



Northwest Florida Water Management District

Consolidated Annual Report



March 1, 2009
Annual Report 2009-02
(Revised 4-23-09)

GOVERNING BOARD

George Roberts, Chair
Panama City

Philip McMillan, Vice Chair
Blountstown

Sharon Pinkerton, Secretary/Treasurer
Pensacola

Stephanie Bloyd
Panama City Beach

J. Luis Rodriguez
Monticello

Jerry Pate
Pensacola

Peter Antonacci
Tallahassee

Steve Ghazvini
Tallahassee

Tim Norris
Santa Rosa Beach

Douglas E. Barr — Executive Director

For additional information, write or call:

Northwest Florida Water Management District
81 Water Management Drive
Havana, Florida 32333-9700
(850) 539-5999

Cover photos of projects completed during 2007-2008 include (from left): Shuler Property conservation easement (Ochlockonee River); Eastpoint Stormwater Retrofit Project; Harbinwood Stormwater Improvement Project (Leon County); and Live Oak Point land acquisition (Walton County).

DISTRICT OFFICES

Headquarters

81 Water Management Drive
Havana, FL 32333-4712
Telephone (850) 539-5999
Fax (850) 539-2777

Crestview

800 Hospital Drive
Crestview, Florida 32539
Telephone (850) 683-5044
Fax (850) 683-5050

Tallahassee

The Delaney Center Building, Suite 2-D
2252 Killearn Center Boulevard
Tallahassee, FL 32309
Telephone (850) 921-2986
Fax (850) 921-3083

Pensacola (Field Office)

2261 West Nine Mile Road
Pensacola, FL 32534-9416
Telephone (850) 484-5125
Fax (850) 484-5133

Marianna (Field Office)

4765 Pelt Street
Marianna, FL 32446
Telephone (850) 482-9522
Fax (850) 482-1376

Econfina (Field Office)

6418 E. Highway 20
Youngstown, FL 32466
Telephone (850) 722-9919
Fax (850) 722-8982

Executive Summary

This Consolidated Annual Report fulfills the requirement of section 373.036(7)(a), Florida Statutes (F.S.), that the Northwest Florida Water Management District (NFWFMD or District) annually submit a report on management of water resources to the Governor, the President of the Senate, the Speaker of the House, and the Department of Environmental Protection (DEP). Copies of the report must also be provided to the chairs of legislative committees having substantive or fiscal jurisdiction over water management districts and the governing boards of all counties having jurisdiction or deriving funds for operations of the District. Each report must also be made available to the public in either a printed or electronic format.

The March 1, 2009, NFWFMD Consolidated Annual Report includes seven required reports, as specified in Section 373.036(7)(b), F.S. These are:

- The District Water Management Plan Annual Report;
- The Minimum Flows and Levels Annual Priority List (per s. 373.042(2), F.S.);
- The annual Five-Year Capital Improvement Plan (s. 373.536(6)(a)3, F.S.);
- The final annual 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 Water Management District Work Plan Annual Report (s.373.199(7), F.S.); and
- The Mitigation Donation Annual Report (s.373.414(1)(b)2, F.S.).

In addition to the required sections, each district may also include additional information on the status or management of water resources as deemed appropriate. This report includes one optional element, a Surface Water Improvement and Management Program and Watershed Restoration Summary Report. The summary report focuses on project implementation under the framework of the Surface Water Improvement and Management (SWIM) program.

These reports are provided in the following chapters and provide a current status of a number of District programs, including land acquisition and management, watershed restoration, water resource development, and alternative water supply development. Among the programs and accomplishments reported are the following:

- The District continues implementation of the Environmental Resource Permitting (ERP) program for northwest Florida. During the first year of Phase I (stormwater) ending in September 2008, District staff received 461 permit applications. Thus far, 332 have been approved. Also during 2008, nine public workshops were held throughout northwest Florida on the proposed Phase II (wetland permitting) rule. Phase II, enhancing protection for wetlands connected to other surface waters, as well as isolated wetlands not previously protected by state law in northwest Florida, is expected to be implemented in mid-2009. www.nwfwmd.state.fl.us/permits/permits-ERP.html (**District Water Management Plan Annual Report**).
- District-wide, ten alternative water supply development and water resource development projects have been approved for funding through the Water Protection and Sustainability Program. Over \$21 million dollars in grant funding have been awarded for projects that are expected to provide over 25 MGD of alternative water supplies. (**Alternative Water Supplies Annual Report**)

- A regional water supply plan was approved for Region III, consisting of Bay County, Florida. The plan includes a Water Resource Development Component and three alternative water supply development projects. Approximately ten million gallons per day (MGD) of alternative water supply have been identified to provide for existing and future demands. http://www.nwfwmd.state.fl.us/rmd/water_supply_planning/region_III_wsp.html (**District Water Management Plan Annual Report, Water Supply; Water Resource Development Work Program Annual Report**)
- The District has recently completed a draft of an updated water supply assessment. The assessment includes demand projections and a resource assessment through 2030. Although the assessment is still in draft form, total water use is projected to increase by 43% during the 2005-2030 planning horizon to approximately 496 MGD by 2030. The Water Supply Assessment Update recommends continued water supply planning efforts in regions II, III and V and does not identify any new regions that need a regional water supply plan. The Water Supply Assessment Update is expected to be complete in March 2009. The water demand projections will be updated again in 2013. (**District Water Management Plan Annual Report, Water Supply**)
- Work continues on the Flood Map Modernization program implemented in cooperation with the Federal Emergency Management Agency (FEMA). Final effective digital flood insurance rate maps (DFIRMs) have been completed for Escambia, Santa Rosa, and Gulf counties. Preliminary DFIRMS have been completed in Bay, Gadsden, Leon and Walton counties, and work continues on updating maps in Wakulla, Calhoun, Washington, Holmes, Jackson, Jefferson and Franklin counties. www.nwfwmdfloodmaps.com (**District Water Management Plan Annual Report, Flood Protection and Floodplain Management**)
- The District has completed acquisition of detailed elevation data, acquired through use of Light Detection and Ranging (LiDAR) technology, for nearly the entire District. This effort has been a cooperative effort involving federal, state and local governments. The District is continuing to process these data and, with local government support, is seeking efficient and effective ways to distribute it via the internet for public use. (**District Water Management Plan Annual Report**)
- Through the end of 2008, the District has acquired 218,751 of the 380,160 acres identified in the 2009 Florida Forever Land Acquisition Work Plan through fee and less-than-fee purchases and donation. Of this, 172,997 acres of floodplain have been acquired of 286,738 floodplain acres identified. This comprises 60 percent of the area identified as vulnerable to flooding and represents significant progress by the District in floodplain protection. (**District Water Management Plan Annual Report; Florida Forever Five Year Work Plan**)
- The District continues to assist local governments with previously approved capital improvement projects that will provide water quality and aquatic and wetland ecosystem benefits. To date, over \$23 million in grant funding have been awarded for implementation of stormwater retrofit, nonpoint source pollution abatement and habitat restoration projects in twelve counties. New grant cycles of the Florida Forever Capital Improvement Grant Program have been postponed until at least the 2009-2010 fiscal year due to legislative budgetary constraints with the Florida Forever Trust Fund. (**District Water Management Plan Annual Report; Florida Forever Five Year Work Plan**)
- During the past fiscal year, District staff continued to implement and develop its mitigation plan and in-lieu fee program under its agreement with the U.S. Army Corps of Engineers (USACOE) and Chapter 373.4137, Florida Statutes, to provide compensatory wetland mitigation for impacts incurred for several Florida Department of Transportation (DOT) projects. During the coming year, continued emphasis will be placed on implementing mitigation projects meeting the new USACOE permit rules

regarding in-lieu fee and banking instruments, as well as identifying future mitigation efforts under our mitigation plan. www.nwfwmdwetlands.com (**District Water Management Plan Annual Report, Natural Systems**)

- Implementation of the District’s mitigation plan also continued through restoration and management of the Sand Hill Lakes Mitigation Bank in Washington County. In February 2008, a hydrologic restoration project was completed through removal of a failed dam and construction of the Black Pond control structure, a sheet pile weir with water level control. Removal of sand pine plantations, shrub reduction, re-planting of wiregrass and longleaf pine, native and exotic species surveys, fire management, water level monitoring, and exotic species removal all continue on the property. www.nwfwmdwetlands.com (**District Water Management Plan Annual Report, Natural Systems**)
- Approximately six miles of hiking trail that traverses the District’s Lafayette Creek portion of the Choctawhatchee River Water Management Area was designated as part of the Florida National Scenic Trail in October 2008. This dedication is part of a 20-mile addition to the 1,400-mile trail system and represents an important connector segment between SR 81 and US 331 in southern Walton County. This designation was achieved through collaboration with federal, state and local agencies, non-profit organizations and private partners. All of the hiking trail planning and construction was completed by a dedicated team of volunteers from the Florida Trail Association. (**District Water Management Plan Annual Report; Florida Forever Five Year Work Plan**)
- Under the framework of the SWIM Program, priority watershed restoration activities are in progress across the District. These include approximately 50 construction projects implemented within seven watersheds, funded through special appropriation and other complementary SWIM programs and in cooperation with local governments and state and federal agencies. The current projects represent long-term watershed resource restoration encompassing nearly 40,000 acres District-wide. (**SWIM Program and Watershed Restoration Summary Report**)

This consolidated annual report is available through the District’s web site at www.nwfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html.

Table of Contents

Executive Summary.....	i
1 Introduction.....	1
2 District Water Management Plan Annual Report.....	3
3 Minimum Flows and Levels Annual Priority List	17
4 Annual Five-Year Capital Improvements Plan.....	19
5 Water Supply	33
5.1 Five-Year Water Resource Development Work Program: FY 2007-08 Update.....	33
5.2 Alternative Water Supplies Annual Report	57
6 Florida Forever Water Management District Work Plan Annual Report.....	59
6.1 Land Acquisition Five Year Work Plan	59
6.2 Land Acquisition Work Plan Annual Report	82
6.3 Florida Forever Capital Improvement Work Plan	89
7 Mitigation Donation Annual Report.....	97
8 Surface Water Improvement and Management Program and Watershed Restoration Summary Report.....	98
9 References	109
Appendix: District Water Management Plan Annual Performance Measures	113

List of Tables

Table 2.1 District-Wide Activities.....	15
Table 3.1 Northwest Florida Water Management District MFL Priority List (2008).....	18
Table 4.1 NFWFMD Five Year Capital Improvements Plan, Fiscal Years 2009-2013.....	20
Table 5.1 Floridan Aquifer Sustainability Model Applications and Support.....	40
Table 5.2 Inland Sand-and-Gravel Aquifer Sustainability Model.....	41
Table 5.3 Development of Feasible Surface Water Resources.....	41
Table 5.4 Aquifer Storage and Recovery Feasibility.....	42
Table 5.5 Water Reuse Coordination.....	43
Table 5.6 Water Conservation Coordination.....	44
Table 5.7 Regional Water Supply Planning Strategies.....	45
Table 5.8 Hydrologic Data Collection and Analysis.....	46
Table 5.9 Abandoned Well Plugging.....	46
Table 5.10 2008-2013 Region II WRDWP Project Funding.....	47
Table 5.11 Hydrologic and Water Quality Data Collection, Monitoring, and Analysis.....	49
Table 5.12 Water Reuse and Conservation Assistance.....	49
Table 5.13 Regional Water Supply Coordination and Technical Assistance.....	50
Table 5.14 2008-2013 Region III WRDWP Project Funding.....	51
Table 5.15 Hydrologic and Water Quality Data Collection and Analysis.....	53
Table 5.16 Coordination, Source Protection, and Engineering and Technical Assistance.....	53
Table 5.17 Water Reuse and Conservation Coordination and Assistance.....	54
Table 5.18 RWSP Implementation.....	55
Table 5.19 2008-2013 Region V WRDWP Project Funding.....	56
Table 5.20 NFWFMD Water Protection and Sustainability Program Trust Fund Projects.....	58
Table 6.1 Florida Forever Trust Fund Funding Allocations by Water Management District.....	59
Table 6.2 Approved Acquisition Areas by Waterbody Type.....	60
Table 6.3 Additional Approved Acquisition Areas and Methods.....	61
Table 6.4 Summary of Land Transactions Completed in 2008.....	83
Table 6.5 Land Management Activities: Restoration, Enhancement and Maintenance (2008).....	85
Table 6.6 Lands Management Activities: Access and Recreation Management (2008).....	86
Table 6.7 Projected Funding, Staffing and Resource Management for FY 2008-2009.....	87
Table 6.8 Anticipated Florida Forever Work Plan Capital Improvement Expenditures.....	91
Table 6.9 NFWFMD Florida Forever Capital Improvement Projects.....	92
Table 6.10 NFWFMD Local Government Florida Forever Capital Improvement Grant Projects.....	93
Table 6.11 NFWFMD Local Government Florida Forever Grant Review Criteria.....	95
Table 8.1 NFWFMD SWIM Priority List.....	99
Table 8.2 SWIM Work Plan for FY 2008-2009.....	100
Table 8.3 NFWFMD Watershed Restoration Capital Improvements.....	102

List of Figures

Figure 5.1 Water Supply Planning Regions.....	34
Figure 5.2 Water Supply Planning Region II.....	39
Figure 5.3 Water Supply Planning Region III.....	48
Figure 5.4 Water Supply Planning Region V.....	52
Figure 6.1 2009 Proposed Land Acquisition Areas (West Region).....	63
Figure 6.2 2009 Proposed Land Acquisition Areas (Central Region).....	64
Figure 6.3 2009 Proposed Land Acquisition Areas (East Region).....	65
Figure 8.1 NFWFMD SWIM Priority Watersheds.....	98
Figure 8.2 NFWFMD Capital Project Distribution.....	108

1 Introduction

Overview

Chapter 2005-36, Laws of Florida, as enacted through 2005 House Bill 727, implemented statewide a consolidation of legislatively mandated plans and reports regarding the status of water management district programs and water resources within each district's jurisdiction. Beginning March 1, 2006, and annually thereafter, a consolidated annual report is submitted to the Governor, the President of the Senate, the Speaker of the House, and the Department of Environmental Protection (DEP). Copies of the report are provided to the chairs of all legislative committees having substantive or fiscal jurisdiction over water management districts, as well as the governing boards of all counties having jurisdiction or deriving any funds for operations of the appropriate district. The report is also made readily available to the public.

