to 2035 for all regions and all water use categories. Evaluations of the status and sufficiency of water resources will also be updated as part of the assessment.

The District continues to emphasize water supply development assistance for financially disadvantaged small local governments. Recently, the district has provided funding assistance for the City of Gretna's water pipeline extension and interconnection with the Town of Greensboro, engineering conducted by Calhoun County in preparation for extending water service to the unincorporated Pine Island community, a feasibility assessment completed by the City of Carrabelle for a water line extension and interconnection with Alligator Point, and potable water transmission and reuse facilities constructed by the City of Freeport. As noted above, the District has also assisted the City of Callaway in constructing water transmission facilities and completing water and sewer systems interconnection. Among earlier projects, the District provided funding assistance to the City of Port St. Joe for the acquisition of the St. Joe fresh water canal.

Significant investments in alternative water supplies have resulted in a diverse base of water supply sources from Gulf to Escambia counties. To build upon this effort, the District is working in cooperation with utilities to explore and develop strategic interconnections between coastal water supply systems. The interconnection of these systems is expected to significantly enhance the resilience of coastal water supplies by enabling transfer of water between utilities if necessary due to water supply interruptions, droughts, or other contingencies.

An initial study was completed in January 2009 to evaluate the feasibility and benefits of interconnecting coastal water supply utilities. A basis of design report was completed in 2012. The report provides a detailed analysis of interconnect alternatives and design parameters. Candidate interconnection projects are described, as are key issues and challenges, including utility emergency capacities and water blending analysis. Work is proceeding on conceptual designs for a western interconnection between Santa Rosa and Okaloosa counties and an eastern interconnection between Walton and Bay counties.

The District continues development of a District-wide reuse plan. The plan will identify opportunities for future reclaimed water projects that enhance resource sustainability and provide environmental benefits, such as offsetting potable water withdrawals and improving surface water quality by reducing wastewater discharges. The plan will support implementation of RWSPs, surface water improvement and management plans, grant funding initiatives, and other District objectives. Integral to this planning effort is development of a spatial analysis application of existing reuse systems.

The District continues its program to properly plug abandoned or contaminated wells for financially constrained public water systems, in water resource caution areas, in areas identified under Chapter 62-524, Florida Administrative Code (F.A.C.) (Escambia, Santa Rosa, Jackson, and Leon counties), and in other areas as necessary. The program at one time had matching funding from DEP and was able to cover

100 percent of costs. The program currently pays up to 50 percent of costs to plug and abandon eligible wells. During 2012, the District expended \$23,360 to plug wells in Jackson and Jefferson counties.

## **References**

Many of these references may be found on the District's website under Publications & Data, Technical Publications: [www.nfwmd.state.fl.us/pubsdata/techpubs.html](http://www.nfwmd.state.fl.us/pubsdata/techpubs.html).

Barrios, K., R.L. Bartel, N. Wooten, and M. Lopez. 2011. Hydrologic Monitoring Plan: Version 1.0. Northwest Florida Water Management District, Program Development Series 2011-04. [www.nfwmd.state.fl.us/pubs/hydrologic\\_monitoring\\_plan/hydrologic\\_monitoring\\_plan.html](http://www.nfwmd.state.fl.us/pubs/hydrologic_monitoring_plan/hydrologic_monitoring_plan.html)

DeFosset, K.L. 2004. Availability of Ground Water from the Sand-And-Gravel Aquifer in Coastal Okaloosa County, Florida. Northwest Florida Water Management District, Water Resources Technical File Report 04-1. August 2004. [www.nfwmd.state.fl.us/pubs/wrtfr04-01/wrtfr04-01.htm](http://www.nfwmd.state.fl.us/pubs/wrtfr04-01/wrtfr04-01.htm)

Florida Department of Environmental Protection. 2012. 2011 Reuse Inventory. DEP Water Reuse Program. May 2012. Tallahassee, FL. [www.dep.state.fl.us/water/reuse/inventory.htm](http://www.dep.state.fl.us/water/reuse/inventory.htm)

Florida Natural Areas Inventory. 2012. Florida Conservation Lands, June 2012. [www.fnai.org/gisdata.cfm](http://www.fnai.org/gisdata.cfm)

HydroGeoLogic, Inc. 2000. Modeling of Ground Water Flow in Walton, Okaloosa and Santa Rosa Counties, Florida. May 2000. [www.nfwmd.state.fl.us/pubs/hglgwmod/hglgwmodel.htm](http://www.nfwmd.state.fl.us/pubs/hglgwmod/hglgwmodel.htm)

HydroGeoLogic, Inc. 2005. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western Domain Model. May 2005. [www.nfwmd.state.fl.us/pubs/hgl\\_western\\_domain/hgl\\_western\\_domain.html](http://www.nfwmd.state.fl.us/pubs/hgl_western_domain/hgl_western_domain.html)

HydroGeoLogic, Inc. 2007a. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Eastern Domain Model, Final Report. September 2007. [www.nfwmd.state.fl.us/pubs/hgl\\_eastern\\_domain/hgl\\_eastern\\_domain.html](http://www.nfwmd.state.fl.us/pubs/hgl_eastern_domain/hgl_eastern_domain.html)

HydroGeoLogic, Inc. 2007b. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Eastern Domain Forecast Simulations. March 2007.

HydroGeoLogic, Inc. and Hazlett-Kincaid, Inc. 2007. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western Domain Forecast Simulations. March 2007.

Northwest Florida Water Management District. 1998. District Water Supply Assessment. Water Resources Assessment 98-2. [www.nfwmd.state.fl.us/rmd/wsa/wsamain.htm](http://www.nfwmd.state.fl.us/rmd/wsa/wsamain.htm)

Northwest Florida Water Management District. 2001. Regional Water Supply Plan for Santa Rosa, Okaloosa, and Walton Counties. Water Resources Assessment 2000-1. July 2000. [www.nfwmd.state.fl.us/pubs/RWSP\\_Region2/2000\\_plan/rwsp.htm](http://www.nfwmd.state.fl.us/pubs/RWSP_Region2/2000_plan/rwsp.htm)

Northwest Florida Water Management District. 2003. Water Supply Projections 2005-2025. Water Resources Assessment 2003-01. [www.nfwmd.state.fl.us/rmd/water\\_supply\\_projections/water\\_supply\\_projections.htm](http://www.nfwmd.state.fl.us/rmd/water_supply_projections/water_supply_projections.htm)

- Northwest Florida Water Management District. 2006. Regional Water Supply Plan for Santa Rosa, Okaloosa, and Walton Counties, Plan Update. Water Resource Assessment 2006-1. September 2006. [www.nfwmd.state.fl.us/pubs/RWSP\\_Region2/2006\\_plan/rwsp.htm](http://www.nfwmd.state.fl.us/pubs/RWSP_Region2/2006_plan/rwsp.htm)
- Northwest Florida Water Management District. 2007. Regional Water Supply Plan: Region V, Franklin and Gulf Counties. Water Resources Assessment 07-01. January 2007. [www.nfwmd.state.fl.us/pubs/rwsp/plan.htm](http://www.nfwmd.state.fl.us/pubs/rwsp/plan.htm)
- Northwest Florida Water Management District. 2008a. 2008 Water Supply Assessment Update. Water Resources Assessment 08-02. December 2008. [www.nfwmd.state.fl.us/rmd/wsa/WSA%20Updates/wsa\\_update\\_2008.htm](http://www.nfwmd.state.fl.us/rmd/wsa/WSA%20Updates/wsa_update_2008.htm)
- Northwest Florida Water Management District. 2008b. Region III Regional Water Supply Plan, Bay County, Florida. Program Development Series 08-02. August 2008. [www.nfwmd.state.fl.us/rmd/water\\_supply\\_planning/region\\_III\\_wsp.html](http://www.nfwmd.state.fl.us/rmd/water_supply_planning/region_III_wsp.html)
- Northwest Florida Water Management District. 2012a. Consolidated Annual Report. March 1, 2012. [www.nfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html](http://www.nfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html)
- Northwest Florida Water Management District. 2012b. 2012 Regional Water Supply Plan Update for Santa Rosa, Okaloosa, and Walton Counties: Water Supply Planning Region II. Water Resource Assessment 2012-01. February 2012. [www.nfwmd.state.fl.us/pubs/RWSP\\_Region2/RWSP\\_Region2.htm](http://www.nfwmd.state.fl.us/pubs/RWSP_Region2/RWSP_Region2.htm)
- PBS&J. 2000a. Water Conservation Task Summary Report. August 2000.
- PBS&J. 2000b. Reuse Task Summary Report. August 2000.
- PBS&J. 2006. Water Supply Planning Region II Final Report: Conceptual Alternative Water Supply Development Projects and Planning Level Cost Estimates. October 2006. [www.nfwmd.state.fl.us/pubs/RWSP\\_Region2/RWSP\\_Region2.htm](http://www.nfwmd.state.fl.us/pubs/RWSP_Region2/RWSP_Region2.htm)
- Pratt, T.R. 2001. Results of Floridan Aquifer Drilling Program in Santa Rosa, Okaloosa, and Walton Counties, Florida. Technical File Report 01-1. [www.nfwmd.state.fl.us/pubs/tfr01-1/tfr01-1.htm](http://www.nfwmd.state.fl.us/pubs/tfr01-1/tfr01-1.htm)
- Whitcomb, J.B. 2005. Florida Water Rates Evaluation of Single Family Homes. [www.nfwmd.state.fl.us/permits/waterratesreport.pdf](http://www.nfwmd.state.fl.us/permits/waterratesreport.pdf)

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## 4.2. Alternative Water Supplies Annual Report

Each water management district is required under s. 373.707(8)(n), F.S., to submit as part of the Consolidated Annual Report a chapter or section that:

- Accounts for the disbursement of all budgeted amounts pursuant to s. 373.707, F.S.;
- Describes all alternative water supply projects funded;
- Describes the quantity of new water to be made available as a result of such projects; and
- Accounts separately for any other funding provided through grants, matching grants, revolving loans, and the use of district land or facilities to implement regional water supply plans.

Beginning in 2006, the District began funding a series of alternative water supply development projects and water resource development projects through the Water Protection and Sustainability Program Trust Fund (WPSPTF). These projects helped implement strategies of the District and local utilities to identify and develop alternative water supplies to meet long-term needs in a sustainable manner. Efforts over the past year were focused on continued implementation of approved water supply and water resource development projects pursuant to the RWSPs, as well as water supply development assistance for financially disadvantaged small local governments and associated utilities. Tables 4-10 and 4-11 provide summary information on projects to date.

It should be noted that substantial water supply development assistance has been provided to local governments and utilities using funding sources other than the WPSPTF. Recently, the District has provided over \$3 million in additional District grant funding for development of water supply transmission pipelines bringing water from the inland Floridan Aquifer wellfield in Walton County to serve coastal communities. Additionally, \$106,000 was recently awarded to the City of Port St. Joe for pump station repairs, and a \$235,845 grant was awarded to the City of Blountstown for replacement of a water distribution main along State Road 20. These are in addition to a number of earlier grants, as outlined in Table 4-11.

Table 4-10. Alternative Water Supply and Water Resource Development Projects Funded under the Water Protection and Sustainability Program

Project	Region	Local Sponsor	Activity	Status	WPSPTF FY Appropriation	Anticipated Water (MGD)	WPSPTF Contribution	Local Contribution	Total	Local %
Area-wide Alternative Water Supply Source Expansion	II	Regional Utilities, South Walton Utility Co.	Inland wellfield expansion	Complete	FY 2006	15.12	\$6,500,000	\$9,991,891	\$16,491,891	61%
Tram Road Public Access Reuse Facility	VII	Tallahassee	Water reuse/spring protection	Complete	FY 2006; FY 2007	1.2	\$1,350,000	\$5,250,000	\$6,600,000	80%
Bob Sikes Reuse Project	II	Okaloosa County	Water reuse	Complete	FY 2006	0.7	\$2,000,000	\$4,509,132	\$6,509,132	69%
Inland Floridan Aquifer Source - WRD	V	NWFWMD; Franklin County Utilities	Inland source evaluation	Complete	FY 2006	3.0	\$300,000	\$0	\$300,000	0%
Ground Water Modeling & Aquifer Testing - WRD	III	Bay County	Inland source evaluation	Complete	FY 2006; FY 2007	*	\$350,000	\$800,000	\$1,150,000	70%
Surface Water Treatment Plant	V	Port St. Joe	Surface water	Complete	FY 2007	6.0	\$4,000,000	\$12,736,700	\$16,736,700	76%
City of Chipley Reuse Project	IV	Chipley	Water reuse	Complete	FY 2007	1.2	\$500,000	\$4,500,000	\$5,000,000	90%
Wakulla County Reuse Project	VII	Wakulla County	Water reuse	Construction	FY 2007	0.35	\$500,000	\$750,000	\$1,250,000	60%
Advanced Wastewater Treatment & Water Reuse Facilities	VII	Tallahassee	Water resource development/spring prot.	Complete	FY 2007	4.5	\$500,000	\$5,800,000	\$6,300,000	92%
Inland Ground Water Source Development**	III	Bay County	Inland source development	Under review	FY 2008	TBD	\$5,470,000	\$9,570,000**	\$15,040,000	64%
<b>Total</b>						<b>32.07</b>	<b>\$21,470,000</b>	<b>\$53,907,723</b>	<b>\$75,377,723</b>	<b>72%</b>

\* Aquifer testing, data collection, and ground water modeling.

Local construction costs for the Chipley and Wakulla County facilities are inclusive of anticipated State Revolving Fund contributions to be repaid by the local governments.

\*\* Project planned in accordance with the 2008 Region III RWSP to provide for inland wellfield development as an emergency backup to the existing reservoir. New alternatives are currently being evaluated. Funding allocated for this project will be further evaluated based on an updated assessment of the optimal strategies for addressing water resource needs.