As provided under s. 373.036(7)(b), Florida Statutes (F.S.), the consolidated annual report must include the following elements:

- A District Water Management Plan annual report or an annual work plan report on strategic plan implementation;
- The DEP approved Minimum Flows and Levels annual priority list (per s.373.042(2), F.S.);
- The annual 5-year Capital Improvement Plan (s. 373.536(6)(a)3, F.S.);
- The Alternative Water Supplies Annual Report (s. 373.1961(3)(n), F.S.);
- The final annual 5-Year Water Resource Development Work Program (s.373.536(6)(a)4, F.S.);
- The Florida Forever Water Management District Work Plan Annual Report (s.373.199(7), F.S.); and
- The Mitigation Donation Annual Report (s.373.414(1)(b)2, F.S.).

Each of the aforementioned requirements must be addressed in separate chapters, although elements common to more than one requirement may be consolidated where appropriate. In addition to the required chapters, the statute provides that districts may include additional information on the status or management of water resources as deemed appropriate. This report includes one optional element, a Surface Water Improvement and Management Program and Watershed Restoration Summary Report. The summary report focuses on project implementation under the framework of the Surface Water Improvement and Management (SWIM) program. Inclusion of this element is appropriate given the importance of the SWIM program for the Northwest Florida Water Management District. This program encompasses watershed management District-wide; it therefore provides the planning context for identifying, prioritizing, and implementing cooperative watershed protection and restoration projects.

Together these reports provide the status of Northwest Florida Water Management District programs including land acquisition and management, watershed restoration, water resource development, alternative water supply development, and minimum flows and levels. Information relating to the status of other important District programs may be found through the following sources:

- Environmental Resource Permitting for northwest Florida (s. 373.4145, F.S. – www.nfwmd.state.fl.us/permits/permits-ERP.html).
- Regional Mitigation for wetland impacts incurred by Florida Department of Transportation impacts (s. 373.4137, F.S) – www.nfwmdwetlands.com.
- Northwest Florida Flood Hazard Map Modernization in cooperation with the Federal Emergency Management Agency – www.nfwmdfloodmaps.com.

Report Organization

The required and optional elements are organized in this report as follows:

- Chapter 1. Introduction
- Chapter 2. District Water Management Plan Annual Report
- Chapter 3. Minimum Flows and Levels Annual Priority List
- Chapter 4. Annual Five-Year Capital Improvements Plan
- Chapter 5. Water Supply
 - 5.1 Annual Five-Year Water Resource Development Work Program
 - 5.2 Alternative Water Supplies Annual Report
- Chapter 6. Florida Forever Water Management District Work Plan Annual Report
 - 6.1 Land Acquisition Five Year Work Plan
 - 6.2 Land Acquisition Work Plan Annual Report
 - 6.3 Florida Forever Capital Improvement Work Plan
- Chapter 7. Mitigation Donation Annual Report
- Chapter 8. Surface Water Improvement and Management Program and Watershed Restoration Summary Report
- Chapter 9. References

2 District Water Management Plan Annual Report

Introduction

The second update of the Northwest Florida Water Management District's District Water Management Plan (DWMP) was approved by the Governing Board in September 2005. The plan was initially completed in 1994, and it was first updated in 2000. The 2005 update describes recent initiatives together with continuing long-term programs. Additionally, the plan describes how a broad array of plans and programs fit within an integrated framework so as to address the District's statutorily-defined areas of responsibility (AORs): water supply, flood protection and floodplain management, water quality, and natural systems. The plan is scheduled to be updated again in 2010.

Provisions of Chapter 62-40.520, Florida Administrative Code (F.A.C.), require the District to include within the DWMP a procedure for evaluating progress toward implementing the plan on an annual basis. The DWMP is organized to address District programs and projects across the above-mentioned AORs. It should be noted that most issues and programs span two or more of these interrelated AORs, and it is customary to approach specific programs and projects in an interdisciplinary, holistic manner. For reporting purposes, however, accomplishments and priorities listed below are primarily described within one category. Individual tasks are also compiled into [Table 2.1](#) under the sub-heading of District-Wide Activities. The table lists tasks, activities, and status during fiscal year 2007-2008, and it notes AORs addressed by each task. Appendix A provides updated values applicable to standardized statewide performance measures.

Water Supply

Over the past year, the District has made noteworthy efforts and accomplishments in regional water supply planning, water resource assessments, water conservation, water supply facilities, and alternative water supply development. Much of the funding for alternative water supply projects comes from the Water Protection and Sustainability Program Trust Fund, established by the Florida Legislature in 2005. Funding for water supply projects also comes from the District's ad valorem tax revenues, regulatory revenues, legislative special appropriations, local government contributions, and federal grants.

Recent Accomplishments

- A regional water supply plan was developed and approved by the Governing Board for Region III, which consists of Bay County. The plan includes water resource and water supply development components and recommends alternative water supply development projects. Information has also been provided to local governments to assist in the development of new local water supply sources and facilities. Further information is provided in Section 5.1 and the plan is available at http://www.nfwmd.state.fl.us/rmd/water_supply_planning/region_III_wsp.html.
- Implementation of the updated regional water supply plan for Region II (Santa Rosa, Okaloosa, and Walton counties) and the regional water supply plan for Region V (Franklin and Gulf counties) continues. Both plans recommend alternative water supply projects and support water resource development projects. Further information is provided in Section 5.1. Additional information on water supply planning efforts in the NFWMD can be found at http://www.nfwmd.state.fl.us/rmd/water_supply_planning/regional_water_supply_planning.html.
- The District has recently completed a draft of an updated water supply assessment. The assessment includes demand projections and a resource assessment through 2030. Although the update is still in draft form, total water use is projected to increase by 43% during the 2005-2030 planning horizon to 496 MGD by 2030. The Water Supply Assessment Update recommends continued water supply planning efforts in Regions II, III and V and does not identify any new regions that need a regional

water supply plan. The Water Supply Assessment Update is expected to be finalized in March 2009. Water demand projections will be updated again in 2013.

- During FY 2007-2008, \$5.2 million in new funding was made available through the Water Protection and Sustainability Program Trust Fund for priority alternative water supply and water resource development projects. An additional \$270,000 was appropriated for FY 2008-2009. To date, the District has received over \$21 million in funding through this program. Grants awarded include \$5.47 million to Bay County for development of an inland ground water source; \$4 million to the City of Port St. Joe for construction of a surface water treatment plant, \$500,000 to the City of Chipley for construction of a reuse system, \$500,000 to Wakulla County for construction of a reuse system, \$350,000 to Bay County for water resource development activities, \$1,350,000 to the City of Tallahassee for construction of the Tram Road public access reuse facility; and an additional \$500,000 for the City of Tallahassee for advanced wastewater treatment and reclaimed water systems.
- In January 2009, the Governing Board approved a \$2.1 million grant to Bay County to assist in the development of an inland ground water source as an alternative water source to exclusive reliance on Deer Point Lake Reservoir. These funds will augment the WPSPTF grant identified above. The inland ground water source development project was identified as the preferred alternative water supply project in the Regional Water Supply Plan for Region III. The project includes construction of up to six Floridan Aquifer public supply wells and associated distribution infrastructure. Total construction costs for the new potable supply source are estimated at \$15 million.
- The City of Wewahitchka has been awarded an additional \$100,000 grant (previously awarded \$300,000) to construct water supply improvements to the city and its service area. With these funds, two twelve-inch municipal water supply wells and associated infrastructure will be constructed. After evaluating a number of alternatives, it was concluded that adding municipal wells near the distribution systems would best meet future water supply needs.
- The Governing Board awarded a \$1,000,000 grant to Regional Utilities of Walton County to implement the Regional Water Supply Phase II project, focused on further developing inland groundwater as an alternative water supply for coastal Walton County.
- For the past four years, the District has supported the operation of a Mobile Irrigation Lab (MIL) in northwest Florida, serving Calhoun, Gadsden and Jackson counties. Agricultural irrigation systems are evaluated and recommendations made to increase water use efficiency. The work is in cooperation with the Florida Department of Agriculture and Community Services, the United States Department of Agriculture, Natural Resources Conservation Service, and the West Florida Resource and Conservation Development Council. The District contributes \$50,000 towards the \$104,000 annual operating cost of the lab. During fiscal year 2007-08, evaluations conducted by the MIL found a potential water savings of 864.39 million gallons per year and actual water savings of 255.91 million gallons per year.
- The District continues to provide educational brochures and guidance documents on water conservation to utilities, local governments, and interested citizens. Over 77,970 such brochures and documents were distributed to utilities and local governments through September 2008. As of September 2008, 25 hotels are participating in the Conservation Hotel and Motel Program (CHAMP) District-wide. The program promotes water and energy conservation by requesting guests to consider having towels and linens laundered less frequently than daily. Participating hotels report water use data from before and after the program for documentation and evaluation. In addition to these activities, the District continued distribution of WaterWise Florida Landscapes, a four-color, 64 page publication distributed to county extension offices, utilities, and the public.
- In cooperation with Bay County, the District continues operating the monitoring network for stream flow and rainfall within the Deer Point Lake Reservoir watershed.

- Work continued on the Franklin County aquifer testing program designed to evaluate the ability of inland ground water sources to help meet future water supply needs while limiting the threat of salt water intrusion. Ground water model development was substantially completed.
- The District continues to provide hydrologic condition data through its website. Data are posted for major waterbodies, watersheds, and aquifers. Included are accumulated rainfall amounts, drought conditions, stream flows, lake levels, and ground water levels. The information is updated at least every six months or as conditions warrant.
- In July 2008, the City of Grand Ridge was awarded funding up to \$19,000 from the District's General Fund to rehabilitate one of its main drinking water supply wells. The work includes mechanical and chemical cleaning of the well, as well as installation of new pumping equipment necessary to return the public supply well to operation.
- In December 2008, the City of Blountstown was awarded funding up to \$35,000 from the District's General Fund to complete emergency repair on one of its main drinking water supply wells. The repair includes installation of new pumping equipment necessary to keep the public supply well operational.
- An agreement with DEP to implement the well permitting requirements of Chapter 62-524, F.A.C., has been in place since 1991 and has continued each subsequent year. The program addresses potable well construction in specific delineated areas including portions of Escambia, Jackson, Leon and Santa Rosa counties and will be effective through June 2011. Geospatial well location data are being added to the database. Water well contractors, other agencies, and the public are provided with reliable data and information.
- The District has taken several steps toward implementing e-permitting under its Resource Regulation Division, Bureau of Ground Water. Elements of a comprehensive e-permitting system are expected to include: (1) an e-compliance module that allows permittees to enter pumpage, water level and water quality as required by the conditions of their permits and (2) well completion report entry system that will allow all contractors to enter well completion reports on-line.
- The District's Regulation of Wells Program continues to promote the proper plugging and abandonment of wells throughout northwest Florida with over 1,700 wells plugged during the reporting period. This program includes a grant program for plugging wells that are unused or unsuitable for their intended purpose, and that pose a threat to ground water resources. Through FY 2007-08, the District provided grants totaling nearly \$19,400 to properly plug 21 wells.

Water Supply Priorities for FY 2008-2009

- Complete development of the Water Supply Assessment Update.
- Continue to work with Bay County to develop a new inland ground water source. Bay County currently relies on surface water from Deer Point Lake Reservoir. As outlined in the Region III RWSP, the District and the County are working together to develop an inland ground water source as an alternative water supply that will serve as back-up for the surface water source and provide needed additional source capacity for future growth. Development of this alternative supply source will also help reduce the long-term vulnerability of the county to the effects of drought and major hurricanes.
- Continue to work in cooperation with local governments and utilities to explore and develop possibilities for interconnection of water supply systems. The significant investments in development of alternative water supplies—from both ground and surface water sources—have resulted in a diverse base of water supply sources. Interconnection of water supply systems will significantly advance the goal of drought-proofing the coastal area of the District by allowing short-term transfer of water between utilities.