Table 4-11. Additional Water Supply Development Assistance Projects

<b>Project</b>	<b>Local Sponsor</b>	<b>Region</b>	<b>Activity</b>	<b>Status</b>	<b>Completion</b>	<b>NFWFMD Contribution</b>	<b>Funding Source</b>
Port St. Joe Fresh Water Canal	Port St. Joe	V	Land acquisition of freshwater canal as alternative water supply source	Complete	FY 2002	\$350,000	District General Fund
Inland Ground Water Supply Development	Fairpoint Regional Utility System	II	Construction of inland Sand-and-Gravel aquifer wellfield and transmission facilities	Complete	FY 2006	\$3,178,700	U.S. EPA
City of Freeport Reuse Project	Freeport	II	Water reuse storage and transmission system construction	Complete	FY 2010	\$3,000,000	SWIM, Florida Forever
Allanton Peninsula Water and Wastewater Extension Project	Callaway	III	Water supply transmission and distribution system construction	Complete	FY 2010	\$100,000	WMLTF
East Okaloosa County Water and Sewer Extension	Okaloosa County	II	Water supply transmission and interconnection	Complete	FY 2010	\$750,000	District General Fund
Walton County Phase II Regional Water Supply	Regional Utilities	II	Construction of transmission and Storage Facilities; associated with inland wellfield AWS D	Complete	FY 2011	\$2,000,000	EMRTF; District General Fund
Port St. Joe Water Distribution System Improvements	Port St. Joe	V	Water supply improvements	Complete	FY 2011	\$50,000	District General Fund
Carrabelle-Alligator Point Interconnection Feasibility Study	Carrabelle	V	Interconnection feasibility assessment; enactment of conservation rate structure	Complete	FY 2011	\$100,000	WMLTF
Wewahitchka Water Supply System Improvements	Wewahitchka	V	Water supply development; test production well construction	Complete	FY 2011	\$400,000	District General Fund
Water and Sewer Systems Interconnections	Callaway	III	Interconnections of water systems and sewer systems between Callaway and Sandy Creek Utility	Complete	FY 2012	\$53,998	District General Fund
Water Transmission Line Construction and Interconnection	Freeport	II	Transmission line and interconnection construction	Complete	FY 2012	\$800,000	District General Fund



Water Supply

Table 4-11. Additional Water Supply Development Assistance Projects (continued)

<b>Project</b>	<b>Local Sponsor</b>	<b>Region</b>	<b>Activity</b>	<b>Status</b>	<b>Completion</b>	<b>NFWMD Contribution</b>	<b>Funding Source</b>
Gretna to Greensboro Water main Extension	Gretna; Gadsden County	VI	Water supply transmission and distribution Facility Construction	Complete	FY 2012	\$449,888	District General Fund
Water Supply Improvements; Preliminary Engineering	Gretna	VI	Preliminary engineering and environmental analysis	In progress	FY 2012	\$50,000	District General Fund
Pine Island Water Distribution System Expansion	Calhoun County	IV	Expansion of water distribution system to unincorporated community	In progress	FY 2013	\$98,607	District General Fund
Water Main Construction (South Walton County)	WRP, Inc.*	II	Construction of transmission facilities and subaqueous pipeline from inland wellfield to serve coastal Walton and Okaloosa counties.	In progress	FY 2013	\$2,500,000	District General Fund
U.S. Highway 98 Water Line Extension	Regional Utilities	II	Water main extension along U.S. Highway 98 in Walton County	In progress	FY 2013	\$750,000	District General Fund
Test Well Development	Panacea Area Water System	VII	Test well development and data analysis	In progress	FY 2013	\$30,500	District General Fund
Chipola Pump Station Repairs	Port St. Joe	V	Repairs and upgrades to Chipola River pump station.	In progress	FY 2013	\$106,000	District General Fund
S.R 20 Water Line Replacement	Blountstown	IV	Water main replacement	Contracting	FY 2014	235,845	District General Fund
Okaloosa County AWS - Surface Water	Okaloosa County	II	Assistance to Okaloosa County for surface water reservoir development.	Planned	FY 2015	\$2,000,000	District General Fund

\* Partnership between South Walton Utility Company, Inc., and Destin Water Users, Inc.

**\$17,003,538**

## Chapter Five: Florida Forever Work Plan Annual Report

### 5.1 Land Acquisition Work Plan

#### Introduction

Section 373.199(7), F.S. requires the Northwest Florida Water Management District (District) to annually update the Florida Forever Work Plan. To date, this is the twelfth annual update of the 2001 Florida Forever Work Plan. Since 2006 this plan has been presented as a separate chapter in the Consolidated Annual Report as required by s. 373.036(7), F.S. This plan contains information on projects eligible to receive funding under the Florida Forever Act and also reports on land management activities, lands surplused and the progress of funding, staffing and resource management of projects for which the District is responsible.

#### Florida Forever Program

In 1999, the Florida Legislature passed the Florida Forever Act (s. 259.105, F.S.) which has continued the state's long-term commitment to environmental land acquisition, restoration of degraded natural areas, and high-quality outdoor recreation opportunities. The Florida Forever Program authorized issuance of up to \$300 million annually in bonds over a ten-year period to several state agencies and the five water management districts (WMDs). In 2008, the Florida Legislature reauthorized the Florida Forever Act for an additional ten years, to 2018. As part of the reauthorization, the water management districts' allocation was reduced from \$105 million annually to \$90 million annually (see table below). The Legislature has not fully funded Florida Forever since 2009.

**Annual WMD Funding Distribution of Florida Forever Funds**

<b>Water Management District</b>	<b>Percent to Each WMD</b>	<b>Allocation</b>
<b>South Florida</b>	<b>35.0%</b>	<b>\$31,500,000</b>
<b>Southwest Florida</b>	<b>25.0%</b>	<b>\$22,500,000</b>
<b>St. Johns River</b>	<b>25.0%</b>	<b>\$22,500,000</b>
<b>Suwannee River</b>	<b>7.5%</b>	<b>\$6,750,000</b>
<b>Northwest Florida</b>	<b>7.5%</b>	<b>\$6,750,000</b>

While previous programs focused almost exclusively on the acquisition of environmentally sensitive lands, the Florida Forever program is somewhat different in that it authorizes the use of up to half of the program funding for certain types of capital improvement projects. Eligible uses of these funds include water resource development, stormwater management projects, water body restoration, recreation facilities, public access improvements, and removing invasive plants, among others. The remaining fifty percent must be spent on land acquisition.

Since the inception of the District's land acquisition program, the goal has been to bring as much floodplain as possible of our major rivers and creeks under public ownership and protection. The Florida Forever Land Acquisition Program continues to increase the acres of wetland, floodplain and aquifer recharge areas acquired by the District. To date, over 224,774 acres have been protected for water

resource purposes through the land acquisition efforts of the District either in fee simple or through conservation easements. The District did not acquire or surplus any land in 2012.

## **Acquisition Planning**

The District employs a watershed approach to select and prioritize the important water resource and natural systems within the major river basins of northwest Florida. Primary among the considerations in this process are how specific floodplain or buffer areas help satisfy the District’s water resources and natural system protection objectives, the availability of funds, the seller’s willingness, how different areas fit into the District’s land management scheme, as well as the size, accessibility and overall condition of each property. Recommendations from interest groups, landowners, local governments, agency representatives and other interested parties are always welcome and are given full consideration in the acquisition process.

Subject to receiving funding for Florida Forever, the District’s acquisition efforts this year will focus on the purchase of inholdings and additions to the existing water management areas (WMAs) as well as Conservation Easements in each of the existing WMA’s. Existing WMAs include the Perdido River, Escambia River, Blackwater River, Yellow River, Garcon Point, Choctawhatchee River/Holmes Creek, Econfina Creek, Chipola River, and Apalachicola River. All of these WMAs will be high priority areas for the acquisition of additions and inholdings. Acquisition efforts will be directed toward acquiring those properties which the District adjoins on one, two or three sides (additions) or those parcels which the District surrounds on all sides (inholdings).

In developing the annual update to the District’s Florida Forever Five Year Land Acquisition Work Plan, District staff shall review Florida Forever projects proposed by DEP, Division of State Lands, to minimize redundancy and to facilitate an efficient and mutually supportive joint land acquisition effort.

## **Approved Acquisition Areas**

The approved acquisition areas listed below are not presented on a priority basis. For each of these water bodies, it is desirable to acquire both the floodplain and a natural buffer zone to provide further water resource protection.

<b>Rivers &amp; Creeks Originating In Florida</b>	<b>Rivers and Creeks Originating Outside Florida</b>	<b>Springs</b>	<b>Lakes &amp; Ponds</b>	<b>Other Ecosystems, Basins and Buffers</b>
Wakulla River	Apalachicola River	St. Marks River near Natural Bridge	Lake Jackson	Southwest Escambia County Ecosystem
St. Marks River	Lower Apalachicola River Wetland	Spring Lake/ Spring Group Area	Sand Hill Lakes	Garcon Point Ecosystem
Econfina Creek and other Tributaries of Deer Point Lake	Chipola River	Waddell Springs		West Bay Buffer
Lafayette Creek	Choctawhatchee River including Holmes Creek	Bosel Springs		Sandy Creek Basin
	Escambia River	Hays Springs		Apalachicola Bay/ St. Vincent Sound Buffer
	Blackwater River including Juniper, Big Coldwater and Coldwater creeks	Gainer Springs		
	Ochlockonee River and its major tributaries			
	Yellow and Shoal Rivers			
	Perdido River and Bay			

Groundwater Recharge Areas	Donated Lands
Such lands may be designated by the District as Recharge Areas for the Floridan, Sand-and-Gravel and other important aquifers.	The District will accept donations of lands within its major acquisition areas if those lands are necessary for water management, water supply and the conservation and protection of land and water resources.

Exchange Lands
The District may exchange lands it has acquired under the Florida Forever program for other lands that qualify for acquisition under the program. In an exchange, the District's Governing Board establishes the terms and conditions it considers necessary to equalize values of the exchange properties. In all such exchanges, the District's goal will be to ensure that there is no net loss of wetland protection and that there is a net positive environmental benefit.

Mitigation Acquisitions
Under Florida law, unavoidable losses of natural wetlands or wetland functions require "mitigation" either through the acquisition or the restoration of other nearby wetlands. The District is often the recipient of such lands in the form of donations, and also serves as the mitigation agent for the Florida Department of Transportation. Whenever possible, the District attempts to acquire mitigation lands contiguous to its existing ownership, but since proximity to the original wetland impact is often paramount, the District at times must acquire or manage isolated tracts.

Surplus
Chapter 373.089 F.S., allows the Governing Board of the District to sell (surplus) lands or interest or rights in lands to which the District has acquired title or to which it may hereafter acquire title. Any lands, or interests or rights in lands, determined by the Governing Board to be surplus may be sold by the District, at any time, for the highest price, but in no case shall the selling price be less than the appraised value.

## Surplus Lands

In the fall of 2012, District staff conducted an evaluation of all District lands to determine if there were any parcels appropriate for surplus. The parcels recommended for surplus are small, non-contiguous, isolated tracts or connect only on a corner.

The following tracts will be recommended to the District Governing Board on February 14, 2013, to be declared as surplus.

WMA	Acres	County	Acquired Date	Funding Source
Escambia River	110.5	Escambia	April 26, 1994	Preservation 2000
Blackwater River	0.4	Santa Rosa	August 3, 2001	Preservation 2000
Yellow River	1.5	Okaloosa	December 15, 1999	Preservation 2000
Choctawhatchee River	38	Walton	July 31, 1992	Preservation 2000
Choctawhatchee River	38	Walton	July 31, 1992	Preservation 2000

## Note to Landowners

It is important to note that the District's land acquisition process only involves willing sellers and is usually opportunity driven in that landowners initiate the process by offering parcels for sale.

This plan includes a number of areas the District has identified for purchase, subject to available funding and especially the presence of willing sellers. If your property is included in any of our acquisition areas or maps and you do not desire to sell your land to the District, Florida Statutes require the District to remove your property from the acquisition plan at the earliest opportunity. Please contact the Division of Land Management and Acquisition at (850) 539-5999 at any time if you wish to remove your property from possible purchase consideration. The District will maintain a list of such requests and annually adjust its acquisition plan accordingly.

## **Note on Less-Than-Fee Methods of Land Protection**

In “less-than-fee” purchases, the District would attempt to acquire only those rights in property, i.e., development and land use conversion rights, that are needed to accomplish specific water resource and environmental protection goals. Such less-than-fee methods can clearly provide a number of public benefits. One is that acquisition funding can be conserved, thereby enabling the protection of more land with limited funds. The property also continues in private ownership and thus may also remain on local property tax rolls. Moreover, the District does not incur the long-term costs of land management since the property’s management and maintenance remains the landowner’s responsibility. Not all properties are suitable nor are all landowners agreeable to less-than-fee acquisition, but the benefits make these kinds of transactions an attractive supplement to the District’ usual fee simple land purchases.

## **DEP Florida Forever Priority List**

The Florida Forever Priority List can be found at [www.dep.state.fl.us/lands/FFplan.htm](http://www.dep.state.fl.us/lands/FFplan.htm)

## **Florida Forever Goals and Numeric Performance Measures**

As outlined in Chapter 18-24, F.A.C., the District is required to report on the goals and measures for lands to be acquired under the Florida Forever program. The following page summarizes the goals and measures applicable to Northwest Florida Water Management District.

## Florida Forever Goals and Numeric Performance Measures

Reported as of October 1, 2012

Rule No. 18-24.0022

(2)(d)1. For proposed acquisitions, see Section 5.1, (Florida Forever) Land Acquisition Five-Year Work Plan in the Consolidated Annual Report.