- Continue to implement regional water supply plans, as approved by the Governing Board, for Regions II, III and V. Implementation includes construction of alternative water supply development projects, water resource development, providing water conservation information to utilities and the public, and providing technical assistance to local governments for the development of local water supply comprehensive plan amendments.
- Implement alternative water supply development and water resource development projects through the Water Protection and Sustainability Program, in accordance with Governing Board resolutions and as detailed in [Chapter 5.2](#).
- Continue development of the inland wellfield and associated infrastructure in Walton County to serve as an alternative water supply source for coastal Walton County.
- Publish results of aquifer testing performed to support development of the inland wellfield in Walton County.
- Assist Freeport in the construction of a potable water pipeline between Portland and Choctaw Beach, interconnecting the utility systems of these communities.
- Continue to work with Okaloosa County to identify and develop alternative sources including reuse, inland groundwater, and inland surface water sources.
- Continue to apply the Floridan Aquifer sustainability model as a tool to evaluate future withdrawals from inland areas and other water supply alternatives.
- In cooperation with the Eastpoint Water and Sewer District, develop a salt water intrusion model to assess the sustainability of the local ground water supply. Withdrawals in Eastpoint provide the potable water supply for both Eastpoint and St. George Island.
- Collect additional water quality data and finalize the Franklin County inland wellfield model analysis.
- In cooperation with utilities, maintain and, where necessary, expand the monitoring network for surface water flow and quality and groundwater level and quality to support water supply development planning in critical areas.
- Continue to provide water conservation educational information to utilities, local governments and residents with emphasis on regions II, III and V.

Flood Protection and Floodplain Management

The District's flood protection and floodplain management efforts are a major focus of multiple District activities. As such, flood protection and floodplain management efforts are coordinated under the majority of District programs, including flood hazard mapping, land acquisition, resource regulation, water quality improvement planning and several other programs and projects. Funding is provided from several sources, including state SWIM appropriations, the Florida Forever Trust Fund, the Water Management Lands Trust Fund, legislative special appropriations, local government contributions, and federal grants.

Recent Accomplishments

- Phase I (stormwater) of the Environmental Resource Permitting (ERP) program began in October 2007, and the District began issuing stormwater permits to address water quality and flow from construction and development. Phase II (wetland permitting) is expected to begin in mid-2009. Phase II will enhance protection of wetlands connected to other surface waters and isolated wetlands not previously protected by state law in northwest Florida.

- The District has taken several steps toward implementing e-permitting under its ERP program. When e-permitting is operational, applicants will be able to (1) automatically check to see if a particular project or activity is exempt from permitting, (2) electronically submit an application and supporting documentation for an environmental resource permit, and (3) have access to the status of the permit with the online tracking system. It is anticipated that e-permitting will be available in mid-2009.
- Work continues on the Flood Map Modernization program implemented in cooperation with the Federal Emergency Management Agency (FEMA). Final effective digital flood insurance rate maps (DFIRMs) have been completed for Escambia, Santa Rosa, and Gulf counties. Preliminary DFIRMS have been completed in Bay, Gadsden, Leon and Walton counties, and work continues on updating maps in Wakulla, Calhoun, Washington, Holmes, Jackson, Jefferson and Franklin counties.
- The District continues to provide hydrologic condition data through its website. Data are posted for major waterbodies, watersheds, and aquifers. Included are accumulated rainfall, drought conditions, stream flows, lake levels, and ground water levels. The information is updated at least every six months or as conditions warrant.
- The District continues operation of real-time stage and rainfall data collection via GOES satellite at four stations: Yellow River at SR2 in Okaloosa County (surface water level), FAF #47 (ground water level) in Walton County, St. Marks River at San Marcos de Apalachee State Park in Wakulla County (surface water level, conductivity, and temperature) and Clark Sand (ground and surface levels) in Escambia County. Data are displayed at the District's website.
- An agreement with Bay County to continue a monitoring program for the Deer Point Lake Reservoir watershed was approved in September. The District has operated and maintained this monitoring network for the county since 1998. The monitoring program includes six discharge stations and three rainfall stations. These monitoring stations measure continuous discharge, rainfall and stage levels. These data provide the major stream flows into Deer Point Lake and are used to manage water resources and identify areas that may require acquisition or additional protection.
- An agreement with the City of Tallahassee and Leon County to continue a stormwater flow monitoring program was approved in September. The program includes the operation of 53 surface water and rainfall data collection stations. The District has operated this stormwater monitoring network for 20 years. The agreement also provides a real-time radio telemetry flood warning network that is a cooperative program involving the District, Leon County and the National Weather Service (NWS). It includes 14 stream and rainfall stations that help identify developing flood conditions for emergency management staff. The District and the NWS cooperate on the management and operation of Leon County's flood warning network.
- The District has completed acquisition of detailed elevation data, acquired through use of Light Detection and Ranging (LiDAR) technology, for nearly the entire District. This effort continues in partnership with the National Oceanic Atmospheric Administration, the Florida Department of Emergency Management and local governments.
- The District continues to fund an effort with Gulf County to remove dredge spoil sand from the floodplain of the Apalachicola River on Site 39 southeast of Wewahitchka. The project will restore floodplain habitat and enhance the ecosystem of the river and Apalachicola Bay.
- During FY 2007-2008, the District protected nearly 2,500 acres through fee simple and less-than-fee acquisition. To date, 218,751 acres of land have been protected for water resource purposes through the land acquisition efforts of the District. Of this, 172,997 acres are floodplain. These acquisitions provide long-term protection of floodplain functions, as well as water quality, natural systems, and public access.

- The District continues implementation of the dam safety program through the Chapter 40A-4, F.A.C., Management and Storage of Surface Waters (MSSW) program as well as the MSSW rule for agriculture and forestry, Chapter 40A-44, F.A.C., Regulation of Agricultural and Forestry Projects.

Flood Protection and Floodplain Management Priorities for FY 2008-2009

- The District will continue to emphasize nonstructural flood protection including land acquisition, floodplain map modernization, and technical assistance to local governments, as well as implementation of stormwater components of Environmental Resource Permitting.
- It is anticipated that wetland resource regulation aspects of Environmental Resource Permitting will be implemented in mid-2009.
- The District will continue to operate a flood warning and monitoring network in cooperation with local governments and federal agencies for flood protection and water resource management.
- It is anticipated that the availability of hydrologic data on the NFWMD website will continue to be enhanced.
- The District will continue operation of real-time stage and rainfall data collection via GOES satellite at the four stations described above as well as an additional two new stations to be installed during FY 2008-2009. Operation of real-time data collection stations continues at other locations throughout the District and data are displayed on the District's website.
- The District will continue efforts with FEMA to implement the district-wide floodplain map modernization program.
- The District will continue acquisition of LiDAR data, including integration and distribution of the data to local governments.
- Acquisition of lands to protect water resources will continue. Approximately 113,741 acres of floodplain have been identified for purchase or conservation easement.
- The District will continue oversight of structural flood protection (facilities) through the District's Management and Storage of Surface Waters rule (Chapter 40A-4, F.A.C.).
- The District will distribute brochures and informational handouts to increase permittee understanding of issues and restrictions associated with the construction of permitted water management systems.
- The District will continue to work with Gulf County on restoration of floodplain functions and removal of an initial ~50,000 cubic yards of dredged material along the Apalachicola River.

Water Quality

The District's surface water quality protection efforts are primarily coordinated under the auspices of the Surface Water Improvement and Management (SWIM) program, as well as resource regulation under ERP. Sources of funding for SWIM plan development and implementation include the Water Management Lands Trust Fund, legislative appropriations, Florida Forever Trust Fund, local government contributions, and state and federal grants. Limited state and federal funding is also provided for the Integrated Water Resource Monitoring (IWRM) Network and the Springs Initiative program.

Recent Accomplishments

- As described above, ERP Phase I was initiated in October 2007 and Phase II is anticipated by mid-2009. Implementation of ERP in Northwest Florida is expected to result in long-term benefits for water quality, flood protection, and natural systems.

- Grant recipients have made substantial progress in completing Florida Forever capital improvement projects with water quality benefits. Those completed over the past year include ten hilltop-to-hilltop unpaved road/stream stabilization sites (work completed by the Orange Hill Soil and Water Conservation District); Gibby Pond regional stormwater retrofit (Blueprint 2000); Killearn Lakes restoration and Harbinwood Estates stormwater retrofit (Leon County); Deer Point Lake dirt road stabilization (Bay County); Choctawhatchee Bay stormwater improvement and Morrison Spring stormwater improvement projects (Walton County); Carpenter Creek Basin stormwater retrofit (Pensacola); and the Lamb Eddy Road and John Redd Road stabilization projects (Calhoun County).
- Work is continuing on development of a stormwater master plan for the Eastpoint community in coastal Franklin County. The project was recently enhanced by incorporating newly acquired LiDAR data into the modeling efforts.
- The District completed the Eastpoint Regional Stormwater Management Systems project, which included installation of eight baffle boxes to treat stormwater discharging directly to St. George Sound. This project is consistent with the goals of the draft Stormwater Master Plan funded in part by an EPA 319 grant and other project partners.
- The District initiated development of an update to the St. Marks River SWIM Plan, originally approved in 1997. The plan is under review and is expected to be complete by the end of 2009. It will provide a framework for District management actions and local government grant-funded projects to protect and improve water and habitat quality in the watershed.
- With District grant funding, the Friends of St. Andrew Bay/Bay Environmental Study Team continues to progress in development of a basin-wide stormwater management plan, project implementation, and public outreach and education activities. Funding is provided by the St. Andrew Bay SWIM program. Additional SWIM grant funding is helping the St. Andrew Bay Resource Management Association (RMA) continue and enhance long-term water quality and ecosystem monitoring and analysis.
- In April 2008, Bay County completed the Lake Powell Stormwater Retrofit project providing water quality improvements to surface water runoff discharging to the largest coastal dune lake in the state. In December, the City of Panama City completed the Henry Davis Park project which included construction of stormwater wet-detention facility and other improvements providing treatment for a 137-acre basin discharging to St. Andrew Bay. This project was funded with \$850,000 from the District's St. Andrew Bay SWIM program as well as significant local contributions.
- With \$250,000 in funding assistance provided by the District, the Choctawhatchee Basin Alliance completed a stormwater retrofit project using best management practices at Cessna Park in southern Walton County. Stormwater treatment was provided for the park and surrounding areas prior to discharging to Hogtown Bayou and Choctawhatchee Bay. The project also included a large public outreach and education component.
- Okaloosa County has completed the Gap Creek watershed assessment. The District and city of Fort Walton Beach are assisting the County in funding the assessment, which details alternatives for improving water quality and providing flood relief. Gap Creek is a primary tributary of Cinco Bayou, a major embayment in western Choctawhatchee Bay. The creek drains portions of Fort Walton Beach and Hurlburt Field, as well as unincorporated areas, before discharging to the bayou.
- The District continues to assist Escambia County in the removal of accumulated sediment from Bayou Chico to improve water quality and estuarine habitat. Dredging the channel was completed by the U.S. Army Corps of Engineers in April 2008. The District continues to conduct post-dredging water quality monitoring through funding from the Pensacola Bay SWIM program.

- In June 2008, the City of Pensacola completed the 19th & Brainerd Streets Stormwater Retrofit project, with funding assistance from the District. This project, located near Bayview Park, provided stormwater treatment for a 160-acre basin discharging to Bayou Texar. Through this project and similar water quality improvement and restoration projects, the District continues its long-term support for restoration of Pensacola Bay.
- In cooperation with Leon County, routine maintenance activities continue at the Lake Jackson Regional Stormwater Facility. During 2007-08, invasive plants and brush were removed from the 4.5-acre sand filter and detention pond outfall channel and the electric pump motor for the sand filter was repaired.
- Through the Florida Springs Initiative and an agreement approved in September with the DEP, the District monitors water quality at Merritt's Mill Pond. The agreement also provides for a study of the chemical characteristics of ground water and spring water in the Econfina River basin and refinement of the springsheds for Gainer Springs and the springs of Holmes Creek.
- The District used LiDAR data to develop contributory basin delineations for the Wakulla River and Spring Creek basins. Additionally, a study of ground water age and nutrient sources affecting the springs of Merritt's Mill Pond was completed.
- In June, the District and the DEP renewed an ongoing agreement to participate in the Integrated Water Resources Monitoring program. This program provides for ground and surface water sampling at a network of sites around the District. Through the statewide monitoring program, water quality data from confined and unconfined aquifers, rivers, streams and lakes are collected and interpreted.
- The District renewed its agreement with the DEP to continue monitoring under the Ambient Surface Water Quality Assessment program. This program provides long-term water quality trends for major streams and rivers within the District's 16 counties. Data obtained are used by DEP and the District to develop management strategies to improve surface water quality and to characterize the quality of our surface water resources.
- The District collected 180 water quality samples from sites in the Perdido River watershed in coordination with DEP's Total Maximum Daily Load (TMDL) Program. These sites included lakes, streams, rivers, and unconfined wells.
- The District installed a stage, salinity, and rainfall station near the confluence of the St. Marks and Wakulla rivers.
- As described in the Floodplain Protection and Management section, acquisition of LiDAR data for the District is nearly complete.

Water Quality Priorities for FY 2008-2009

- District efforts will continue to focus on implementation of SWIM plans and related projects to address existing and potential water quality issues. Planning efforts will include updating and streamlining SWIM plans where watershed needs have been identified and where priorities need to be reassessed.
- It is anticipated that the District will complete an update of the St. Marks River Watershed SWIM Plan.
- The District will continue monitoring ambient surface and ground water quality through the status monitoring network and Surface Water Temporal Variability monitoring network. The District will continue to sample 17 sites in the Econfina Creek watershed monthly to monitor water quality for recreation purposes.