Acquisitions of lakes, wetlands, and floodplain areas to date =	187,112	Total acres
	15,255	Florida Forever acres

(2)(d)2. Acquisitions for water resource development to date = 41,606 Total acres (incl. fee and l-t-f)  
3,663 Florida Forever acres (incl. fee and l-t-f)

(3)(a)2. Refer to Section 5.2, (Florida Forever) Capital Improvement Work Plan of the Consolidated Annual Report for funded capital improvements identified in SWIM, stormwater, or restoration plans.

(3)(a)3. NFWFMD lands to be treated for upland invasive, exotic plants = <100 acres  
The District has not conducted surveys to identify the spatial distribution of invasive exotic plant infestation on District lands. It is known that invasive plant problems exist at varying levels on some District lands, and staff treat with herbicide as needed.

(3)(b) New water to be made available through Florida Forever funding for water resource development -  
Major water resource development accomplishment provided by additions to Econfina Creek Water Management Area. Additionally, Florida Forever funding contributed to the construction of a 750,000 gallon reuse storage facility for the City of Freeport to serve a 0.6 MGD reuse water service area. Funding for water supply development, including construction of water reuse facilities, is primarily provided through the Water Protection and Sustainability Program Trust Fund, NFWFMD General Fund, and local funding. See the NFWFMD Five Year Water Resource Development Work Program report and Consolidated Annual Report.

(4)(a)1. All NFWFMD lands are in need of and are undergoing management by the District.

In need of restoration =	16,882 acres
Undergoing restoration =	497 acres
Restoration completed =	17,872 acres
Restoration maintenance =	17,872 acres

(4)(a)3. Refer to Section 5.2, (Florida Forever) Capital Improvement Work Plan of the Consolidated Annual Report for capital improvements identified in SWIM, stormwater, or restoration plans.

(4)(a)6. NFWFMD lands under upland invasive, exotic plant maintenance control = <3,500 acres

(4)(b) Refer to Section 4.1, Five-Year Water Resource Development Work Program: FY 2012-2013 of the Consolidated Annual Report for quantity of new water made available through regional water supply plans.

(4)(c) See Section 5.1, (Florida Forever) Land Acquisition Work Plan (Table 2) of the Consolidated Annual Report for resource-based recreation facilities by type.

## **Land Acquisition Projects**

The Florida Forever Act, in particular s. 373.199(s) F.S., identifies information that must be included for each Florida Forever Project. Some of the required information is relatively general and applicable to all projects. To reduce the redundancies of this plan, general information is provided separately as part of the District's Five Year Plan for the Florida Forever Program. Specific land acquisition projects are individually identified and detailed information specific to the project is provided in the following pages.

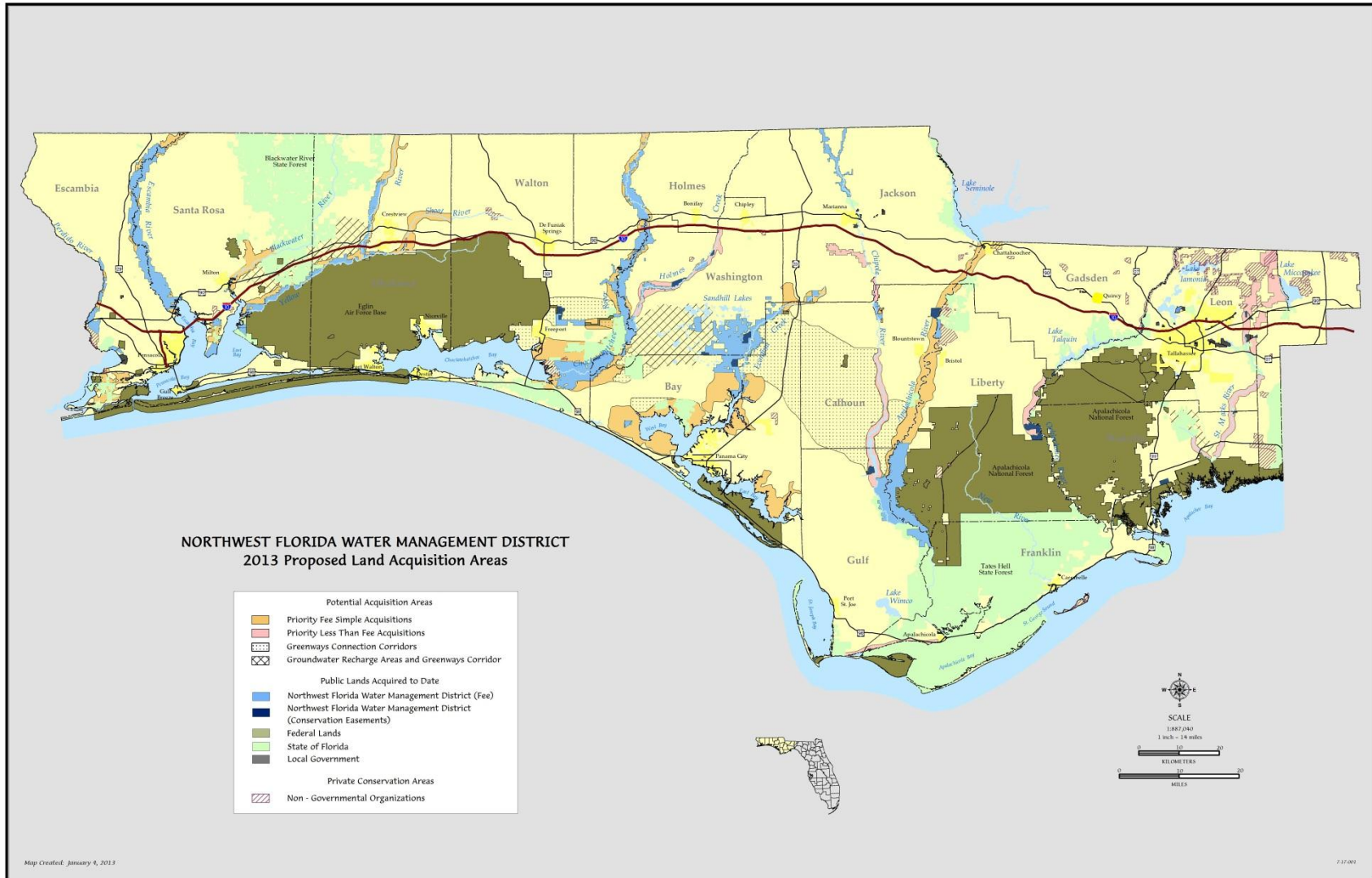


Figure 5-1. Proposed Land Acquisition Areas



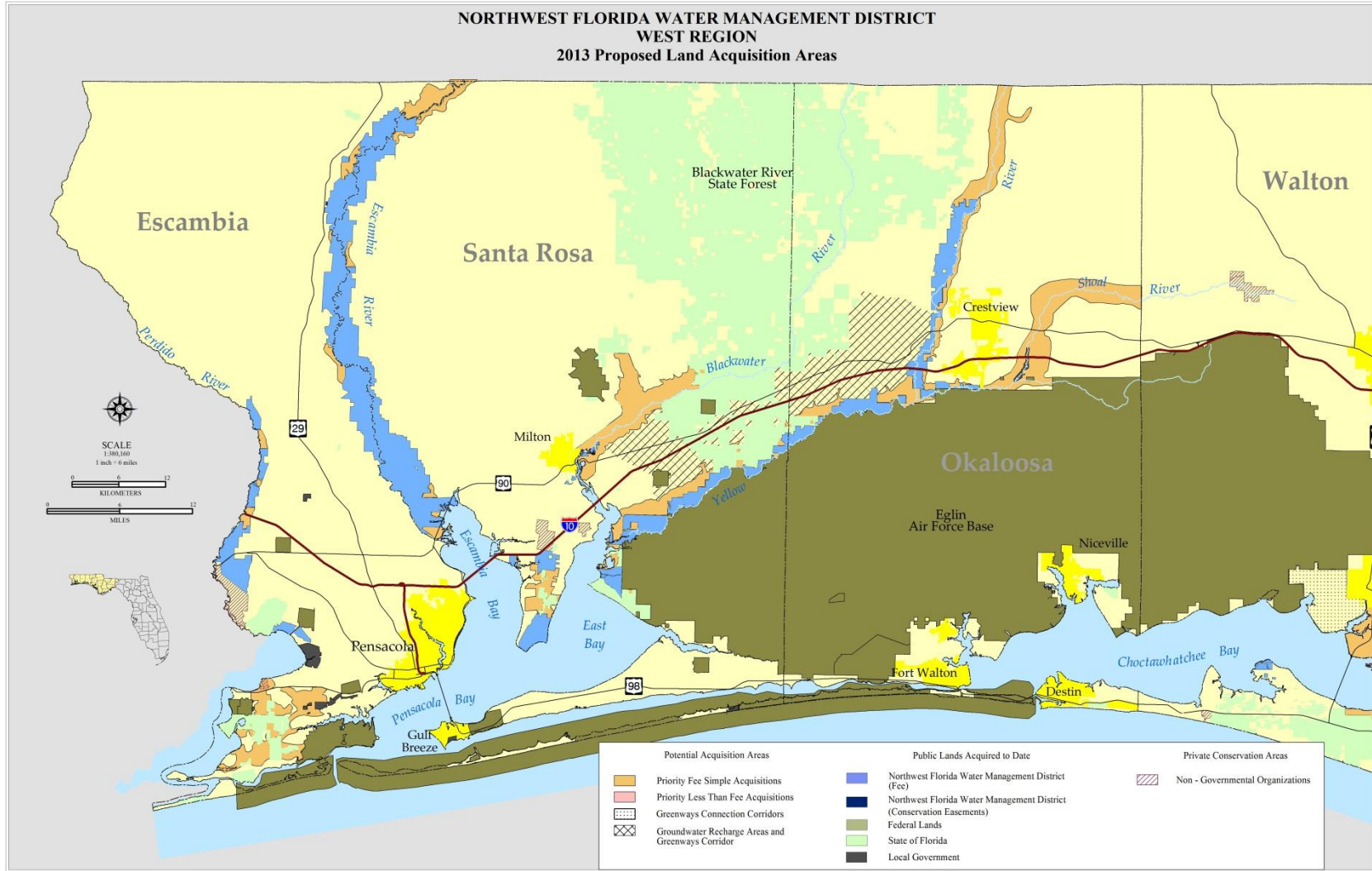


Figure 5-2. Proposed Land Acquisition Areas (West Region)

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Perdido River and Bay Basin**

The Perdido River serves as the state line, separating Florida from Alabama. The Perdido has been designated an Outstanding Florida Water and Special Water system, a canoe trail, and a recreation area. The upper part of the river is a shifting sand river system, which are unique to portions of Northwest Florida, south Alabama, southern Mississippi and extreme eastern Louisiana, while the lower end of the river is characteristic of a black water stream. Currently the District owns 6,261 acres in fee and 4 acres in less-than-fee between the Perdido River and Bay.

The project area is mostly undeveloped and contains a diverse list of species. Acquisition of any floodplain area along the Perdido River, whether in fee or less than fee, will significantly protect the water resources of the area as well as enhance water quality protection efforts for the Perdido Bay system.

Priority purchases will be concentrated on parcels adjacent to existing District lands along the river, around the river mouth and designated tributaries.

The Perdido Bay is an estuarine system which receives fresh water from the Perdido River. Subsidiary embayments within the Perdido Bay estuary include Tarkiln Bay, Arnica Bay, Wolf Bay, Bayou La Launch and Bayou St. John. Perdido Key separates Perdido, Tarkiln, and Arnica bays, Bayou La Launch and Bayou St. John from the Gulf of Mexico. Big Lagoon adjoins Perdido Bay to the east, separating it from Pensacola Bay. Currently, the District owns 810.19 acres along Perdido Bay.

Priority purchases will be concentrated on parcels adjacent to the bay which can enhance water quality protection and mitigate for wetland impacts associated with DOT highway construction in southern Escambia County.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 1,447 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will depend upon such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Southwest Escambia County Ecosystem**

Several major estuarine drainages, including Jones Swamp, Bayou Grande, Big Lagoon, and Tarkiln Bay, intersect in southwest Escambia County. These, in turn, comprise portions of the Pensacola and Perdido bay watersheds. The proposed acquisition borders a major urban area and is experiencing encroachment from residential and commercial development. The project area is characterized by an undulating topography where remnants of ancient dune lines alternate with lower intervening swales that drain east or west, parallel to the Gulf coast. The wet prairies in the area are some of the last examples of what may be one of the most diverse plant communities in the southeast, supporting large stands of white-topped pitcher plants and almost 100 other plant species.

Protecting the ecological integrity of this area is very important to the quality of water resources in the Pensacola and Perdido bay systems. Acquisition will preclude new nonpoint pollution sources and will limit stormwater runoff by preventing channelization and placement of new impervious surfaces. Wetlands and upland buffers will be preserved, and riparian buffer zones will be maintained. Additionally, public access and use will be improved and fish, wildlife, and estuarine productivity will be protected.

This acquisition is consistent with a number of major initiatives designed to protect environmental and other public resources in the region. These include water quality treatment systems, acquisition programs for the Jones Swamp Wetland Preserve and the Perdido Pitcher Plant Prairie, and efforts to prevent encroachment on NAS Pensacola. Together with nearby state parks, these acquisitions will provide for a major environmental reserve and greenway system within a rapidly urbanizing area.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis.

### **Land Acquisition**

Approximately 11,000 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

### **Groundwater Recharge Area**

Designated area has groundwater recharge potential.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Escambia River Basin**

Beginning at the confluence of the Conecuh River and Escambia Creek above the Florida-Alabama border and discharging into Escambia Bay, the Escambia River corridor contains a rich diversity of plant and animal species, as well as many rare fish and waterfowl. The Escambia River basin is broad and well drained in the upper reaches, and swampy below Molino, Florida. While the overall water quality is considered good, many point and non-point pollution sources empty into the river. Currently the District owns 35,413 acres in fee and 19 acres in less than fee along the river.