- The District will install a data logger within the vent of Jackson Blue Spring for the purpose of establishing a long-term discharge record.
- The District will conduct quarterly discharge measurements at several major springs: Wakulla, St. Marks, Jackson Blue, Gainer and Cypress.
- The District will conduct a ground water chemical characterization of the Econfina Creek basin.
- The District will develop a refined delineation of the ground water contribution areas (springsheds) for Gainer Springs and the Holmes Creek springs cluster.
- The District will publish a study of ground water recharge age and nutrient sources of spring discharge in Merritt's Mill Pond, Jackson County.
- Stormwater retrofit planning will continue for the community of Eastpoint, on Apalachicola Bay in Franklin County.
- The District will continue to work in cooperation with local governments to implement capital improvement projects through the Florida Forever Capital Improvement Grant Program.

Natural Systems

Recent Accomplishments

- During the past fiscal year, District staff continued to implement and develop its mitigation plan and in-lieu fee program under its agreement with the U.S. Army Corps of Engineers (USACOE) and Chapter 373.4137, Florida Statutes, to provide compensatory wetland mitigation for impacts incurred for several Florida Department of Transportation (DOT) projects. During the coming year, continued emphasis will be placed on implementing mitigation projects meeting the new USACOE permit rules regarding in-lieu fee and banking instruments, as well as identifying future mitigation efforts under our mitigation plan.
- The District is continuing to implement and develop its mitigation plan and in-lieu fee program under its agreement with the U.S. Army Corps of Engineers (USACOE) and Chapter 373.4137, Florida Statutes, to provide compensatory wetland mitigation for impacts incurred for several Florida Department of Transportation (DOT) projects. The mitigation plan and additional information are available at www.nwfwmdwetlands.com.
- The District has continued land acquisition and restoration efforts through the Florida Forever and DOT mitigation programs. Through the end of FY 2008, the District has acquired, through fee and less-than-fee acquisition and donation, 218,751 acres of the 380,160 acres identified in the District's 2008 Florida Forever Land Acquisition Work Plan to protect water quality, natural systems, and floodplain functions.
- Acquisition of 31 acres, including a fee simple access, was approved in January 2008. The parcel is located off Acuff Road, a county maintained road, and is contiguous to District property on the east and south sides. This purchase provides public access to 475 acres of District lands along Holmes Creek and provides a second land management access point.
- The District acquired a 20-acre parcel on Live Oak Point Peninsula. The property, southeast of previously existing District lands, consists primarily of forested wetlands and estuarine marsh. The parcel was acquired to satisfy mitigation needs of the DOT due to highway construction on US 331. Thus, the project was funded solely with DOT mitigation funds.
- In February 2008, the District acquired 719.3 acres in Bay County from St. Joe Timberland Company of Delaware. This acquisition was a critical component of the District's UWRMP and provides essential wetland mitigation for multiple past, current and future DOT projects in Bay County. The

property lies on the west side of Highway 79 and consists primarily of slash pine plantations of various ages within a mosaic of wetland communities. The property also contains ditches which promote drainage of the surrounding area to facilitate silvicultural activities. This purchase will mitigate for wetland impacts associated with DOT's four-laning of Highway 79, could also free up credits previously assessed against the District's mitigation bank as well as provide some additional credits for future DOT mitigation needs. This purchase was funded with DOT Mitigation funds.

- A conservation easement was acquired on 1,573.66 acres in Liberty County along the Ochlockonee River. The easement is bordered on the east by the river and the Apalachicola National Forest and on the south by another District conservation easement. The property is a mosaic of mixed bottomland hardwood forest, pine plantations and mesic pine/hardwood upland habitat types and includes over one mile of frontage on the Ochlockonee River. Purchase of this easement will protect over one mile of frontage on the Ochlockonee River and serve as an offsite mitigation area for future DOT construction impacts along Interstate 10 and Highways 90, 20, 65, and 98. This purchase was funded solely with DOT Mitigation funds.
- A 150.77-acre conservation easement was donated by Coastal Plywood Company in August 2008. Approved by the Governing Board in 2007, this easement provides about three miles of riverbank frontage along the Ochlockonee River in Gadsden County. The property consists of mixed bottomland hardwood habitat interspersed with some areas of upland pine plantation.
- Approximately six miles of hiking trail that traverses the District's Lafayette Creek portion of the Choctawhatchee River Water Management Area (WMA) was designated as part of the Florida National Scenic Trail in October 2008. This dedication is part of a 20-mile addition to the 1,400-mile trail system and represents a vital connector segment between SR 81 and US 331 in southern Walton County. This designation was achieved through collaboration with federal, state and local agencies, non-profit organizations and private partners. All of the hiking trail planning and construction was completed by a dedicated team of volunteers from the Florida Trail Association.
- In February 2008, District contractors completed construction of the replacement bridge to Florida River Island in Liberty County, a popular portion of the Apalachicola River WMA. The replacement bridge provides public access to approximately 6,000 acres of floodplain lands with excellent hunting, fishing, and hiking opportunities. In September, District staff held a workshop to obtain public input concerning vehicle access on the island's roads and other related land management issues. Workshop participants were quite supportive of the enhanced public access and encouraged the District to enhance and stabilize the existing road network. One primary road was stabilized in 2008 and plans were developed to stabilize the remaining primary roads on the island.
- During FY 2007-2008, habitat restoration was completed on 1,588 acres of District lands. Approximately 601,000 longleaf pine, 21,000 slash pine, 2,100 hardwoods/cypress, and 994,600 wiregrass tubelings were planted across the District.
- District staff continue to work with equestrian users to evaluate and develop horse trails on the Econfinia Creek and Perdido River WMAs. Designs and preliminary improvements were undertaken to facilitate construction of the Perdido River Fillingim Landing canoe launch in 2009.
- Implementation of the District's mitigation plan also continued through restoration and management of the Sand Hill Lakes Mitigation Bank in Washington County. In February 2008, a hydrologic restoration project was completed through removal of a failed dam and construction of the Black Pond control structure, a sheet pile weir with water level control. Removal of sand pine plantations, shrub reduction, re-planting of wiregrass and longleaf pine, native and exotic species surveys, fire management, water level monitoring, and exotics removal all continue on the property. More information on the mitigation bank can be found at www.nfwmdwetlands.com.

- In 2007, the District began a planning process to address resource protection and recreation facility issues affecting Pitt, Sylvan, and Williford springs on Econfina Creek. Proposed changes include replacing the retaining wall at Pitt Spring with natural limestone and vegetation, enhancing the canoe dock with ladders, adding a tube launch dock with ladders, constructing decks to overlook spring pools, extending boardwalks over sensitive natural areas, building an elevated observation deck at Williford, installing a permanent restroom facility and more. This process continued in 2008 with the development of final plans and designs for Pitt and Sylvan Springs and coordination with the permitting and project review agencies.
- As described previously, implementation of ERP Phase I (stormwater) was initiated in October 2007, and work is proceeding toward implementation of ERP Phase II (wetland resource protection). Implementation of this program is expected to result in long-term benefits for water quality, flood protection, and natural systems.
- The District continues development of a Hydrologic Restoration Plan for Tates Hell State Forest. This project involves: (1) identifying and prioritizing areas for hydrologic restoration, (2) developing conceptual engineering designs for high priority restoration projects (to be implemented as funds become available), (3) developing recommendations for environmental monitoring and maintenance, and (4) clarifying agency roles and responsibilities. The Hydrologic Restoration Plan will be completed in 2009.
- The District started work on the Whiskey George Basin Hydrologic Restoration Project, which will restore historic drainage patterns, enhance wetland function, and improve the quality of surface water discharged from the Tate's Hell State Forest to East Bay and the Apalachicola Bay system. The project involves the removal of six miles of dirt logging roads and adjacent ditches, the installation of five low water crossings, a ditch plug, and several culvert improvements. The project is expected to be complete by August 2009.
- The District completed a resource investigation, published in December, which identified ground water discharge locations along Holmes Creek. The study was published as WRSR 2008-01, Holmes Creek Springs Inventory. An HTML version of the report will be available on the District's website.
- The District completed the *Assessment of Freshwater Inflows to North Bay from the Deer Point Watershed of the St. Andrew Bay System* in February 2008. The report assesses the current and long term fresh water inflows into the Deer Point Lake Reservoir and potential impacts of additional withdrawals from the reservoir on North Bay. It includes a biological characterization of North Bay, a watershed hydrologic model assessment of the Deer Point Lake watershed and a hydrodynamic model analysis of North Bay.
- The new *Emerging Waters: Springs of Northwest Florida* brochure was completed this past year. The brochure stresses the importance of freshwater springs for water quality, fish and wildlife habitat, and natural systems. The benefits of springs are described and illustrated, and methods of protecting springs are presented. *Emerging Waters: Springs of Northwest Florida* is available through the District's website and by request.
- The District continued to assist DOT through implementation of the Efficient Transportation Decision Making (ETDM) process. This process improves linkages between land use, transportation and environmental resource planning initiatives. The District's role includes evaluation of proposed projects with regard to potential water resource, floodplain, and wetland impacts and the development of related data and information.

Natural Systems Priorities for FY 2008-2009

- During the coming year, land acquisition emphasis is expected to be placed on inholdings and additions within the existing water management areas.

- The District will continue to implement wetland restoration and enhancement projects as mitigation for DOT activities in accordance with the ongoing development and updates of its in-lieu fee Regional Mitigation Plan.
- The District will continue to focus on restoration and management of the 2,155-acre Sand Hill Lakes Mitigation Bank in Washington County.
- The District will continue to make improvements for public access and recreation on its lands including construction of a canoe/kayak/small boat hand launch facility and picnic area at Fillingim Landing on the Perdido River WMA; restoration at Pitt Spring; construction of access improvements for over four miles of primary roads on Florida River Island in the Apalachicola River WMA; installation of two bridges in the Whirlpool Road area of the Escambia River WMA; and development of plans to install three bridges on the west side of Econfina Creek.
- The District will construct a new field office for the Western Region Land Management staff on a District-owned property in Milton.
- The District will continue restoration and management of its public lands, including prescribed burning for 7,500 to 10,000 acres, depending on weather conditions; planting of up to 726,000 longleaf pine seedlings on approximately 1,000 acres; timber harvest monitoring and management on over 1,300 acres; and, land preparation activities on any new acquisitions.
- Efforts will continue to focus on implementation of SWIM plans and related projects to protect and improve aquatic habitat, wetland, and riparian habitat quality, as well as watershed resource functions of contributing upland areas. In addition to project implementation, SWIM planning efforts will include updating and streamlining SWIM plans where watershed needs have been identified and where priorities need to be reassessed.
- The District will continue to work in cooperation with local governments to implement priority capital improvement projects through the Florida Forever Capital Improvement Grant Program. These include projects within the Apalachicola, St. Andrew/St. Joe, Pensacola, and Choctawhatchee watersheds.
- It is anticipated that the hydrologic restoration plan for Tates Hell State Forest will be completed during fiscal year 2008-2009. Implementation may be accomplished through the SWIM and DOT Mitigation programs.
- The District continues to work with Escambia County to accomplish dredging of the main channel of Bayou Chico. The project will be completed in cooperation with the U.S. Army Corp of Engineers.
- The District will continue to work with Gulf County to remove dredge spoil sand from the floodplain of the Apalachicola River on Site 39 southeast of Wewahitchka. The project will restore floodplain habitat and hydrology, which will enhance the riverine ecosystem.

District-Wide Activities

Major tasks have been compiled into the table below with description of recent activities and status during fiscal year 2007-2008 (October 1, 2007 through September 30, 2008). The tasks are subdivided into water management program areas. Project status is denoted by ‘Ongoing’ (O) and ‘Completed’ (C). The ‘Ongoing’ designation has been applied to on-going, day-to-day programs, such as regulatory activities, plan implementation, intergovernmental coordination, and multi-year projects which, combined, account for the majority of District activities. The ‘Completed’ designation is applied to discrete projects that have been completed. The Areas of Responsibility (AOR) are water supply (WS), flood protection and floodplain management (FP), water quality (WQ), and natural systems (NS).