Priority purchases will be concentrated on parcels adjacent to existing District lands around the river mouth and designated tributaries.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 6,644 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Garcon Point Ecosystem**

This proposed land acquisition project contains most of the Garcon Point Peninsula, which borders Pensacola, Escambia, East and Blackwater bays. The project area is largely undeveloped and includes a variety of natural communities that are in good to excellent condition. The entire tract provides considerable protection to the water quality of the surrounding estuary, as well as harboring a number of rare and endangered species. Priority purchases will be concentrated on parcels adjacent to existing District lands. Currently the District owns 3,245 acres on Garcon Point.

The emergent estuarine marsh that borders several miles of shoreline within the project is an important source of organic detritus and nutrients, and serves as a nursery for many of the species found in Pensacola Bay. These wetlands function as both stormwater filtration and a storm buffer area, as well as providing erosion controls to the neighboring uplands. A minimum of 13 endangered or threatened species are known to live in the region including the recently listed federally endangered reticulated flatwoods salamander. The northern wet prairie portion is known to be an outstanding pitcher plant habitat.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 3,200 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Blackwater River Basin**

Originating in the Conecuh National Forest in Alabama, the Blackwater River has a large portion of its Florida watershed further protected by the Blackwater River State Forest. In all, nearly 50 miles of the river corridor is remote and undeveloped. As a result, the Blackwater is considered one of Florida's best preserved waterways. Currently the District owns 381 acres along the river.

The acquisition area includes a large area of mature longleaf pine forest, considerable bottomland forest and marsh acreage, upland mixed forest, blackwater stream and seepage slope communities. Priority purchases will be concentrated on parcels adjacent to existing District lands. Some 380 acres have been acquired along the Blackwater immediately south of Milton.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 11,449 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Yellow/Shoal River Basin**

The Yellow River has its headwaters in Conecuh National Forest in Alabama and forms the northern border of Eglin Air Force Base (AFB) across much of eastern Santa Rosa and western Okaloosa counties. The proposed acquisitions would bring much of the remainder of the Yellow River floodplain in Florida under public ownership. Included in the project is a segment of the lower Shoal River, the largest tributary to the Yellow. Large private landowners own a majority of the floodplain in this project, but considerable areas of the bordering and buffer lands must also be acquired to ensure effective management and the protection of water resources. To accomplish these objectives, acquisition of the bordering land within the 100-year floodplain, along with an additional buffer of at least 50-feet, will be required. Highest priority will be given to tracts in the western portion of the project. Priority purchases will be concentrated on parcels adjacent to existing District lands. Currently the District owns 17,742 acres along the river.

Although the Yellow and Shoal rivers exhibit good overall water quality, both are fed largely by rainwater runoff and thus are highly susceptible to pollution from land use activities. The proposed purchase area would provide water quality protection from the Alabama border and encompass roughly 39,000 acres. Purchase of lands northwest of Eglin AFB, along the I-10 corridor, would provide approximately 52,000 acres of land that has excellent potential for future water resource development to supplement the strained potable water sources in southern Santa Rosa and Okaloosa counties. Acquisitions in this area are recommended by the District Regional Water Supply Plan for Okaloosa, Santa Rosa and Walton counties to protect future supply sources.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 39,140 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

### **Groundwater Recharge Areas**

In Escambia and Santa Rosa counties, the Sand-and-Gravel Aquifer is the principal source of potable water for public supply. The Sand-and-Gravel Aquifer is unconfined or poorly confined, making it particularly susceptible to contamination by land uses. Land acquisition along the I-10 corridor between the Yellow and Blackwater rivers in Santa Rosa County would protect recharge areas that are particularly important for future water supply sources.

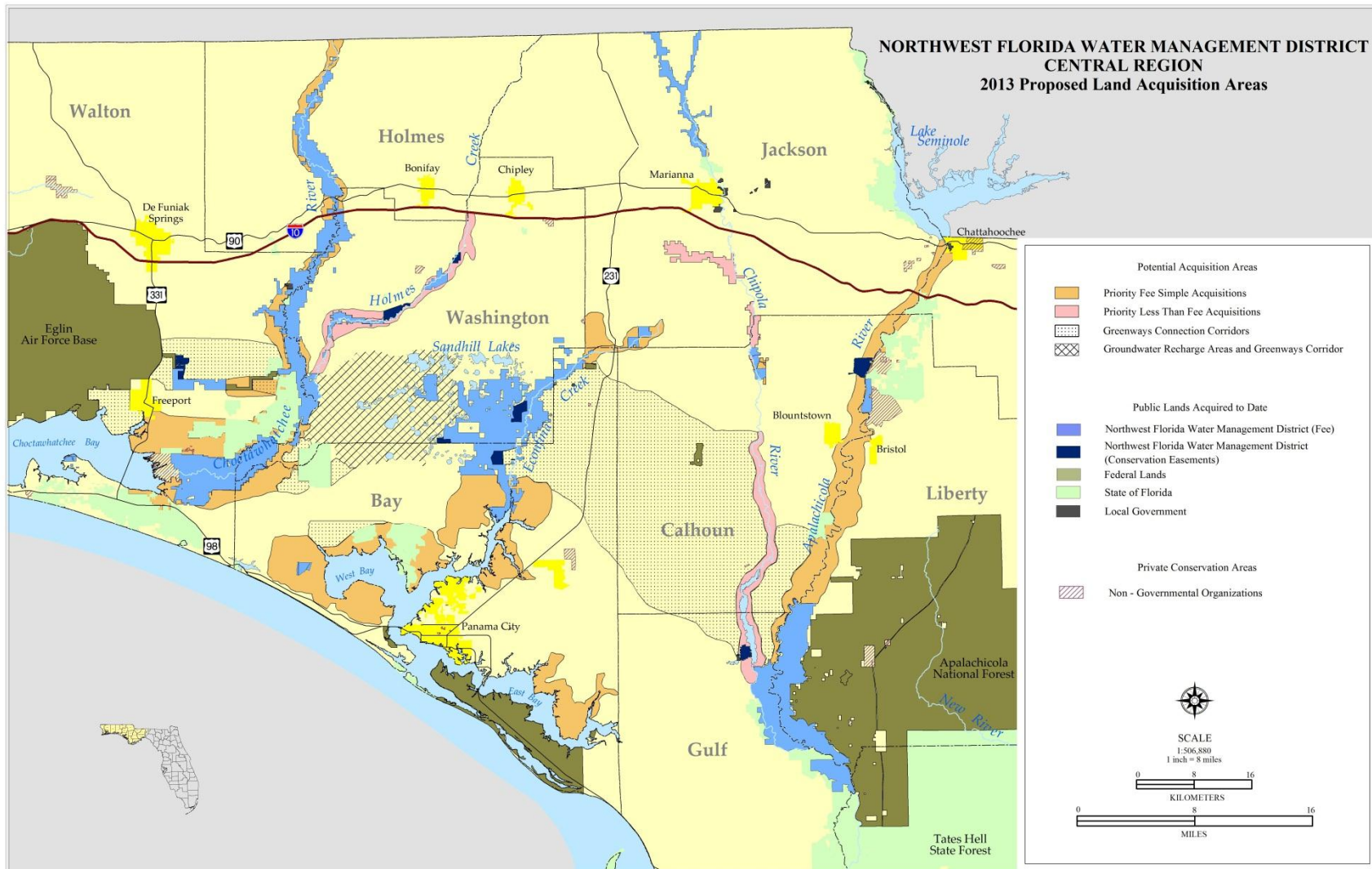


Figure 5-3. Proposed Land Acquisition Areas (Central Region)



## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Lafayette Creek**

Originating in south central Walton County, the Lafayette Creek drainage basin is located due east and north of Freeport, Florida. The main stem of the creek begins about seven miles east of Freeport and runs due west for about six miles before it turns south and empties into LaGrange Bayou/Choctawhatchee Bay. Additional purchases along the creek will protect many diverse natural communities and habitat types. In addition, any proposed acquisitions will also protect a portion of the water resources of Magnolia and Wolf creeks, both of which are significant tributaries to Lafayette Creek. Currently, the District owns 3,160 acres along the creek, including 420 acres for DOT mitigation purposes.

The area between the Choctawhatchee River and Eglin Air Force Base is part of the Northwest Florida Greenway Corridor which serves to protect open space stretching from the Apalachicola National Forest to Eglin Air Force Base. It is intended to preserve environmentally sensitive areas, sustain existing military lands and airspace, maintain the economic viability of forest lands and provide recreation. The District, in cooperation with Eglin Air Force Base, acquired a 1,095.3-acre conservation easement from Nokuse Plantation utilizing Department of Defense Readiness and Environment Initiative (REPI) funds. Acquisition of this Conservation Easement will ensure the protection of seepage streams within the Magnolia and Lafayette Creeks and buffer Eglin Air Force Base lands to the west.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 5,800 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Choctawhatchee River/Holmes Creek Basin**

Originating in Alabama and flowing into Choctawhatchee Bay, the Choctawhatchee River/Holmes Creek basin encompasses the second largest floodplain in the state. Approximately 3,133 square miles of the watershed is in Alabama and 2,052 square miles is in Florida. The river is 170 miles long with about 88 miles in Florida. Although the river basin exhibits localized water quality problems, primarily due to agricultural land use in the upper basin, the overall water quality is considered good. The river basin encompasses several springs and a variety of habitats including bottomland hardwood forests, marshes and Tupelo-Cypress swamps.

Due to the river corridor's undeveloped nature, the basin provides habitat for a variety of native wildlife, including several endangered plant and animal species. The river also serves as a breeding and migratory area for both the Alligator Gar and the Gulf Sturgeon. The District currently owns 63,386 acres along the river and/or creek in fee and less-than-fee. Priority purchases will be concentrated on parcels adjacent to existing District lands, around the river's mouth and designated tributaries such as Holmes Creek and such other projects that can mitigate for wetland impacts associated with DOT highway construction.

#### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

#### **Land Acquisition**

Approximately 55,064 acres have been identified for fee simple acquisition on the Choctawhatchee River and Holmes Creek, and 7,000 acres have been identified for possible less-than-fee acquisition on Holmes Creek. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **West Bay Buffer**

West Bay is the westernmost embayment of the St. Andrew Bay estuary. The bay supports notable shellfish and seagrass communities, important fisheries, and other environmental and economic resources. The West Bay watershed is characterized by extensive pine flatwoods, as well as hardwood forests, cypress wetlands, mixed-forested wetlands, freshwater marshes, wet prairie and other wetlands. Salt marshes, inland forested wetlands, and associated upland communities are especially prominent in several areas, including the Breakfast Point peninsula and adjacent to the Burnt Mill and Crooked Creek tributaries.

Like other estuaries, the bay is vulnerable to impacts associated with intensive residential and commercial development. Such potential impacts include the long-term effects of nonpoint source pollution and habitat loss and fragmentation. The proposed acquisition would help prevent such degradation by preserving intact an extensive ecosystem of forests, scrub, salt marshes, and freshwater wetlands. The acquisition would preclude new sources of pollution, prevent habitat loss and fragmentation, and protect the stability and integrity of littoral vegetation. Preserving intact the associated wetland and upland communities in the vicinity of the bay would also protect water quality by providing a substantial riparian buffer and maintaining the natural hydrology in the vicinity of the bay. The District currently owns 719 acres in the West Bay Buffer.

In addition to providing for water resource protection and public use, this acquisition will be consistent with several ongoing initiatives, including the West Bay Sector Plan. These initiatives also include efforts to restore seagrass communities in the bay and to improve the treatment and management of domestic wastewater.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 47,281 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Econfina Creek**

Econfina Creek is the major contributor to Deer Point Lake, which serves as the public water supply for Bay County, including Panama City, Panama City Beach and neighboring communities. The proposed purchases along the creek contain several spring-run streams, which are imperiled biological communities. The slope forest communities that border considerable lengths of the creek contain some of the highest species diversities encountered in Florida. The sand hills portion of the project features high rolling pinelands, steephead ravines and numerous sandhill upland lakes. Much of the sand hills area is of excellent quality, with nearly intact ground cover of wiregrass and dropseed. At least 18 species of rare or endangered plants inhabit the sand hills area. Because of the upland nature of the sand hills sites, the region is being developed with little regulatory restriction. The District currently owns over 43,762 acres in fee and less-than-fee, including the 2,155-acre Sand Hill Lakes Mitigation Bank. Priority purchases will be concentrated on parcels adjacent to existing District lands and parcels with significant recharge.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 39,679 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

### **Groundwater Recharge Areas**

The upper portion of the acquisition project is a significant recharge area of the Floridan Aquifer. The majority of the acreage purchased by the District and targeted for future purchase is one of the most important recharge areas for the Floridan Aquifer in northwest Florida. Recharge rates in the area have been estimated at 25 to 40 inches per year, and this recharge drives the spring flows along Econfina Creek, the largest tributary of the Deer Point Lake Reservoir. The reservoir currently provides approximately 50 million gallons per day for public supply and industrial water uses in Bay County.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Sandy Creek Basin**

Sandy Creek is a major tributary of East Bay, the easternmost embayment of the St. Andrew Bay estuary. The creek's basin is characterized by extensive pine flatwoods, as well as hardwood forests, saltmarshes, cypress wetlands, mixed forested wetlands, freshwater marshes, wet prairie and other wetlands. Salt and freshwater marshes, inland forested wetlands, and associated upland communities are especially prominent along the creek and its tributaries.

Preservation of the Sandy Creek basin will protect a major tributary basin of East Bay. In so doing, it would preserve water quality and a mosaic of interconnected upland, wetland, stream, and estuarine habitats. The acquisition would also protect water quality by providing a substantial riparian buffer and maintaining natural hydrology.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 15,000 acres have been identified for acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

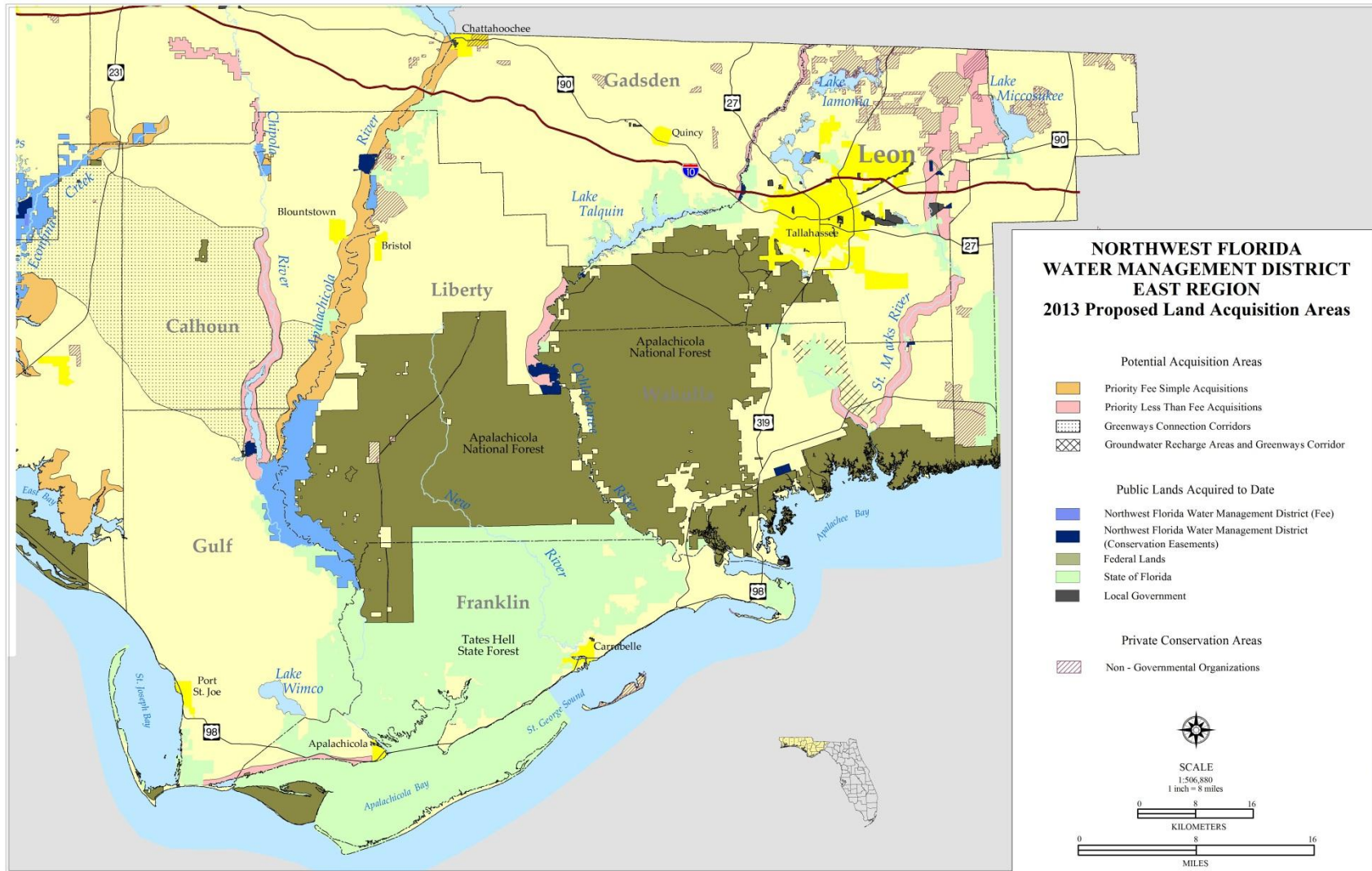


Figure 5-4. Proposed Land Acquisition Areas (East Region)

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Chipola River Basin**

A new area along the Middle Chipola River has been identified for less-than-fee acquisition. The area is comprised of approximately 2,400 acres in northern Calhoun and southern Jackson counties. Acquisition of this tract will protect over 3.4 miles of the west bank and 4.25 miles of the east bank of the Chipola River. In 2009, the District acquired 1,377.76 acres in fee along the Middle Chipola River, including the “Look-N-Tremble” rapids. The District now owns a total of 9,094 acres in fee simple and holds a conservation easement on 810 acres in the Chipola River Basin.

Two additional areas have been identified for less-than-fee acquisition along the Chipola River. The first is comprised of approximately 6,000 acres in the Spring Lake/Spring Group area located in central Jackson County. Acquisition of the Spring Lake/Spring Group area and its numerous springs, which ultimately flow into Dry Creek, a significant tributary stream to the Chipola, will provide enhanced water resource protection to the area.

The second proposed less-than-fee acquisition contains a core tract of roughly 20,000 acres in the river basin in Calhoun and Gulf counties. The Chipola River is the largest tributary to the Apalachicola River and its mostly spring-fed waters make an important and consistent contribution of sediment-free water to the Apalachicola. The degree of biological diversity of the Chipola appears to be nearly as high as that of the Apalachicola. Priority purchases will be focused along the middle reaches of the Chipola River.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 1,025 acres has been identified for possible fee acquisition and 28,400 acres have been identified for possible less-than-fee acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Apalachicola Bay/St. Vincent Sound Buffer**

Apalachicola Bay has been recognized as a resource of state, federal, and international significance. The bay has extensive fish and shellfish resources, and it supports noteworthy commercial and recreational fisheries and other recreational and economic activities. It has been designated an Outstanding Florida Water, a State Aquatic Preserve, and an International Biosphere Reserve. It includes the Apalachicola Bay National Estuarine Research Reserve and the St. Vincent National Wildlife Refuge. State and federal agencies, as well as the NFWFMD, have made extensive investments in acquiring and protecting lands throughout the basin. This project would provide an important addition to these efforts.

Like other northwest Florida estuaries, Apalachicola Bay is vulnerable to impacts associated with development. Such potential impacts include the long-term effects of non-point source pollution and habitat loss and fragmentation. The proposed acquisition would help prevent such degradation by preserving intact the integrated forest and wetland community bordering St. Vincent Sound and Apalachicola Bay. The acquisition would preclude new sources of pollution, prevent habitat loss and fragmentation, and protect the stability and integrity of littoral vegetation. The acquisition would also protect water quality by providing a substantial riparian buffer and precluding new impervious surfaces and channelization.

The land targeted through this project is immediately adjacent to some of the most productive oyster harvesting areas of the Apalachicola Bay system, including the Indian Lagoon, Scorpion and Paradise bars.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 5,200 acres have been identified for less-than-fee acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.



## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Upper Apalachicola River Basin**

The Apalachicola River begins below Lake Seminole at the confluence of Chattahoochee and Flint rivers. It has the largest floodplain in the state and is widely regarded as one of the state's most important natural resources. The Apalachicola River supports the highly productive fishery in Apalachicola Bay, and more endangered plant species can be found along the river's upper stretches than in any comparably-sized river in the state. The District owns 36,823 acres of river floodplain and holds a conservation easement on 1,550 acres.

Major habitat types along the Apalachicola River include coastal marshes, freshwater marshes, flatwoods and bottomland hardwood swamp. Water tupelo, Ogeechee tupelo, Bald cypress, Carolina ash and Swamp tupelo have been identified in the floodplain, as well as numerous species of rare fish. Substantial additional acreage of the Apalachicola system is owned by other public agencies and private conservation organizations. Priority purchases will be concentrated on parcels adjacent to existing District lands, other conservation lands and designated tributaries.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 50,132 acres have been identified for possible fee acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **Ochlockonee River Basin**

The Ochlockonee River originates in the coastal plain of Georgia and traverses parts of five Florida counties. Water quality in the river is lowest when it enters Florida and generally improves as it moves to the Gulf of Mexico. The Ochlockonee is primarily fed by rainwater runoff, hence highly susceptible to pollution by land use activities. Large parts of the watershed are publicly owned, including Joe Budd Wildlife Management Area, Lake Talquin State Forest and Apalachicola National Forest. The District's primary focus is to acquire less-than-fee rights on privately owned floodplain land separating existing federal/state properties. Public ownership of the erosion-prone lands bordering this usually fast flowing river will reduce the likelihood of water quality degradation. The District presently has 3,675 acres in less-than-fee (conservation easement) in the area.

### **Public Access**

All District conservation lands are available for public use. Such uses include fishing, hunting, camping, hiking, boating, swimming, and other recreational and educational activities. Access issues are addressed on a parcel-by-parcel basis prior to acceptance.

### **Land Acquisition**

Approximately 11,767 acres have been identified for less-than-fee acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## FLORIDA FOREVER LAND ACQUISITION PROJECT

### **St. Marks/Wakulla Rivers**

The Wakulla River originates at Wakulla Springs and flows south approximately 10 miles to join the St. Marks River at the town of St. Marks. The St. Marks River starts east of Tallahassee as a tiny stream, widens considerably below Horn Spring, and then disappears underground at Natural Bridge. Reemerging as a much stronger river at St. Marks Spring, it flows 11 miles to its confluence with the Wakulla River. While the lower reach of the river below the town of St. Marks is protected and preserved as part of the St. Marks National Wildlife Refuge, much of the remainder of the two river watersheds is threatened by active riverfront development and in the adjacent highlands. The St. Marks supports one of the most heavily used inshore saltwater fisheries in north Florida, the viability of which is largely dependent on the quality of freshwater flowing into the estuarine system. Both the Wakulla Springs State Park and the St. Marks National Wildlife Refuge are major refuges for numerous biological species. Much of the remaining privately owned land is timberland that is under intense development pressure. The District presently has 1,376 acres under less-than-fee acquisition in the area.

### **BluePrint 2000**

In December 2003, the Northwest Florida Water Management District and the City of Tallahassee-Leon County BluePrint 2000 Intergovernmental Agency entered into a five-year Memorandum of Agreement (MOA) to work cooperatively to acquire conservation easements to protect and preserve the water resources of the St. Marks River basin in Leon County. Although this MOA has now expired, the District and BluePrint 2000 successfully purchased conservation easements on a 132.62-acre tract and 194.5-acre tract, both located in Leon County.

### **Land Acquisition**

Approximately 45,456 acres have been identified for possible acquisition. Sufficient lands have been identified to allow for a flexible implementation strategy over at least the next five years. The timing of any given acquisition will be dependent on such considerations as: (1) Governing Board policy, (2) Threats to the resource, (3) Availability of willing sellers, (4) Tract size, (5) General market conditions, (6) Available staff resources and (7) Availability of funds.

## **Implementation of the 2011-2012 Work Plan**

The District did not acquire any new properties in fee simple or less-than-fee simple.

### **Land Management**

The District also completed numerous land management activities during FY 2011-2012. Management and restoration efforts, including prescribed burns, native species planting and timber harvesting, continue across the District's 212,371 managed acres. In addition, the District maintains and improves public access and recreational amenities, such as boat ramps, primitive campsites, and day use (swimming and picnic) areas. In the pages that follow, **Table 5-1** and **Table 5-2** provide additional information on specific land restoration activities completed during the year. The projected FY 2012-2013 staffing and management budget by water management area can be found in **Table 5-3**.

To date, the District has conserved and protected 224,774 acres primarily through fee simple acquisition. These lands protect natural systems, wetland and floodplain functions, groundwater recharge, surface and groundwater quality, and fish and wildlife habitat. District-owned lands are all accessible to the public and are managed to protect water resources while allowing public access and resource-based recreation. Management and restoration efforts, including prescribed burns, native species planting, and timber harvesting, continue across 212,371 managed acres. In addition, the District maintains and improves public access and recreational amenities, such as boat ramps, primitive campsites, and day use (swimming and picnic) areas.

District lands include the majority of the Escambia and Choctawhatchee river floodplains, as well as extensive lands along the Yellow, Shoal, Blackwater, Chipola, Perdido, and Apalachicola rivers; Econfina, Holmes and Lafayette creeks; and on Garcon Point, Live Oak Point, and Perdido Bay. In addition, the District manages and conducts habitat restoration/maintenance on Live Oak Point, Sand Hill Lakes Mitigation Bank (SHLMB) and Ward Creek West. The District has also acquired the majority of the recharge area for springs that discharge into Econfina Creek and form a crucial component of the water contribution to Deer Point Lake Reservoir. Also, the District helped Escambia County preserve Jones Swamp as a conservation and greenway area and has assisted in local government land acquisitions within Leon County.

### **Land Management Accomplishments (FY 2011-2012)**

- In May, 2012, the \$1.3 million Econfina Springs Complex – Spring Restoration and Protection project was completed and opened to the public.
- Prescribed burns were conducted on approximately 4,500 acres.
- Vegetation management (herbicide) activities and habitat enhancements were conducted on approximately 1,044 acres.
- 256 “group camping” permits were issued at seven reservation only campsites on District lands.
- Five special resource area permits were issued for larger events on District property.
- Four timber harvests were conducted on District lands.
- A cooperative project with Walton County to improve a popular boat ramp and camping area at Dead River Landing was initiated by the District.

## **Restoration**

The NFWFMD accomplishes water resource restoration through several interrelated programs, primarily SWIM, Land Management, and Mitigation.