Table 2.1 District-Wide Activities

TASK	RECENT ACTIVITY	STATUS	RELATED AOR			
			WS	FP	WQ	NS
Water Resource Planning and Monitoring Program			WS	FP	WQ	NS
Water Supply Assessment	The initial <i>Water Supply Assessment</i> was completed in 1998, and, in 2003, water supply projections were extended to 2025. Staff are continuing work on an updated assessment and set of projections. Completion is anticipated in 2009.	O	√			
Regional Water Supply Plan – Region II	The Governing Board approved the updated Regional Water Supply Plan (RWSP) in October 2006. A number of Water Resource Development Work Program (WRDWP) projects are being implemented, as well as water supply development assistance in support of the RWSP. Coordination with local governments to assist in related comprehensive plan requirements is ongoing.	O	√			
Regional Water Supply Plan – Region III	The Governing Board approved the RWSP in August 2008. A number of WRDWP projects are being implemented, as well as water supply development assistance in support of the RWSP. Coordination with local governments to assist in related comprehensive plan requirements is ongoing.	O	√			
Regional Water Supply Plan – Region V	The Governing Board approved the RWSP in January 2007. A number of WRDWP projects are being implemented, as well as water supply development assistance in support of the RWSP. Coordination with local governments to assist in related comprehensive plan requirements is ongoing.	O	√			
Floridan Aquifer Sustainability Modeling Project	Model development and calibration have been completed. Ongoing work is focused on model application.	O	√			√
Ground Water Quality Special Projects	The District continued springs inventory updates and the groundwater temporal variability network sampling. The District will install a data logger in Jackson Blue Spring and publish a study of ground water age and recharge rate of springs located in Merritt's Mill Pond, Jackson County.	O	√		√	√
Water Quality and Quantity Monitoring	This program continued according to schedules established in agreements with DEP and local governments for ongoing data collection and research efforts.	O	√		√	√
Surface Water Availability Assessment	The District completed a feasibility assessment and cost estimates for developing surface water sources in Okaloosa County.	C	√		√	√
Water Flows and Levels Monitoring	Monitoring programs continue with USGS, DEP, and local governments to collect stream flow and water level data on a limited number of streams and lakes, as well as Sand-and-Gravel Aquifer in Region II.	O	√	√	√	√
Surface Water Monitoring Program	The trend monitoring program continued with DEP in order to monitor 25 stations throughout the District, and programs continued through agreements with Tallahassee, Leon and Bay counties to measure continuous rainfall, water levels and stream flow. Additional project-specific data collection and analysis were undertaken. The District renewed involvement in Status Network, a statewide water quality program, which includes sampling 120 randomly chosen sites annually.	O	√	√	√	√
Update/Revise SWIM Priority List	The SWIM priority list was updated in 2006 and will be updated again in 2011.	C		√	√	√
SWIM Plan Development, Implementation, Assessment, and Revision	Implementation of SWIM plans continued. Work on an update to the St. Marks SWIM plan continues, as well as resource characterizations on the St. Marks River and Apalachee Bay.	O		√	√	√
Flood Hazard Map Modernization	This activity includes project scoping, DFIRM development, development of project proposals for FEMA funding, and development of interagency funding agreements with FEMA.	O		√	√	√
Acquisition, Restoration, and Public Works Program			WS	FP	WQ	NS
Land Acquisition and Management	In FY 07-08, 2,489.51 acres of land were protected through the Florida Forever and DOT mitigation programs. Management is in place for all 218,750.91 acres.	O	√	√	√	√
Abandoned Well Plugging	During FY 07-08, 1,377 abandoned wells were plugged.	O	√		√	

TASK	RECENT ACTIVITY	STATUS	RELATED AOR			
Floodplain Land Acquisition and Restoration	Nearly 173,000 acres along the Perdido, Escambia, Blackwater, Choctawhatchee, Holmes, Econfina, Chipola, Apalachicola and Ochlockonee rivers are managed for natural flood protection and floodplain benefits, and the restoration of natural habitat and the removal of any impediments to natural flows and flooding.	O		√	√	√
Restoration Projects	The District continued work to restore the natural flow and hydroperiod within Tates Hell Swamp. Restoration work also included efforts to restore floodplain and sloughs on the Apalachicola River and implementation of wetland mitigation projects for DOT.	O	√	√	√	√
Operation and Maintenance of Lands and Works Program			WS	FP	WQ	NS
Management of District-Owned Lands	The 218,751 acres of District-owned lands are managed to protect water resources including natural floodplain functions, groundwater recharge and water quality. This includes restoration and maintenance of upland habitat. The District planted approximately 601,000 longleaf pines, 21,000 slash pine, 2,100 hardwoods/cypress and 995,000 wiregrass plugs during FY 07-08.	O	√	√	√	√
Operation and Maintenance of Lake Jackson Stormwater Facility	Improvements and maintenance of the stormwater facility are ongoing. Activities this year included the following: trash removal, exotic species eradication, educational field trips, and filter maintenance and repairs.	O		√	√	√
Regulation Program			WS	FP	WQ	NS
Consumptive Uses of Water Regulatory Program (Chapter 40A-2, F.A.C.)	Administration and enforcement for consumptive use of water is an ongoing regulatory program that is meeting the objectives of Chapter 40A-2, F.A.C. During FY 2007-2008, 87 Individual Water Use Permits were issued.	O	√		√	√
Well Construction Regulatory Program (Chapter 40A-3, F.A.C.)	Rule administration and enforcement is a fully implemented regulatory activity. During FY 2007-2008, 7,448 well construction permits were processed.	O	√		√	
Regulation of Agricultural and Forestry Surface Water Management Projects (Chapter 40A-44, F.A.C.)	261 Agriculture and Forestry surface water permits/authorizations were issued during 2007-2008.	O	√	√	√	√
Management and Storage of Surface Waters (Chapter 40A-4, F.A.C.)	The District processed 18 MSSW permits during FY 2007-2008.	O	√	√	√	√
Environmental Resource Permitting (Chapter 62-346, F.A.C.)	Stormwater management aspects of ERP was implemented in October 2007. Implementation of wetland resource protection ERP is anticipated to begin in mid-2009.	O	√	√	√	√
Outreach Program			WS	FP	WQ	NS
WaterWays Education Program	Development and production of materials has been completed; distribution of materials is a continuing responsibility.	O	√	√	√	√
Participation on Interagency Hazard Mitigation Team, State Emergency Operations, and Annual State Hurricane Exercise	The District participates in a statewide program with EOC to prepare for and respond to hurricanes in northwest Florida. The District continued to monitor rivers and streams and provide information to the state, EOC, counties, National Weather Service, and the public. The District also works with Leon County on the real time Capital Area Flood Warning Network.	O	√	√		
Technical Assistance and Intergovernmental Coordination	The District performed two reviews, with multiple alternatives, under the ETDM program during FY 2007-2008. Additionally, District staff reviewed Northwest Florida Transportation Corridor Authority (NWFTCA) plans, local government comprehensive plan amendments, developments of regional impact (DRIs), sector plans, external permits, and clearinghouse issues. The District continued to maintain a library of FEMA and USGS flood prone area maps.	O	√	√	√	√

3 Minimum Flows and Levels Annual Priority List

Requirements for the establishment of minimum flows and levels (MFLs) are specified in section 373.042, F.S. Minimum flows and levels are defined as the limit at which further withdrawals of ground or surface water would be significantly harmful to the water resources or ecology of the area (s. 373.042(1)(a)-(b), F.S.). A priority list and schedule for the development of MFLs are submitted to DEP for review and approval each November. The final list is incorporated as this chapter within the Consolidated Annual Report.

In accordance with statutory requirements, the priority list and schedule is developed based on the importance of the waters to the state or region and the potential for significant harm to the water resources or ecology of the state or region. The list also includes first magnitude springs and second magnitude springs within state or federally-owned conservation lands. The schedule for establishment of spring minimum flows and levels is planned so as to be commensurate with the existing or potential threat to spring flow from consumptive uses. The Northwest Florida Water Management District Minimum Flows and Levels priority list may be found in [Table 3.1](#) below and at: <http://www.nfwmd.state.fl.us/rmd/mfl/mfl.htm>.

Table 3.1 Northwest Florida Water Management District MFL Priority List (2008)

#	Waterbody	WB Type	County	2007 List	2008 List	Date Est.	Peer Rev.	Reason for Schedule Change	Existence of or Potential for Significant Harm
1	Floridan Aquifer	A	Coastal Portions of Santa Rosa, Okaloosa, Walton	2010	2010		N		Potential migration of saline water due to significant drawdown of Floridan Aquifer in coastal portions of these counties.
2	Inland Sand and Gravel Aquifer	A	Santa Rosa, Okaloosa	2010	2010		N		Identified in Regional Water Supply Plan as likely future water supply. Monitoring and Hydrologic modeling is ongoing to consider potential for harm.
3	Deer Point Lake	E/L	Bay	2015	2015		N		Potential increase in withdrawals greater than currently projected that result in reduced discharge to North Bay.
4	Wakulla Spring	S	Wakulla	2008	2012		N	Need for additional model analysis and data to quantify uncertainty.	Scheduling of first order magnitude springs is a requirement of Chapter 373.042, F.S. Monitoring and technical analyses to determine hydrology and aquatic resource needs are ongoing.
5	Jackson Blue Spring	S	Jackson	2008	2012		N	Need for additional model analysis and data to quantify uncertainty.	Scheduling of first order magnitude springs is a requirement of Chapter 373.042, F.S. Monitoring and technical analyses to determine hydrology and aquatic resources needs are ongoing.
6	Yellow River	R	Santa Rosa, Okaloosa	2010	2010		N		Monitoring and Technical analyses to determine consumptive demands, hydrology and aquatic ecosystem needs are ongoing.
7	Morrison Spring	S	Walton		2015		N		Scheduling of first order magnitude springs is a requirement of Chapter 373.042, F.S. Monitoring and technical analyses to determine hydrology and aquatic resources needs are ongoing.

WB Type: A=Aquifer, Fl=Floridan, E=Estuary, L=Lake, R=River, S=Spring, W=Wetland; 2008 List=anticipated MFL establishment date proposed in October 2008; Peer Rev.=voluntary peer review of MFL; * MFL in rule making; ** MFL rule challenged.

4 Annual Five-Year Capital Improvements Plan

Introduction

The five-year capital improvements plan (CIP) includes projected revenues and expenditures for capital improvements from fiscal years 2008-2009 through 2012-2013. As directed by Section 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 Section 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.

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 Plan, Land Acquisition Plan, 5-year Water Resource Development Work Plan, Land Management Plan and DOT Mitigation Plan may also provide valuable insight to the District's long range capital improvements plan.

Table 4.1 NFWFMD Five Year Capital Improvements Plan, Fiscal Years 2009-2013

2.0 ACQUISITION, RESTORATION AND PUBLIC WORKS

2.1 Land Acquisition					
Revenues (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Water Management Lands Trust Fund	408,563	200,000	400,000	400,000	400,000
Florida Forever	4,562,500	5,750,000	2,375,000	2,375,000	2,375,000
District Land Acquisition Reserve	2,045,513	2,074,150	2,103,188	2,132,633	2,162,490
TOTAL	7,016,576	8,024,150	4,878,188	4,907,633	4,937,490
Expenditures (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Florida Forever - Land Acquisitions	4,062,500	5,750,000	2,375,000	2,375,000	2,375,000
Land Acquisition	2,045,513	2,074,150	2,103,188	2,132,633	2,162,490
BluePrint 2000	500,000	0	0	0	0
Water Management Lands Trust Fund	408,563	200,000	400,000	400,000	400,000
TOTAL	7,016,576	8,024,150	4,878,188	4,907,633	4,937,490
2.2 Water Source Development					
Revenues (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Florida Forever	500,000	1,000,000	1,000,000	1,000,000	1,000,000
TOTAL	500,000	1,000,000	1,000,000	1,000,000	1,000,000
Expenditures (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Florida Forever - Land Acquisitions	500,000	1,000,000	1,000,000	1,000,000	1,000,000
TOTAL	500,000	1,000,000	1,000,000	1,000,000	1,000,000

2.3 Surface Water Projects

Revenues (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
DOT Mitigation Funds	11,021,664	7,200,000	7,200,000	7,200,000	7,200,000
TOTAL	11,021,664	7,200,000	7,200,000	7,200,000	7,200,000

Expenditures (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
DOT Mitigation Funds	11,021,664	7,200,000	7,200,000	7,200,000	7,200,000
TOTAL	11,021,664	7,200,000	7,200,000	7,200,000	7,200,000

2.5 Facilities Construction and Major Renovations

Revenues (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Water Management Lands Trust Fund	450,000	0	50,000	0	0
TOTAL	450,000	0	50,000	0	0

Expenditures (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Land Management Field Office – Western Region	450,000	0	50,000	0	0
TOTAL	450,000	0	50,000	0	0

3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS**3.1 Land Management**

Revenues (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Water Management Lands Trust Fund	875,000	700,000	900,000	900,000	1,100,000
Florida Forever	0	0	0	0	0
TOTAL	875,000	700,000	900,000	900,000	1,100,000

Expenditures (\$)	Fiscal Year				
	2008-09	2009-10	2010-11	2011-12	2012-13
Public/Land Management Access Bridges	175,000	250,000	300,000	350,000	400,000
Canoe/Small Boat Launch	50,000	50,000	50,000	50,000	50,000
Spring Restoration	400,000	250,000	300,000	350,000	400,000
Public Recreation – Coop. with Local Govts.	100,000	100,000	100,000	100,000	100,000
Public Access Road Construction	100,000	0	100,000	0	100,000
Creek Bank and Solution Hole Stabilization	50,000	50,000	50,000	50,000	50,000
TOTAL	875,000	700,000	900,000	900,000	1,100,000

TOTAL CAPITAL EXPENDITURES (\$)	19,863,240	16,924,150	14,028,188	14,007,633	14,237,490
--	-------------------	-------------------	-------------------	-------------------	-------------------

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

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

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 that qualify as mitigation for DOT wetland impacts

Physical Location: Undetermined - Watersheds within the District

Square Footage/Physical Description: Land purchases 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: S. 373.4137, Florida Statutes provides that the Districts mitigate for DOT wetland impacts to the extent that funding is available from the Department.

Plan Linkages: Regional Mitigation Plan, District's five-year land management plan, SWIM plans.

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

Alternative(s): Upon agreement of all parties (District and DOT) specific mitigation projects may be deferred to the DOT.