Approved NFWFMD plans with substantial restoration components include the following:

- *Apalachicola River and Bay Management Plan (1996)*
- *Pensacola Bay System SWIM Plan (1997)*
- *Lake Jackson Management Plan (1997)*
- *Choctawhatchee River and Bay SWIM Plan (2002)*
- *St. Andrew Bay Watershed SWIM Plan (2000)*
- *St. Marks River Watershed SWIM Plan (2009)*
- *Ochlockonee River and Bay SWIM Plan (draft)*
- *Perdido River and Bay SWIM Plan (draft)*
- *Tate's Hell State Forest Hydrologic Restoration Plan (2010)*
- *Florida Forever Capital Improvements Plan*

### **Restoration Accomplishments (FY 2011-2012)**

- Multiple streambank restoration projects were implemented totaling approximately 530 feet. One of these projects at Pipes Landing on the Perdido River WMA was an innovative project that primarily used natural materials such as logs and root wads to stabilize an eroding riverbank at a popular recreation site. The project was designed and built by District staff with assistance from the U.S. Fish and Wildlife Service.
- In its ongoing reforestation and groundcover habitat restoration program, the District completed hand planting of 1,059 acres of disturbed longleaf pine, wet pine flatwoods, and wiregrass habitat across northwest Florida. These habitat restoration activities enhance groundwater recharge and improve wetland functions and also offset wetland losses due to Department of Transportation projects.
- Over 416,000 longleaf pine tubelings were planted on the Perdido River and Econfina Creek water management areas (WMAs) and the Ward Creek West mitigation tract.
- The District also reestablished groundcover habitat, planting over 709,000 plugs of upland/wetland wiregrass, toothache grass, and mixed wet pine flatwood species on disturbed habitat sites on the Sand Hill Lakes Mitigation Bank, and the Ward Creek West and Yellow River Ranch mitigation tracts. Also planted in late 2011 were 154,880 wildflowers (three species) on the Sand Hill Lakes Mitigation Bank and the Ward Creek West mitigation tract.
- Seeds for many District groundcover projects were collected from District land on Garcon Point and the Econfina Creek WMA. The District continues to research, refine and establish new habitat restoration techniques that increase species diversity and ecosystem health.

Table 5-1. Restoration, Enhancement and Maintenance (2012)

Water Management Area	Acres Burned					Acres Planted					Acres Harvested				Acres Treated
	Total	Fuel Reduction	Site Preparation	Growing Season	Wiregrass Propagation	Total	Wiregrass	Longleaf Pine	Slash Pine	Replanted	Total	Restoration	Thinning	Habitat Restoration	For Invasive, Non-native or Off-site Species
Escambia River	20		20			16		16							33
Garcon Point	61	61													2,000
Blackwater River															
Yellow River															1,120
Perdido River	390	107	283			428		428			199	199			301
Choctawhatchee River	811	811									291	46	245		2,201
Econfina Creek	2,008	571		1,317	120	101		101			1,005	1,005			210
St. Andrews															
Carter Restoration	527		527			201	68	133			201	17	17		
Ward Creek West	46	46									4		4		
Devils Swamp Restoration															
Chipola River	457	457													
Apalachicola River															
Lake Jackson	309	309													
<b>Totals</b>	<b>4,629</b>	<b>2,362</b>	<b>830</b>	<b>1,317</b>	<b>120</b>	<b>746</b>	<b>68</b>	<b>678</b>			<b>1,700</b>	<b>1,267</b>	<b>266</b>		<b>5,865</b>

Table 5-2. Access and Recreation Management (2012)

Water Management Area	Primitive Campsites	Picnic Grounds	Public Parks	Parking Areas	Reserved Group Sites	Boat Landings	Portoilet Stations	Horse Trail	Canoe Trail	Hiking Trail	Nature Trail	Bike Trail	Access Road	Group Use Permits	Birding	Nature Trail	General Purpose	Information Signs	Weather Pavilions
	Number Maintained							Miles Maintained						Issued	Maps/Brochures Printed			Installed	
Escambia River	13	9	8	9	1	8	11			1	2		27	23			3,000	40	
Garcon Point				3						3			3					10	
Blackwater River		1				1					1							10	
Yellow River	9	2	7	6		4	4		50				47					20	
Perdido River		3	3	4	1	3	4	3	9				32	45			3,000	40	
Choctawhatchee River	8	9	13	12		11	8		15				103						3
Econfina Creek	10	14	8	18	5	4	14	56	22	18	2		130	188				30	5
Chipola River	3	1	3	2		3	2	4	6	3	1	2	6						
Apalachicola River	2	1	1	3		3	1			3	4		5						
Lake Jackson			1	2			1	9		10	1	9	4						
<b>Totals</b>	<b>45</b>	<b>40</b>	<b>44</b>	<b>59</b>	<b>7</b>	<b>37</b>	<b>45</b>	<b>72</b>	<b>102</b>	<b>38</b>	<b>11</b>	<b>11</b>	<b>357</b>	<b>256</b>			<b>6,000</b>	<b>150</b>	<b>8</b>

Table 5-3. Projected Funding, Staffing and Resource Management for FY 2012-2013

Region	Water Management Area	Acres	Assigned Staff	Total Funding	Funding for Resource Management
<b>Western</b>	Escambia	35,413		\$158,600	\$108,930
	Escambia Conservation Easements	19		\$1,265	\$500
	Garcon Point	3,245		\$78,127	\$32,300
	Yellow/Escribano	17,742		\$134,782	\$96,500
	Blackwater	382		\$25,325	\$6,750
	Perdido	6,261		\$221,873	\$168,100
	Perdido Conservation Easements	4		\$1,039	\$500
	<b>Western Region Total</b>	<b>63,066</b>	<b>3</b>	<b>\$ 621,011</b>	<b>\$ 413,580</b>
<b>Central</b>	Choctawhatchee	60,848		\$469,056	\$338,400
	Choctawhatchee/Holmes Conservation Easements	2,537		\$15,676	\$13,000
	Econfina	39,173		\$982,512	\$769,550
	St. Andrew/Econfina Conservation Easements	2,433		\$4,020	\$500
	Ward Creek West	719		\$0	\$0
	Carter Restoration	2,155		\$62,250	\$62,250
	<b>Central Region Total</b>	<b>107,865</b>	<b>5</b>	<b>\$1,533,514</b>	<b>\$1,183,700</b>
<b>Eastern</b>	Chipola	9,094		\$223,776	\$146,800
	Apalachicola	36,823		\$140,783	\$79,850
	Apalachicola/Chipola Conservation Easements	2,359		\$3,870	\$500
	Lake Jackson	516		\$365,611	\$324,981
	St. Marks Conservation Easements	1,376		\$4,083	\$750
	Ochlockonee Conservation Easements	3,675		\$4,962	\$750
	<b>Eastern Region Total</b>	<b>53,843</b>	<b>2</b>	<b>\$ 627,955</b>	<b>\$ 438,501</b>
<b>Regional Totals</b>		<b>224,774</b>	<b>10</b>	<b>\$2,782,480</b>	<b>\$2,035,781</b>
Management Administration			4	\$1,144,351	\$ 564,500
<b>Grand Total</b>		<b>224,774</b>	<b>14</b>	<b>\$3,926,831</b>	<b>\$2,600,281</b>



## 5.2 Capital Improvement Work Plan

As required by s. 373.199(2), F.S., the five-year work plan includes capital improvement projects that further the goals of the Florida Forever Act (s. 259.105, F.S.). These include priorities identified in approved SWIM plans and other restoration plans, water resource development projects, and other eligible Florida Forever projects and improvements to District lands and facilities approved by the Governing Board.

Priority waterbody and water resource descriptions are outlined in approved SWIM plans and RWSPs. These plans respectively are available at [www.nwfwmd.state.fl.us/pubs/swmp/swim.html](http://www.nwfwmd.state.fl.us/pubs/swmp/swim.html) and [www.nwfwmd.state.fl.us/rmd/water\\_supply\\_planning/regional\\_water\\_supply\\_planning.html](http://www.nwfwmd.state.fl.us/rmd/water_supply_planning/regional_water_supply_planning.html).

From 2003-2008, the District offered grant funding to local governments for capital improvements that help implement SWIM projects, water resource development projects, and projects included within stormwater master plans. Over \$23 million has been awarded for 55 stormwater retrofit, restoration, and reuse projects under the program. These grants have leveraged significant additional funding, with over \$52 million in local and other match funding being allocated to the approved projects. Facility ownership, permitting, and long-term maintenance remain the responsibilities of the grantees, as provided through cooperative grant agreements. Due to the lack of new Florida Forever funding, grant cycles have not been offered for the past several years.

Performance measures for restoration projects are incorporated within the Strategic Water Management Plan ([www.nwfwmd.state.fl.us/pubs/swmp/swmp.html](http://www.nwfwmd.state.fl.us/pubs/swmp/swmp.html)) and described in Chapter 1 of the Consolidated Annual Report. Cooperative local grant project accomplishment is described in this section and in [www.nwfwmd.state.fl.us/rmd/swim/fla\\_forever\\_grants/fla\\_forever\\_grants.htm](http://www.nwfwmd.state.fl.us/rmd/swim/fla_forever_grants/fla_forever_grants.htm) by SWIM watershed and jurisdiction.

### **Implementation of the 2011-2012 Five Year Work Plan**

Implementation of the Apalachicola River and Bay/Tates Hell Swamp wetland restoration project continued through hydrologic restoration within the Doyle Creek, Juniper Creek, and Whiskey George Creek basins of Tates Hell State Forest. Construction completed included ten hardened low water crossings, twenty-four earthen ditch plugs, and four culvert modifications.

Blueprint 2000 and the City of Tallahassee have made substantial progress toward completion of the Cascades Park Watershed Restoration Project. Components under construction include major stormwater ponds, retaining walls, utility relocations, landscaping to support littoral vegetation, and stream reconstruction, all within the St. Marks River watershed. It is anticipated that the project will be complete in 2013.

### **Fiscal Year 2013-2017 Capital Improvement Work Plan**

Table 5-4 lists projects currently approved for Florida Forever capital improvement funding. These projects are funded from prior year appropriations.

Table 5-5 identifies additional projects eligible for Florida Forever capital improvement funding, depending on funding availability. Although the Florida Forever Act was extended to 2018, appropriations have been eliminated and future funding may be unavailable. Final approval of funding for any project requires specific Governing Board approval. Funding from SWIM, legislative special appropriation, Water Management Lands Trust Fund, federal grants, local governments, and potentially other sources may also contribute to project accomplishment. Where implementation is precluded due to current funding limitations, projects are identified to assist in long-term project planning and prioritization. The funding indicated represents current estimates and may be revised based on evolving project needs. There is significant potential for additional projects that would meet challenges described within the Pensacola, Choctawhatchee, St. Marks River, and Lake Jackson watershed SWIM plans, in addition to those listed in the table below. Listing of such projects as priorities within the Florida Forever Work Plan awaits additional planning and evaluation.

Figure 5-5 illustrates the distribution of current and past capital improvement projects District-wide. Additional preservation, enhancement, and restoration projects accomplished to meet regional mitigation needs are described in the Northwest Florida Umbrella, Watershed-based, Regional Mitigation Plan (“Umbrella Plan”), available at [www.nwfwmdwetlands.com/](http://www.nwfwmdwetlands.com/).

Table 5-4. Currently Approved Florida Forever Capital Improvement Projects

Project	Watershed	Description	Project Partners	Progress (3/1/2013)	Estimated Funding*
Tates Hell Swamp Hydrologic Restoration	Apalachicola River and Bay	Previously titled Apalachicola River and Bay Wetland Restoration Project encompassed this work. Continues implementation of the <a href="#">Tates Hell State Forest Hydrologic Restoration Plan</a> ; Provides water quality, hydrologic, and habitat restoration.  Currently contracted activities include construction of eight low water crossings, ten earthen ditch plugs, one flashboard riser, and nine culvert modifications, as well as removal of one-half mile of dirt logging road and adjacent ditches.	DOF, DEP, FWC, local governments	Construction of low water crossings, ditch plugs, and other hydrologic restoration components continue. Completion of work planned for the Whiskey George basin expected in FY 2013-2014.	\$160,900
Watson Bayou Stormwater Retrofit	St. Andrew Bay	Stormwater retrofit for water quality and flood control. Spring Avenue cooperative project approved in 2011.	Bay County	Engineering and permitting in progress	\$586,200
Cascades Park Watershed Resource Restoration	St. Marks River	Stormwater retrofit and stream restoration. Grant project approved in 2009.	Blueprint 2000	Under construction	\$300,000
<b>Total</b>					<b>\$1,047,100</b>

\*Florida Forever portion of funding only.