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): None

Anticipated Additional Operating Costs/Continuing: Undetermined

PROGRAM: 2.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

ACTIVITY: 2.5 FACILITIES CONSTRUCTION AND MAJOR RENOVATIONS

Project Title: Land Management Field Office—Western Region

Type: Steel superstructure, siding and roof; with three office cubicles, enclosed materials storage/shop, and open covered storage

Physical Location: 5453 Davidson Rd., Milton, FL 32583

Square Footage/Physical Description: 1,200 sq. ft. Land Management Field Office; 1,200 sq. ft. of covered materials storage/shop; 2,400 sq. ft. of open covered equipment storage; plus site work, utilities, and fencing.

Expected Completion Date: September 30, 2009

Historical Background/Need for Project: The current Western Region Land Management Field Office is located in a rented residential house in west Pensacola (Escambia County). The landlord has notified the District that the house will be demolished in the near future for a development project. Land management field offices require somewhat unique building and storage components, most of which are not typically available on the rental market. The staff who work out of the Western Region Land Management Field Office are responsible for over 61,000 acres of District land in Escambia, Santa Rosa and Okaloosa counties and a more central location in the Milton (Santa Rosa County) area will result in efficiencies when deploying equipment and personnel to the various work locations. A site already owned by the District in Milton was selected for development of a permanent field office with the appropriate configuration for housing of staff, vehicles, equipment (dozer, tractors, boats, ATV's, trailers, fire support vehicles, etc.), and materials that are used to manage these properties. The District has contracted with the Florida Department of Management Services to implement the project management, design, and construction.

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): Rent a different location; build in an alternative location.

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): \$350,000

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other): \$50,000 expended in FY 07-08 for design, survey, soils, project management. \$100,000 for professional (architectural/engineering/DMS) services.

Anticipated Additional Operating Costs/Initial (includes salaries, benefits, equipment, furniture, expenses): Furniture – cost to be determined.

Anticipated Additional Operating Costs/Continuing: Undetermined – maintenance and utilities.

PROGRAM: 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

ACTIVITY: 3.1 LAND MANAGEMENT

Project Title: Public/Land Management Access Bridges

Type: Single Lane Steel Bailey Bridges (50-year life)

Physical Location: Whirlpool Road Public Access – Escambia River Water Management Area

Square Footage/Physical Description: Two proposed single-lane steel bridges utilizing refurbished Bailey bridge sections (12.5 x 45 feet) across two sloughs associated with the floodplain of the Escambia River, subject to engineering design.

Expected Completion Date: September 30, 2009

Historical Background/Need for Project: To provide public/land management access to approximately 750 acres of District property in the Escambia River Water Management Area.

Plan Linkages: District's Florida Forever Work Plan

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

Alternative(s): The current bridges were used for logging purposes, have deteriorated and are unsafe. None of the bridges have a DOT load rating. In addition, road fill was placed across these sloughs adversely impacting hydrology. The District intends to restore natural hydrologic function to the Escambia River floodplain by removing logging road fill and installing two bridges, subject to site conditions. NFWFMD could delay the project, which would prevent vehicular access by the public for recreational use of the property, prevent land management/maintenance access to District property for habitat restoration, erosion control, prescribed burning, etc. activities. Lack of access prevents law enforcement/emergency vehicles from the property. Division of Forestry (DOF) or District equipment cannot access the property to suppress wildfire. FWC cannot adequately enforce fish and wildlife rules and regulations. Lack of adequate access adversely impacts public safety. Bridge engineering designs have been completed and bridge spans are undergoing strengthening before installation. Project scheduled for completion by September 30, 2009.

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): Estimated at \$175,000 for two bridges.

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other.): Actual engineering design services are \$37,810.

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

Anticipated Additional Operating Costs/Continuing: \$1,500 annually

PROGRAM: 3.0 ACQUISITION, RESTORATION, AND PUBLIC WORKS

ACTIVITY: 3.1 FACILITIES CONSTRUCTION AND MAJOR RENOVATIONS

Project Title: Econfina Springs Complex – Restoration and Protection

Type: Multiple Spring Restoration and Protection Project

Physical Location: Econfina Creek Water Management Area

Square Footage/Physical Description: Proposed restoration and protection of Pitt, Sylvan and Williford springs. The District intends to work with DEP’s Spring Restoration Committee (SRC) to develop a comprehensive spring restoration/protection plan for the Econfina Creek Springs Complex located at the junction of Econfina Creek and Hwy. 20. Project will consist of a three step process, i.e. drafting and evaluating a “conceptual design,” review/approval by the Spring Restoration Committee and by the Public and Board approval of a final design and restoration and protection (construction) measures. Final design process is underway for Phase I – Pitt/Sylvan Springs. Restricted access measures for canoeists may be proposed for Phase II - Williford Spring (2nd Magnitude), subject to Board of Trustees (BOT) sovereign land exception. Design concepts and design sketches are complete as of March, 2007. Site surveying is also under way. Review/approval of concepts/sketches by the SRC/Public/Governing Board was completed in late 2007. Phase I - 50 % design complete. Final design and permit application process is underway. Bidding scheduled for summer of 2009 with construction slated for 10/01/09, subject to permits.

Expected Completion Date: September 30, 2010

Historical Background/Need for Project: Project will prevent erosion/sedimentation/water quality impacts to one significant 2nd Magnitude spring and two 3rd Magnitude springs.

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 the water quality of Econfina Creek (a Class I Waterbody).

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): \$400,000, subject to final architecture/engineering design/permitting and bidding.

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other.): Initially estimated at \$142,000 for final architectural/engineering design/construction services.

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

Anticipated Additional Operating Costs/Continuing: \$2,000+ annually

PROGRAM: 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

ACTIVITY: 3.1 LAND MANAGEMENT

Project Title: Fillingim Landing Canoe/Small Boat Launch

Type: Canoe/Small Boat Launch Structure

Physical Location: Fillingim Landing – Perdido River Water Management Area

Square Footage/Physical Description: One proposed wooden or concrete canoe/small boat launch, subject to engineering design.

Expected Completion Date: September 30, 2009

Historical Background/Need for Project: Until acquired by the District in 2006, the Perdido River had been historically closed to public access for at least two decades. The project will provide vital public/recreational access to the northern Perdido River 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 would prevent the public from accessing the river for recreational activities.

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): Estimated at \$50,000.

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other.): Estimated at \$20,000 for engineering design services.

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

Anticipated Additional Operating Costs/Continuing: \$1,000+ annually

PROGRAM: 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

ACTIVITY: 3.1 LAND MANAGEMENT

Project Title: Public/Land Management Access Road Construction (Materials Only)

Type: Single Lane Crushed Limerock Public Access Road (Approx. 25-foot wide)

Physical Location: Approximately 5 miles west of Vernon, FL. – Holmes Creek Water Management Area

Square Footage/Physical Description: One proposed single-lane crushed limerock public access road.

Expected Completion Date: September 30, 2009.

Historical Background/Need for Project: To provide critical public/land management access to approximately 360+ acres of District property near Vernon, FL. along the Holmes Creek Water Management Area.

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 hinder vehicular access by the public and contractors to conduct timber harvesting, habitat restoration, erosion control, prescribed burning, etc. activities, prevent law enforcement/emergency vehicles from accessing the property to suppress wildfire and enforce FWC rules and regulations.

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): One single lane public access road estimated at \$100,000 (limerock materials only).

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: \$1,000 annually

PROGRAM: 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

ACTIVITY: 3.1 LAND MANAGEMENT

Project Title: Devil's Hole, Sea Shell and Bluff Campsite Areas

Type: Erosion Control Stabilization/Structures

Physical Location: Devil's Hole, Sea Shell and Bluff Campsite Areas –Econfina Creek Water Management Area

Square Footage/Physical Description: Erosion Control Stabilization/Structures, etc., subject to engineering design.

Expected Completion Date: September 30, 2009

Historical Background/Need for Project: Devil's Hole, Sea Shell and Bluff Campsite areas are experiencing erosion due to adverse impacts caused by unregulated public use on sensitive slope areas and adjacent to a within bank spring. The project will stabilize highly erodible slopes and creek banks while providing for public/recreational access to these three campsite areas 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 one swallet hole (Devil's Hole) and further degrade the creek bank at Sea Shell and Bluff campsite areas 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 \$50,000.

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other.): Estimated at \$20,000 for engineering design services.

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

Anticipated Additional Operating Costs/Continuing: \$500 + annually

PROGRAM: 3.0 OPERATION AND MAINTENANCE OF LANDS AND WORKS

ACTIVITY: 3.1 LAND MANAGEMENT

Project Title: Public Recreation Site Development/Improvement – River Landing and Dead River Landing Boat Launch and Campsite Areas (Cooperative Agreement - Walton County)

Type: Public Recreation Site Development/Improvement

Physical Location: River Landing and Dead River Landing Boat Launch and Campsite Areas – Walton County, Choctawhatchee River Water Management Area

Square Footage/Physical Description: Public Recreation Site Development/Improvement, subject to engineering design.

Expected Completion Date: River Landing, September 30, 2009/Dead River Landing, September 30, 2010.

Historical Background/Need for Project: Both boat landings/campsites are experiencing heavy use and abuse by the recreational public. In addition, both landings need additional site development and improvements to regulate parking and camping. Boat launch improvements, parking lot stabilization, erosion control and weather pavilions/kiosks may also be constructed, subject to engineering design. Bank fishing piers and/or boardwalks may also be considered.

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 these popular public access and recreation sites.

Basic Construction Costs (includes permits, inspections, communications requirements, utilities outside building, site development, other): Estimated at \$50,000 each (materials only – Walton County. will furnish labor and equipment, subject to agreement.

Other Project Costs (includes land, survey, existing facility acquisition, professional services, other.): Estimated at \$50,000 for engineering design services.

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

Anticipated Additional Operating Costs/Continuing: \$1,000 + annually

Chapter IV 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.

5 Water Supply

5.1 Five-Year Water Resource Development Work Program: FY 2007-08 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 Section 373.536(6)(a)4, Florida Statutes (F.S.), to prepare a Five-Year Water Resource Development Work Program to describe strategies for implementing the water resource development components of each approved regional water supply plan (RWSP) developed or revised under Section 373.0361, 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 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."

The Northwest Florida Water Management District completed an update to the Region II RWSP on October 26, 2006, a new plan for Region V on January 25, 2007, and a new plan for Region III on August 28, 2008. The water resource development components incorporated within these plans include projects that support sustainable water supply development. This Fiscal Year (FY) 2007-2008 update to the District's Five Year Water Resource Development Work Program document describes the current strategies for implementing the water resource development components of each approved plan. Following DEP review and incorporation of any subsequent revisions, if applicable, the final Five Year Water Resource Development Work Program will be incorporated into the March 1 Consolidated Annual Report in accordance with Sections 373.536 and 373.036, F.S.

Regional Water Supply Planning in Northwest Florida

The Northwest Florida Water Management District (NFWFMD or District) established seven water supply planning regions in 1998 ([Figure 5.1](#)). The initial District Water Supply Assessment (WSA) (NFWFMD 1998) evaluated whether supplies would be sufficient to meet demands projected out 20 years to 2020. It was determined at that time that only Region II (Santa Rosa, Okaloosa, and Walton counties) required a RWSP. The primary resource concern in Region II is in the coastal area where long-term pumping from Floridan Aquifer wells caused a pronounced drawdown in the coastal Floridan Aquifer that could result in significant saltwater intrusion and damage to public water supply wells. In 2003, the demand projections were updated through 2025. The District-wide WSA is in the process of being updated to include water demand projections through 2030. It is expected that the updated assessment will be completed in early 2009.

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 determined that the need for additional source redundancy and sustainability warranted development of a RWSP for Region III (Bay County).

As required by Section 373.0361(2)(a)1, F.S., the level of certainty planning goal for identifying water supply needs of existing and future reasonable-beneficial uses in the RWSPs was based on meeting such needs for a 1-in-10 year drought event. Water demand can be expected to increase during drought conditions for certain water uses, such as agricultural irrigation and outdoor water use. A more thorough discussion of the quantification of these demands may be found in the District’s 2003 water demand projections update (NFWFMD 2003). An overall objective of the District is to drought proof its communities through development of alternative water supplies and to develop water supply options such as utility interconnects where available.

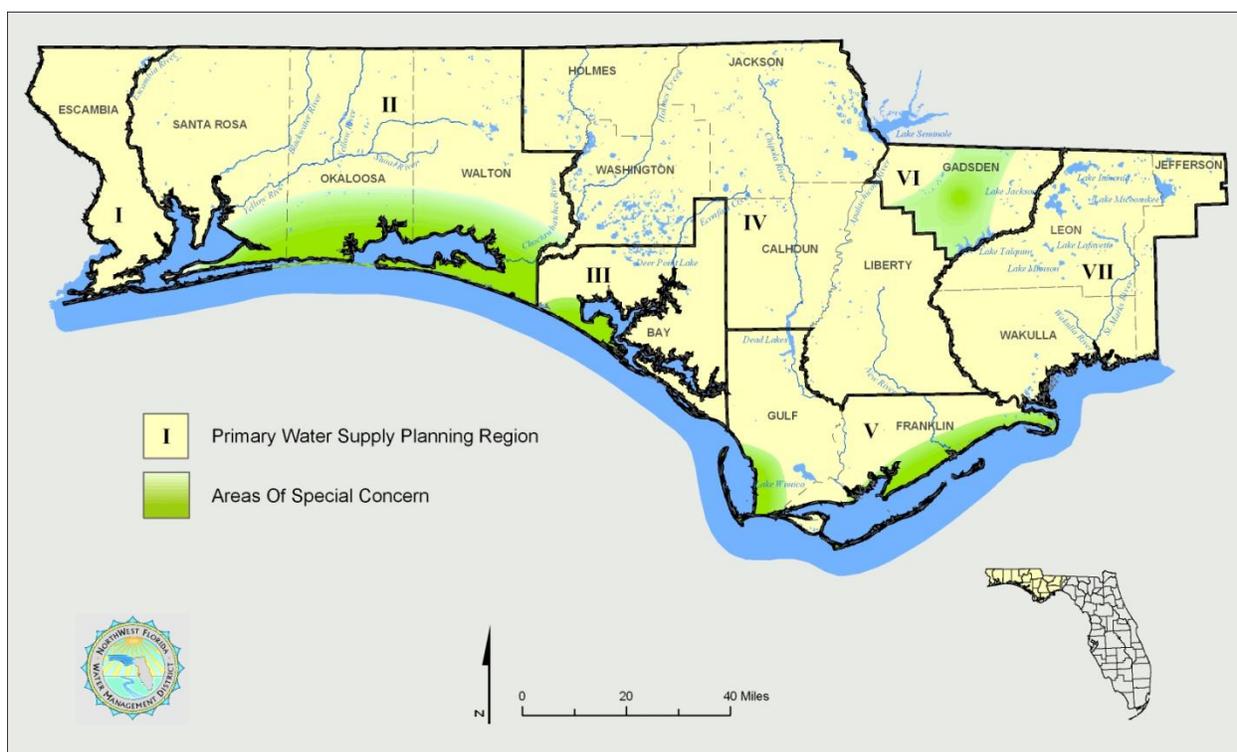


Figure 5.1 Water Supply Planning Regions

As described herein, implementation of the strategies detailed in the Water Resource Development Work Program (WRDWP) has resulted in identification of additional water that will be available for reasonable-beneficial uses through the planning period. Sources of water include the Sand-and-Gravel Aquifer, the inland Floridan Aquifer, increased reuse and conservation, and surface water sources. It should also be noted that all future water demands, including considering 1-in-10 year drought and seasonal water demand fluctuations, are addressed through the consumptive use permitting program.

Region II

The primary water supply issue in Region II is attributable to demands for potable water by public supply water utilities withdrawing water from the Floridan Aquifer along the coastal fringe of Santa Rosa, Okaloosa, and Walton counties. Long-term pumping has caused formation of a substantial cone of depression in the coastal Floridan Aquifer. Public supply water use in the region is currently projected to increase 57 percent from 44.91 million gallons per day (MGD) in 2005, to 70.60 MGD in 2030. Roughly two-thirds of this increased demand is projected to occur in the region’s coastal areas. Public supply is

the use category of paramount concern as it represents nearly three-fourths of the total projected demand for 2030. Water supply planning and resource management activities have focused on this issue during the past two decades, and the District has developed a close working relationship with local governments and utilities in the region to monitor water resources and develop solutions to meet future demands.

The first regional water supply plan developed in northwest Florida under section 373.0361, F.S., was approved for Santa Rosa, Okaloosa and Walton counties in February 2001 (NFWFMD 2001). The RWSP was developed to address the regional water supply planning requirements over a 20-year planning horizon, extending through the year 2020. It described the region's water supply needs, identified existing and alternative water sources, and analyzed the ability of these sources to meet future demands. The RWSP also discussed alternatives to address unmet demands and to sustain the water resources and related natural systems.

An update to the Region II RWSP was approved by the Governing Board in October 2006 (NFWFMD 2006). The plan incorporates updated and revised water resource development and water supply development components, specific alternative water supply development projects, and other elements as described in the statute.

Region III

Bay County is the latest region to be addressed with a RWSP. The coastal area in the vicinity of Panama City Beach is an Area of Special Concern due to historic salt water intrusion in the upper portion of the Floridan Aquifer. While coastal ground water withdrawals have largely been replaced by surface water from Deer Point Lake Reservoir, there remain concerns about the long-term sustainability of water supply resources. Public supply water use in Region III is currently projected to nearly double from 28.92 MGD in 2005 to 56.94 MGD in 2030. In this region, public supply represents approximately 56 percent of the total 2030 projected demand.

In February 2008, the Governing Board directed staff to develop a RWSP for Region III that would diversify long-term public supply, drought-proof the region, and minimize vulnerability of the Deer Point Lake Reservoir to hurricane storm surge. The Governing Board approved the Region III RWSP in August 2008 (NFWFMD 2008b).

Region V

Within Region V, the primary concern identified is saltwater intrusion into the upper Floridan Aquifer within the coastal Area of Special Concern. This has implications for the long-term sustainability of coastal ground water supplies within both Franklin and Gulf counties. Public supply water use in the region is currently projected to increase from 3.85 MGD in 2005, to 6.31 MGD in 2030. Public supply represents nearly 65 percent of the total projected demand for 2030. To meet projected demands associated with permanent and seasonal population growth, focus has been placed on identification of a sustainable inland ground water source within Franklin County and development of a surface water source for Port St. Joe and the surrounding area of Gulf County.

The Region V RWSP was developed concurrently with the Region II RWSP update and was approved by the Governing Board in January 2007 (NFWFMD 2007).

Work Program Implementation

Region II

To date, model development and calibration have been completed for both the Floridan Aquifer Sustainability Model and the Inland Sand and Gravel Aquifer Model. Additionally, a major analysis and feasibility assessment was completed for surface water sources in Okaloosa County. Implementation of other strategies, including Water Reuse Coordination, Water Conservation, and Hydrologic Data Collection and Analysis, are ongoing.

The current Region II WRDWP, as incorporated within the 2006 RWSP update, includes nine projects that build upon the accomplishments of the original RWSP:

1. Floridan Aquifer Sustainability Model Applications and Support;
2. Inland Sand-and-Gravel Aquifer Sustainability Model;
3. Development of Feasible Surface Water Sources;
4. Aquifer Storage and Recovery Feasibility;
5. Water Reuse Coordination;
6. Water Conservation Coordination;
7. Regional Water Supply Planning Strategies;
8. Hydrologic Data Collection and Analysis; and
9. Abandoned Well Plugging.

Region III

Three water resource development (WRD) projects support development of alternative water supplies for Bay County:

1. Hydrologic and Water Quality Data Collection, Monitoring, and Analysis;
2. Water Reuse and Conservation Assistance; and
3. Regional Water Supply Coordination and Technical Assistance.

Region V

The WRD component of the Region V RWSP consists of four projects that support development of sustainable alternative water supplies for Franklin and Gulf counties:

1. Hydrologic and Water Quality Data Collection, Monitoring, and Analysis;
2. Regional Water Supply Coordination, Source Protection, and Engineering and Technical Assistance;
3. Water Reuse and Conservation Assistance; and
4. Regional Water Supply Plan Implementation.

Project descriptions and anticipated funding requirements are provided by region below.

Funding for Water Resource Development

Since the state constitution limits the NFWMD to only 1/20th of the *ad valorem* taxing authority afforded the other four districts, legislative mandates for water supply planning and WRD have required the NFWMD to use other sources of revenue and to seek grant funds for addressing water supply issues. To date, the District has identified or secured funding for WRD and supply development from numerous sources, including the following:

- Water Management Lands Trust Fund;
- Florida Forever (limited water reuse construction only);
- District General Fund;
- Legislative special appropriations;
- Federal grants;
- Local government and water supply utility cost-sharing; and
- Water Protection and Sustainability Program Trust Fund.

The Water Protection and Sustainability Program Trust Fund (WPSPTF) was established by the 2005 Florida Legislature to provide a dedicated source of revenue for alternative water supply (AWS) development and WRD projects. When fully funded, the WPSPTF allows the District to provide cost-share assistance for construction of AWS development projects that may have otherwise been delayed or placed in competition with other projects for limited funds. Additionally, priority WRD and springs protection activities may be funded given sufficient annual appropriations. Projects funded under the WPSPTF are included in the March 1 Consolidated Annual Report as required by section 373.036(7), F.S. For fiscal year (FY) 2008-2009, the appropriation declined precipitously from prior years.

Additional WRD activities and support functions will continue to be funded with the Water Management Lands Trust Fund (WMLTF), grant funds, and other sources as available. The District has also set aside reserves that may be necessary to fund WRD efforts and water supply assistance, including possible funding for other regions in the future. District expenditures for acquisition and protection of important recharge lands should also be recognized.

The District assists with priority WRD projects in other regions when those projects help to prevent or address emerging water supply and water resource problems. Current projects include public access reuse projects for the cities of Chipley and Tallahassee and for Wakulla County. Also, the District expects to assist the Emerald Coast Utilities Authority (ECUA) (Region I) in developing an updated model of the Sand-and-Gravel Aquifer in Escambia County to support water supply development and protection.

Funding budgeted for WRD is listed within the project descriptions below and in summary tables for regions II, III and V ([Table 5.10](#), [Table 5.14](#), and [Table 5.19](#), respectively). The total proposed FY 2008-2009 WRDWP budget is \$787,000. This amount will adequately fund the planned WRD programs for regions II, III and V for the year. Additional budgeted funds have been reserved to provide financial assistance for WRD or water supply development projects in other regions and for future projects.

Water Supply Development Project Assistance

While this report is focused on the WRD component of the approved regional water supply plans, a brief description of the District's technical and financial assistance for water supply development helps illustrate how the combined components of the RWSP work together to ensure sustainable long-term water supplies. A primary objective of WRD is to support and facilitate future alternative water supply development. The District is, by statutory definition, primarily responsible for WRD projects, while

water supply development is primarily the responsibility of local governments, water supply authorities, and utilities. However, the District also provides technical and financial assistance to local governments for water supply development. A basic distinction that can be drawn between the two levels of projects is that WRD projects are typically regional and broad in scope, while water supply development projects are more localized and deal with treatment, storage, and delivery to end users.

Significant AWS development projects constructed to date in Region II have included development of inland water sources for coastal utilities in Santa Rosa (inland Sand and Gravel Aquifer project), Okaloosa (inland Floridan Aquifer wells and transmission facilities), and Walton (Rock Hill inland wellfield development and transmission facilities) counties. Construction of reuse facilities is also helping reduce the use of potable-quality water for landscape irrigation. Funding assistance for the expansion of the Rock Hill wellfield was provided by the WPSPTF. In Region V, development of an alternative surface water source in Port St. Joe has been funded in part through the WPSPTF. Current projects funded through the WPSPTF are listed in [Table 5.20](#).

All of these efforts complement dedicated regulatory efforts to ensure the long-term sustainability of water resources. Within the coastal Water Resource Caution Area (WRCA) in particular, stringent conservation and reporting requirements are applied, and new allocations of potable Floridan Aquifer water for non-potable uses are prohibited.

Water Resource Development Projects – Region II: Santa Rosa, Okaloosa, and Walton Counties

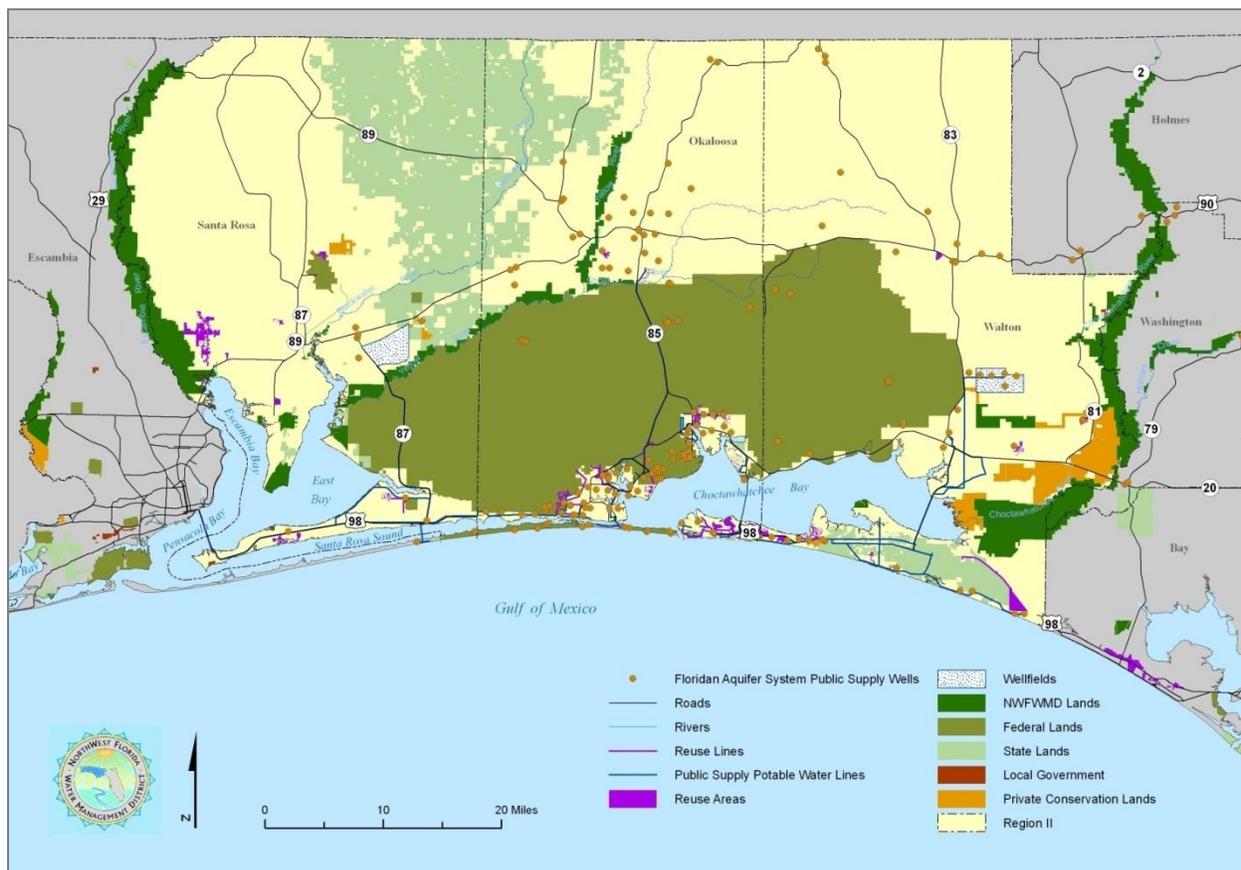


Figure 5.2 Water Supply Planning Region II

Strategy 1.0 Floridan Aquifer Sustainability Model Applications and Support

The solute transport model required for analyzing saltwater intrusion into the Region II Floridan Aquifer was developed with two distinct domains, western and eastern, to more accurately portray hydrogeologic characteristics and to make the massive, complex data sets manageable.