Table 5-5. Additional Eligible Projects

Project	Description	Status (3/1/2013)	Eligible Funding Sources	Estimated Funding
<b>Apalachicola River and Bay Watershed</b>				
Additional Tates Hell Swamp Hydrologic Restoration	Continues implementation of the <a href="#">Tates Hell State Forest Hydrologic Restoration Plan</a> ; Provides water quality, hydrologic, and habitat restoration.	Planning and Engineering	Florida Forever SWIM Federal Grants	\$5,330,000
Stormwater retrofit	Construction of projects identified in the city of Apalachicola Stormwater Master Plan, as well as other stormwater retrofit projects identified through an ongoing SWIM program basinwide assessment. Project objectives include water quality improvement and restoration and enhancement of wetland and aquatic habitat.	Planning	Florida Forever SWIM*	\$3,645,000
Shoreline and Tidal Marsh Restoration	Restoration of intertidal habitat, to include salt marsh and seagrass habitat, oyster reef and living shorelines projects, and associated breakwaters.	Planning	Florida Forever SWIM	TBD

Project	Description	Status (3/1/2013)	Eligible Funding Sources	Estimated Funding
<b>St. Andrew Bay Watershed</b>				
Stormwater Retrofit	Project implementation pursuant to the Stormwater Master Plan prepared for Bay County and its municipalities. Project objectives include water quality improvement and restoration and enhancement of wetland and aquatic habitat.	Planning	Florida Forever SWIM	TBD
Unpaved Road sedimentation abatement	Unpaved road stabilization to abate direct impacts on Econfina Creek, Deer Point Lake, and the St. Andrew Bay estuary. Includes Scotts Road – Econfina Creek crossing and potentially other sites. Project objectives include water quality improvement and restoration and enhancement of wetland and aquatic habitat.	Planning	Florida Forever SWIM	\$600,000
Econfina Spring Complex Restoration	Spring restoration at Williford Springs in Washington County. Project components include sediment removal, spring bank restoration and protection, stormwater facilities, canoe dock/boardwalk (to minimize use impacts), and compatible public access improvements.	Planning and permitting	General Fund SWIM Florida Forever	\$1,958,000
Shoreline and Tidal Marsh Restoration	Restoration of intertidal habitat, to include salt marsh and seagrass habitat, oyster reef and living shorelines projects, and associated breakwaters.	Planning	Florida Forever SWIM	TBD
<b>Choctawhatchee River and Bay Watershed</b>				
Shoreline and Tidal Marsh Restoration	Continued salt marsh and littoral habitat restoration and protection at Live Oak Point, in Choctawhatchee Bay. Six oyster shell reefs have been planned, with associated salt marsh planting. Three have been completed thus far. Also includes additional restoration of intertidal habitat elsewhere in the bay, to include salt marsh and seagrass habitat, oyster reef and living shorelines projects, and associated breakwaters	Planning for additional construction	Florida Forever SWIM	\$200,000
Stormwater Retrofit	Implementation of cooperative stormwater retrofit projects that improve water quality in Choctawhatchee Bay. Project objectives include water quality improvement and restoration and enhancement of wetland and aquatic habitat.	Planning	Florida Forever SWIM	TBD
<b>Ochlockonee River and Bay Watershed</b>				
Additional Tates Hell Swamp Hydrologic Restoration	Implementation of portions of the <a href="#">Tates Hell State Forest Hydrologic Restoration Plan</a> within the Ochlockonee River and Bay watershed; provides water quality, hydrologic, and habitat restoration.	Planning and Engineering	Florida Forever SWIM Federal Grants	\$1,580,000
<b>Pensacola Bay System</b>				
Stormwater Retrofit	Implementation of cooperative stormwater retrofit projects that improve water quality in the Pensacola Bay System. Project objectives include water quality improvement and restoration and enhancement of wetland and aquatic habitat.	Planning	Florida Forever SWIM	TBD
Shoreline and Tidal Marsh Restoration	Restoration of intertidal habitat, to include salt marsh and seagrass habitat, oyster reef and living shorelines projects, and associated breakwaters.	Planning	Florida Forever SWIM	TBD

\* SWIM funding is provided from the Ecosystem Management and Restoration Trust Fund and potentially the Water Management Lands Trust Fund and Water Protection and Sustainability Trust Fund.

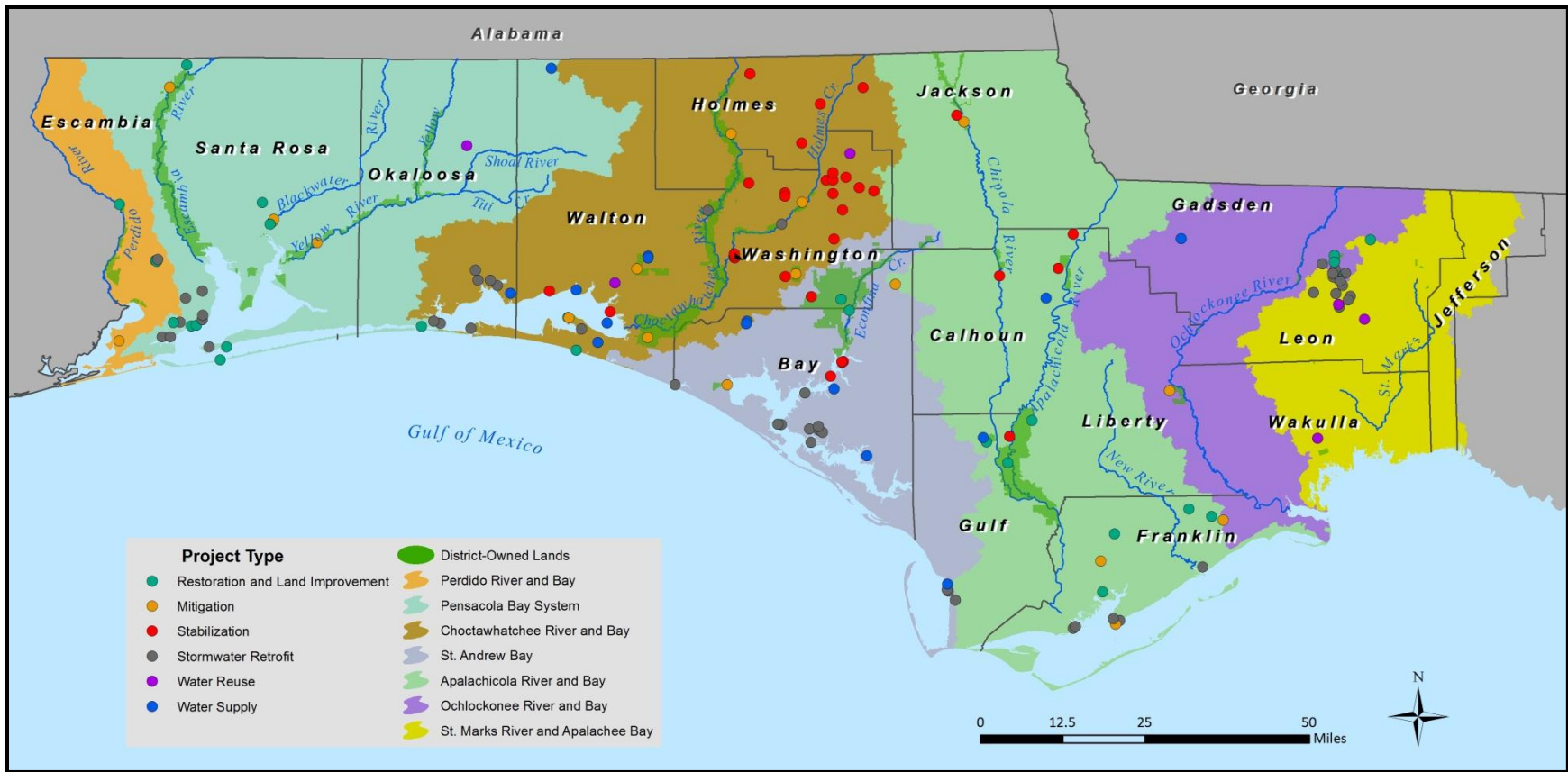


Figure 5-5. NFWMD Capital Project Distribution

## **Chapter Six: Mitigation Donation Annual Report**

Section 373.414(1)(b)2, F.S., requires the District and DEP to report by March 1 of each year, as part of this report, all cash donations accepted as mitigation for use in duly noticed environmental creation, preservation, enhancement, or restoration projects that offset impacts permitted under Chapter 373, Part IV, F.S., Management and Storage of Surface Waters. The report is required to include a description of the endorsed mitigation projects and, except for projects governed as mitigation banks or regional offsite mitigation, must address, as applicable, success criteria, project implementation status and timeframe, monitoring, long-term management, provisions for preservation, and full cost accounting. The report specifically excludes contributions required under s. 373.4137, F.S. (regional mitigation for specified transportation impacts).

The Northwest Florida Water Management District implemented Environmental Resource Permitting (ERP) Phase II (wetland resource permitting), jointly with DEP, beginning on November 1, 2010. Any cash donations accepted by the District as mitigation during the current fiscal year will be reported annually in this report. No cash donations were received in FY 2011-2012.

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# Chapter Seven: Surface Water Improvement and Management Program Summary Report

## 7.1 Introduction

Section 373.036(7)(d), F.S., provides that districts may include in the Consolidated Annual Report additional information on the status or management of water resources as deemed appropriate. The NFWFMD has a long-term program to protect and restore watershed resources. The Surface Water Improvement and Management (SWIM) program provides the framework for watershed and project planning for the major riverine-estuarine watersheds indicated below (Figure 7-1).

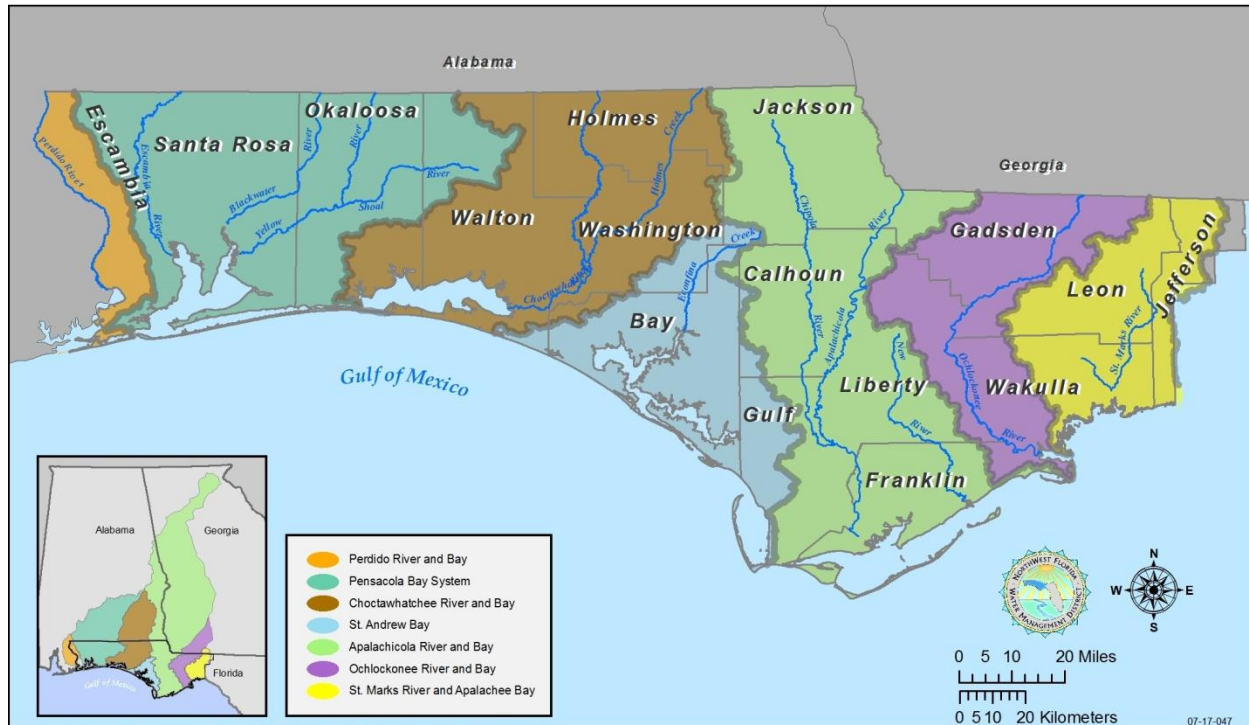


Figure 7-1 NFWFMD SWIM Priority Watersheds

## 7.2 SWIM Priority List

The Northwest Florida Water Management District’s SWIM Priority list is provided in Table 7-1. Pursuant to s. 373.453, F.S., the SWIM priority list may be periodically reviewed with updates reflected in this section. In addition to respective watersheds, the list identifies major tributaries and waterbodies. All other tributaries, sub-embayments, and contributing basins are also considered as being within the listed priority waterbodies. A more detailed discussion of the development of the SWIM priority list is provided by NFWFMD (2006a).



Table 7-1. NFWFMD SWIM Priority List

Watershed		SWIM Plan Status
<b>Apalachicola River and Bay Watershed</b>		
Apalachicola River	New River	Plan update approved 1996
Apalachicola Bay	Lake Seminole	
Chipola River		
<b>Pensacola Bay System</b>		
Escambia River	Escambia Bay	Plan update approved 1997
Blackwater River	East Bay	
Yellow River	Blackwater Bay	
Shoal River	Western and Central	
East Bay River	Santa Rosa Sound	
Pensacola Bay	Big Lagoon	
<b>Choctawhatchee River and Bay Watershed</b>		
Choctawhatchee River	Eastern Santa Rosa	Plan update approved 2002
Holmes Creek	Sound	
Choctawhatchee Bay		
<b>St. Andrew Bay Watershed</b>		
St. Andrew Bay	St. Joseph Bay	Plan approved 2000
North Bay	Deer Point Lake	
West Bay	Reservoir	
East Bay	Econfina Creek	
<b>St. Marks River and Apalachee Bay Watershed</b>		
St. Marks River	Lake Lafayette	Plan update approved 2009
Wakulla River	Lake Munson	
Lake Miccosukee	Apalachee Bay	
<b>Ochlockonee River and Bay Watershed</b>		
Ochlockonee Bay	Lake Jackson	Draft plan completed 2011 Lake Jackson plan update approved 1997
Ochlockonee River	Lake Iamonia	
<b>Perdido River and Bay Watershed</b>		
Perdido River	Perdido Bay	Draft plan completed 2011

SWIM Plans are developed to address cumulative anthropogenic impacts on water quality and aquatic habitats. To accomplish this, they incorporate comprehensive strategies to both restore and to protect watershed resources. Implementation is accomplished through a variety of activities, including stormwater retrofit planning and construction for water quality improvements and flood protection, wetland and aquatic habitat restoration, freshwater needs and other resource assessments, springs protection, public outreach and awareness, and intergovernmental review of proposed land use changes and other activities. The SWIM program also supports coordination of state and federal grants and implementation of cooperative capital improvement projects with local governments. Figure 5-5 above illustrates the distribution of past capital improvement projects implemented across the district with SWIM program planning and coordination.

Historically, SWIM plan implementation has integrated and leveraged a variety of funding sources, including SWIM (s. 451-459, F.S.), the Water Management Lands Trust Fund (s. 373.59, F.S.), Florida Forever (s. 259.105 and s. 373.199, F.S.), legislative special appropriations, the Water Protection and Sustainability Program (s. 403.890, F.S.), state and federal grants, and funding through local government partnerships. Cumulatively, the overall effort has resulted in significant protection and improvement of water resources District-wide.

### 7.3 Current Project Priorities

Beginning in 2012, the District has established a renewed focus on the Apalachicola River and Bay and St. Andrew Bay watersheds, applying remaining Ecosystem Management and Restoration Trust Fund revenues appropriated by past legislatures to address acute problems apparent within these two systems. While the current level of funding is not capable of comprehensively addressing the challenges currently affecting these systems, it can effectively leverage and build upon local resources, as well as state and federal grant funding.

Table 7-2 lists priority SWIM projects currently in the planning stages or otherwise under consideration. Note that there is overlap between the project priorities listed here and those within the Florida Forever Capital Improvement Plan (Table 5-4), particularly for construction projects requiring multiple funding sources for completion.

Table 7-2. Current SWIM Projects

Project	Cooperators	Estimated Cost	Description
Apalachicola River and Bay Watershed			
Battery Park Stormwater Retrofit	City of Apalachicola	\$721,500	Stormwater retrofit for 67-acre basin in downtown Apalachicola. Funding anticipated for FY 2012-2013 and FY 2013-2014.
Mobile Irrigation Lab	FDACS; USDA NRCS; West FL RC&D Council	\$64,000	Continued/enhanced implementation within the Jackson Blue Spring basin and other agricultural areas. Project funded for FY 2012-2013.
Sod-based Crop Rotation Program	UF IFAS	\$40,000	Continued development and implementation of agricultural BMPs. Project funded for FY 2012-2013.
Basinwide Screening and Project Planning	Local governments	\$100,000	Watershed-wide screening of basin conditions and prioritization of project needs. Project funded for FY 2012-2013.
Detailed Stormwater Plan Development	Local governments	\$200,000	Detailed engineering and project development. Funding anticipated for FY 2012-2013 and FY 2013-2014.
Local Watershed Initiative Assistance	Apalachicola Riverkeeper	\$20,000	Assistance for local initiatives. Project funded for FY 2012-2013.

SWIM Program Summary Report

<b>Project</b>	<b>Cooperators</b>	<b>Estimated Cost</b>	<b>Description</b>
Additional Data Collection	USGS	\$35,000	Continued hydrologic data collection. Project funded for FY 2012-2013; anticipated for FY 2013-2014.
Additional Local Stormwater Retrofit Assistance	Local governments	\$2,515,000	Funding need for additional stormwater plan implementation.
Apalachicola Bay Strategic Plan	Watershed stakeholders	\$250,000	Conceptual project.
Bay Freshwater Needs Assessment	Watershed stakeholders	\$215,000	Conceptual project.
<b>St. Andrew Bay Watershed</b>			
Stormwater Retrofit and Restoration Grants	Bay County; municipalities; Local watershed initiatives	\$1,400,000	Anticipated implementation of Stormwater Master Plan projects and other St. Andrew Bay restoration priorities. May include the Watson Bayou/ Spring Ave. Pond retrofit project.
Unpaved Road Sedimentation Abatement	Bay County	\$688,608	Potential project to abate direct impacts on Econfina Creek, Deer Point Lake, and the St. Andrew Bay estuary. Includes Scotts Road – Econfina Creek crossing and potentially other sites.
Williford Springs Restoration	NFWFMD	\$470,000	Implementation of aquatic and riparian habitat restoration components of the overall project. Funding anticipated for FY 2013-2014.
Additional Cooperative Restoration Projects	Local Governments and watershed initiatives	\$80,000	Assistance for local restoration projects and/or local watershed initiatives. May include shoreline, tidal marsh, and other habitat restoration and monitoring.
Lisenby Avenue Pond	Panama City	\$84,757	Engineering design and surveying for stormwater retrofit. MOEX funding with construction coordinated by FDEP.
<b>Choctawhatchee River and Bay Watershed</b>			
Hill/Lovejoy Ponds	Okaloosa County	\$63,167	Engineering design and surveying for stormwater retrofit. MOEX funding with construction coordinated by FDEP.
Overbrook Pond	Okaloosa County	\$40,089	Engineering design and surveying for stormwater retrofit. MOEX funding with construction coordinated by FDEP.

Project	Cooperators	Estimated Cost	Description
Tanglewood Pond	Okaloosa County	\$29,294	Engineering design and surveying for stormwater retrofit. MOEX funding with construction coordinated by FDEP.

Additional funding sources, including from local governments and state and federal grant sources, may be identified to complement the funding indicated above.

#### 7.4 Potential Funding Related to the Deepwater Horizon Oil Spill

District staff are in the process of evaluating project needs for potential funding related to the Deepwater Horizon Oil Spill. The District’s SWIM plans and associated watersheds provide the planning context for this evaluation. Federal RESTORE Act, Natural Resource Damage Assessment, MOEX Offshore penalties, and other associated funding have the potential to help address current problems and challenges. This may be particularly important for those watersheds that currently have no available SWIM funding.

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## Chapter Eight: References

- Barrios, K., R.L. Bartel, N. Wooten, and M. Lopez. 2011. Hydrologic Monitoring Plan: Version 1.0. Program Development Series 2011-04. Northwest Florida Water Management District. [www.nfwmd.state.fl.us/pubs/hydrologic\\_monitoring\\_plan/hydrologic\\_monitoring\\_plan.html](http://www.nfwmd.state.fl.us/pubs/hydrologic_monitoring_plan/hydrologic_monitoring_plan.html)
- Bartel, R.L., K. Barrios, M. Pritzl, and K. Coates. 2011. Jackson Blue Spring: Water Resources Assessment. Water Resources Assessment 2011-01. Northwest Florida Water Management District. [www.nfwmd.state.fl.us/pubs/wra11-01/WRA11-01.pdf](http://www.nfwmd.state.fl.us/pubs/wra11-01/WRA11-01.pdf)
- Bonekemper, J., Macmillan, T., Bartel, R., Thorpe, P., Marchman, G., Layfield, H., Fisher, G., and Cleckley, W. 2001. Florida Forever 2001 Five-Year Work Plan. Project Development Series 2001-1. Northwest Florida Water Management District. [www.nfwmd.state.fl.us/pubs/florida\\_forever/florida\\_forever.htm](http://www.nfwmd.state.fl.us/pubs/florida_forever/florida_forever.htm)
- DeFosset, Kevin L. 2004. Availability of Ground Water from the Sand-And-Gravel Aquifer in Coastal Okaloosa County, Florida. Water Resources Technical File Report 04-1. August 2004. [www.nfwmd.state.fl.us/pubs/wrtfr04-01/wrtfr04-01.htm](http://www.nfwmd.state.fl.us/pubs/wrtfr04-01/wrtfr04-01.htm)
- Florida Department of Environmental Protection. 2012. 2011 Reuse Inventory. FDEP Water Reuse Program. May 2012. [www.dep.state.fl.us/water/reuse/inventory.htm](http://www.dep.state.fl.us/water/reuse/inventory.htm)
- Florida Natural Areas Inventory. 2011. Florida Conservation Lands, June 2011. [www.fnai.org/gisdata.cfm](http://www.fnai.org/gisdata.cfm)
- HydroGeoLogic, Inc. 2000. Modeling of Ground Water Flow in Walton, Okaloosa and Santa Rosa Counties, Florida. May 2000. [www.nfwmd.state.fl.us/pubs/hglgwmod/hglgwmodel.htm](http://www.nfwmd.state.fl.us/pubs/hglgwmod/hglgwmodel.htm)
- HydroGeoLogic, Inc. 2005. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western Domain Model. May 2005. [www.nfwmd.state.fl.us/pubs/hgl\\_western\\_domain/hgl\\_western\\_domain.html](http://www.nfwmd.state.fl.us/pubs/hgl_western_domain/hgl_western_domain.html)
- HydroGeoLogic, Inc. 2007a. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Eastern Domain Model, Final Report. September 2007. [www.nfwmd.state.fl.us/pubs/hgl\\_eastern\\_domain/hgl\\_eastern\\_domain.html](http://www.nfwmd.state.fl.us/pubs/hgl_eastern_domain/hgl_eastern_domain.html)
- HydroGeoLogic, Inc. 2007b. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Eastern Domain Forecast Simulations. March 2007.
- HydroGeoLogic, Inc. and Hazlett-Kincaid, Inc. 2007. Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western Domain Forecast Simulations.
- Lewis, F.G. 2010. East Bay/Blackwater Bay/Lower Yellow River Preliminary Baseline Resource Characterization: With a Discussion of Flow-dependent Habitats and Species. Water Resources Special Report 2010-02. [www.nfwmd.state.fl.us/pubs/wrsr2010-02\\_east\\_bay/wrsr2010-02.html](http://www.nfwmd.state.fl.us/pubs/wrsr2010-02_east_bay/wrsr2010-02.html)
- Northwest Florida Water Management District. 1998. District Water Supply Assessment. Water Resources Assessment 98-2. [www.nfwmd.state.fl.us/rmd/wsa/wsamain.htm](http://www.nfwmd.state.fl.us/rmd/wsa/wsamain.htm)

## References

- Northwest Florida Water Management District. 2001. Regional Water Supply Plan for Santa Rosa, Okaloosa, and Walton Counties. Water Resources Assessment 2000-1. July 2000 (approved February 2001). [www.nwfwmd.state.fl.us/pubs/RWSP\\_Region2/2000\\_plan/rwsp.htm](http://www.nwfwmd.state.fl.us/pubs/RWSP_Region2/2000_plan/rwsp.htm)
- Northwest Florida Water Management District. 2003. Water Supply Projections 2005-2025. Water Resources Assessment 2003-01. [www.nwfwmd.state.fl.us/rmd/water\\_supply\\_projections/water\\_supply\\_projections.htm](http://www.nwfwmd.state.fl.us/rmd/water_supply_projections/water_supply_projections.htm)
- Northwest Florida Water Management District. 2006a. Surface Water Improvement and Management Program Priority List. Program Development Series 2006-02. [www.nwfwmd.state.fl.us/pubs/swmp/swim.html](http://www.nwfwmd.state.fl.us/pubs/swmp/swim.html)
- Northwest Florida Water Management District. 2006b. Regional Water Supply Plan for Santa Rosa, Okaloosa, and Walton Counties, Plan Update. Water Resource Assessment 2006-01. September 2006 (approved October 26, 2006). [www.nwfwmd.state.fl.us/pubs/RWSP\\_Region2/2006\\_plan/rwsp.htm](http://www.nwfwmd.state.fl.us/pubs/RWSP_Region2/2006_plan/rwsp.htm)
- Northwest Florida Water Management District. 2007. Regional Water Supply Plan: Region V, Franklin and Gulf Counties. Water Resources Assessment 07-01. January 2007 (approved January 25, 2007). [www.nwfwmd.state.fl.us/pubs/rwsp/plan.htm](http://www.nwfwmd.state.fl.us/pubs/rwsp/plan.htm)
- Northwest Florida Water Management District. 2008a. 2008 Water Supply Assessment Update. Water Resources Assessment 08-02. December 2008. [www.nwfwmd.state.fl.us/rmd/wsa/WSA%20Updates/wsa\\_update\\_2008.htm](http://www.nwfwmd.state.fl.us/rmd/wsa/WSA%20Updates/wsa_update_2008.htm)
- Northwest Florida Water Management District. 2008b. Region III Regional Water Supply Plan, Bay County, Florida. Program Development Series 08-02. August 2008. [www.nwfwmd.state.fl.us/rmd/water\\_supply\\_planning/region\\_III\\_wsp.html](http://www.nwfwmd.state.fl.us/rmd/water_supply_planning/region_III_wsp.html)
- Northwest Florida Water Management District. 2011. Strategic Water Management Plan. Program Development Series 2010-03. [www.nwfwmd.state.fl.us/pubs/swmp/swmp.html](http://www.nwfwmd.state.fl.us/pubs/swmp/swmp.html)
- Northwest Florida Water Management District. 2012a. Consolidated Annual Report. Annual Report 2012-02. March 1, 2012. [www.nwfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html](http://www.nwfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html)
- Northwest Florida Water Management District. 2012b. Regional Water Supply Plan Update for Santa Rosa, Okaloosa, and Walton Counties. Water Resource Assessment 2012-01. February 2012. [www.nwfwmd.state.fl.us/pubs/RWSP\\_Region2/RWSP\\_Region2.htm](http://www.nwfwmd.state.fl.us/pubs/RWSP_Region2/RWSP_Region2.htm)
- PBS&J. 2000a. Water Conservation Task Summary Report. August 2000.
- PBS&J. 2000b. Reuse Task Summary Report. August 2000.
- PBS&J. 2006. Final Report: Conceptual Alternative Water Supply Development Projects and Planning Level Cost Estimates. October 2006. [www.nwfwmd.state.fl.us/pubs/RWSP\\_Region2/RWSP\\_Region2.htm](http://www.nwfwmd.state.fl.us/pubs/RWSP_Region2/RWSP_Region2.htm)
- Pratt, Thomas R. 2001. Results of Floridan Aquifer Drilling Program in Santa Rosa, Okaloosa, and Walton Counties, Florida. Technical File Report 01-1. [www.nwfwmd.state.fl.us/pubs/tfr01-1/tfr01-1.htm](http://www.nwfwmd.state.fl.us/pubs/tfr01-1/tfr01-1.htm)

Whitcomb, John B. 2005. Florida Water Rates Evaluation of Single Family Homes.  
[www.nfwmd.state.fl.us/permits/waterratesreport.pdf](http://www.nfwmd.state.fl.us/permits/waterratesreport.pdf)