The model for the western domain is applicable to the major coastal utilities in Santa Rosa and western Okaloosa counties. These include the Holley-Navarre Water System (WS), Midway WS, Santa Rosa County (Navarre Beach), Okaloosa County West WS, Hurlburt Field, the City of Mary Esther, the City of Fort Walton Beach, Okaloosa County Garnier WS, and Eglin AFB Main and Housing WS. Results from the western sub-region model are summarized in the report “Saltwater Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western Domain Model Final Report” (HydroGeoLogic, Inc. 2005). The report has been distributed to interested utilities and is available from the District or via the District website, www.nfwfmd.state.fl.us/pubs/hgl_western_domain/hgl_western_domain.html.

The eastern domain sub-region model is applicable to major coastal utilities in Walton and eastern Okaloosa counties. These include Destin Water Users, South Walton Utility Company, the City of Freeport, and Regional Utilities of Walton County. Results are summarized in the report “Saltwater

Intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Eastern Domain Model Final Report” (HydroGeoLogic, Inc. 2007). The report is available at www.nfwmd.state.fl.us/pubs/hgl_eastern_domain/hgl_eastern_domain.html.

Model results indicate that saltwater intrusion into potable portions of the Floridan Aquifer is occurring at a very slow and manageable rate. 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 from saline waters of the lower Floridan Aquifer where the Bucatunna Clay confining unit is not present (easternmost Choctawhatchee Bay area) to the upper Floridan Aquifer, and downward vertical leakage through the intermediate system.

These models may be applied in the future to analyze sustainable aquifer levels, water supply alternatives, cumulative impacts, uncertainty, consumptive use permit applications and further supply planning strategies. Project funding will be provided by the WMLTF. Current funding expectations are listed below.

Table 5.1 Floridan Aquifer Sustainability Model Applications and Support

Implementing Agency:	NFWFMD
Proposed FY Expense (FY 08-09):	\$232,000
Estimated 5-Year Cost (FY 08-13):	\$342,000
Potential Funding Sources:	WMLTF
Quantity of Water Made Available:	30 MGD
Project Status:	Ongoing

Based on evaluation of the data and models cited above, the estimated sustainable amount of water withdrawal from the coastal Floridan Aquifer identified is approximately 30 MGD. Future work accomplished through this project will be directed to model application through additional resource assessments, model uncertainty analysis, consumptive use permit application evaluation, withdrawal scenario development, and investigating alternative approaches to establishment of minimum aquifer levels or water reservations.

Strategy 2.0 Inland Sand-and-Gravel Aquifer Sustainability Model

Due to its high recharge rate, the Inland Sand-and-Gravel Aquifer in Santa Rosa County is capable of providing regionally-significant quantities of water. Through this project, a ground water flow model was developed to assess and identify the volume of water available from the aquifer. The study area for this effort is that portion of Santa Rosa and Okaloosa counties lying between the Blackwater and Yellow Rivers. In previous years, significant 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. An aquifer model was then developed and calibrated. It is currently being used to determine the potential yield from this aquifer as an alternative source of supply.

Since the pipeline from the inland Sand-and-Gravel Aquifer wellfield to the coastal area was completed late in 2003, withdrawals from the wellfield have increased to nearly four MGD. This water is being conveyed south to alleviate pumping demand from the Floridan Aquifer along the coast. Based on this work and continuing development of the inland wellfield, it is anticipated that Santa Rosa County utilities will continue to increase withdrawals from the Sand-and-Gravel Aquifer, thereby limiting coastal Floridan Aquifer withdrawals.

Table 5.2 Inland Sand-and-Gravel Aquifer Sustainability Model

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 43,000
Estimated 5-Year Cost (FY 08-13):	\$103,000
Potential Funding Sources:	WMLTF, Utilities
Quantity of Water Made Available:	18 MGD
Project Status:	Ongoing

Project funding for District activities has been provided by the WMLTF. Additionally, local utility contributions and approximately \$3 million in federal grant funding have been applied to development of the inland wellfield.

Strategy 3.0 Development of Feasible Surface Water Sources

Surface water has been identified as a potential source of AWS to meet future demands beyond 2020, particularly within Okaloosa County. Initial efforts conducted under this water resource development project included collection of hydrologic and water quality data needed to analyze the viability of potential surface water sources. In 2006, the District's 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 report lays the groundwork for several potential AWS development projects. Alternatives considered technically and economically feasible include direct river withdrawal, potentially with offline tributary surface impoundments, and riverbank filtration. In the process of the analysis, the District also conducted an evaluation of the county's Yellow River Reservoir proposal. The resulting report indicated that this proposal is not economically feasible, and its implementation would result in significant environmental impacts and mitigation requirements.

It is anticipated that District and county staff will continue to investigate direct withdrawal and riverbank filtration alternative surface water supply sources, as presented in the report. Technical assistance to Okaloosa County will continue, such as detailed field assessments of environmental and technical characteristics within potential project areas and more detailed evaluation of potential surface water project sites. Associated with these activities, the District may evaluate needs and opportunities for watershed resource protection, including land acquisition and restoration.

Table 5.3 Development of Feasible Surface Water Resources

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$107,000
Estimated 5-Year Cost (FY 08-13):	\$507,000
Potential Funding Sources:	WMLTF, WPSPTF, Local Governments, Utilities
Quantity of Water Made Available:	25 MGD
Project Status:	Ongoing

The District estimates FY 2008-2009 expenses at \$107,000 with funding provided through the WMLTF. Implementation of surface water AWS development projects may be funded through the WPSPTF, local governments, and utilities.

Strategy 4.0 Aquifer Storage and Recovery (ASR) Feasibility

Large-scale District-funded aquifer storage and recovery (ASR) operations have not been implemented due to economic feasibility, water quality, and other technical considerations. A primary water quality concern is possible leaching of unsafe levels of arsenic into waters pumped into the Floridan Aquifer for later use. There is some potential, however, for this option to be explored further by utilities within the region. The District’s interests and efforts in this regard are aimed at working cooperatively with interested parties wherever viable ASR opportunities exist and would possibly include technical, financial, and educational assistance. Associated activities may also be coordinated closely with ongoing aquifer sustainability efforts and surface water source alternatives analyses. Aquifer storage, when available or where feasible, could be used to store large quantities of water at low cost more effectively than above ground storage facilities. Possible funding sources for ASR testing and development as a water resource development project include the WPSPTF, WMLTF, federal funds, and coastal public utilities interested in pursuing this alternative.

The District will coordinate with DEP regarding any proposed ASR permitting activities as they may relate to Region II or elsewhere in the District. Destin Water Users, Inc. has recently been permitted for ASR for storage and recovery of reclaimed water. In future years, in coordination with evaluations of surface water supply alternatives, the District may conduct preliminary ground water model analyses of the feasibility of ASR within Region II.

Table 5.4 Aquifer Storage and Recovery Feasibility

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 5,000
Estimated 5-Year Cost (FY 08-13):	\$ 25,000
Potential Funding Sources:	NWFWMD, Utilities, Local Governments
Quantity of Water Made Available:	TBD
Project Status:	Ongoing

Strategy 5.0 Water Reuse Coordination

As of 2006, an estimated 9.4 MGD of reclaimed water was used for public access reuse in Region II (DEP 2008). This includes irrigation of an estimated 966 residences, 20 golf courses, five parks, one school and one cemetery. The total area irrigated for public access reuse is estimated at over 3,559 acres (DEP 2008).

Reuse projects under construction in the region include expansion of the Okaloosa County Bob Sikes Water Reclamation Facility, which will provide an estimated 1 MGD of reuse water for public access irrigation, and the city of Freeport’s Wastewater Reuse Program, which will provide an estimated 0.4 MGD of public access reuse water. The city of Fort Walton Beach is developing a reuse water system in cooperation with Hurlburt Field. This project would initially provide approximately 30,000 gallons per day for irrigation of a cemetery (now irrigated with Floridan Aquifer water), as well as water for various uses on Hurlburt Field. The system will likely be expanded to area schools and additional uses within an industrial park. Ultimately, the project is expected to provide up to 1.0 MGD of reclaimed wastewater for reuse, treated to advanced wastewater, public access standards. This project will also benefit the Gap Creek, Cinco Bayou basin (Choctawhatchee Bay), which now receives the wastewater discharge.

Also noteworthy is an ongoing water reuse initiative of the Niceville, Valparaiso, Okaloosa County Regional Sewer Board (NVOC). The NVOC owns and operates a 3.5 MGD wastewater treatment plant that is located on State Road 85 in Niceville. The NVOC recently completed improvements that tripled

the reclaimed water capacity from 1 to 3 MGD. The improvements also included construction of a 19 million gallon holding basin on Eglin AFB, as well as a new high volume pumping station. The reclaimed water system supplies water to the Rocky Bayou Golf Course, Heritage Gardens Cemetery, the Rocky Bayou Christian School, and the Swift Creek residential subdivision. Plans include supplying reclaimed water to two new residential apartment complexes.

South Walton Utility Company may construct a new reuse system to supply water for two subdivisions and a condominium in southern Walton County, reducing use of Floridan Aquifer water for nonpotable uses in the WRCA. Also noteworthy, Destin Water Users, Inc. is developing ASR for storage and recovery of reclaimed water.

District staff continue work with utilities and local governments to identify additional potential new projects or project additions that would be eligible for funding through the Water Protection and Sustainability Program. Funding assistance is also made available on a competitive basis through the Florida Forever Capital Improvement grant program for construction of eligible reuse facilities. These efforts complement incentives and requirements provided through the District's Regulatory program, particularly within the WRCA.

District staff also continue to emphasize reuse and conservation in both resource regulation and in reviewing proposed comprehensive plan amendments and developments of regional impact (DRIs) District-wide. In response to regulatory and cooperative planning efforts, significant investments in reuse have been made in coastal areas of the region, particularly irrigation of golf courses.

Table 5.5 Water Reuse Coordination

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 21,000
Estimated 5-Year Cost (FY 08-13):	\$ 81,000
Potential Funding Sources:	WMLTF, Local Governments, Utilities
Quantity of Water Made Available:	5 MGD
Project Status:	Ongoing

The estimated cost for coordination of this effort, including working cooperatively with local governments and utilities to plan and implement new projects, is \$21,000 in FY 2008-2009. Additional construction funding assistance has been made available through the WPSPTF ([Table 5.20](#)) and may also be provided on a competitive basis through the Florida Forever Capital Improvement grant program. Coordination funding is provided through the WMLTF.

Strategy 6.0 Water Conservation Coordination

A significant effort at water conservation has been taking place in Region II for some time, mostly due to regulatory requirements and incentives established within the coastal WRCA. As a result, additional potential for conservation to offset current potable water use is relatively low (estimated previously at 2.5 MGD) (PBS&J 2000a). Water conservation remains a high priority within Region II, both to sustain and build upon gains made in water efficiency and to ensure that future growth is established in such a way as to maximize long-term water use efficiency and resource sustainability.

District staff therefore continue to emphasize conservation education and awareness. In 2004, a concerted effort began to distribute water conservation brochures to Region II utilities, with 23,520 brochures distributed over the last three years. These numbers do not reflect continued distribution of *WaterWise Florida Landscapes*, a four-color, 64-page statewide publication distributed to county extension offices,

utilities, and the public District-wide. It should be noted that other District-wide support activities are ongoing through the Water Resource Education program. For example, the District participates in a number of public events where water conservation and other water resource information is distributed.

During FY 2004-2005, 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 2008, 23 hotels are participating in the program, including 9 in Region II. Newsletters are regularly distributed to recognize participants and encourage new participation. Participating hotels are providing positive feedback on the program.

In cooperation with other water management districts statewide, the District participated in the statewide study of the effects of water rate pricing structures on public supply water demand (Whitcomb 2005). To act on the findings of this study, the NFWFMD coordinates distribution of the associated water rates model in cooperation with the author. Since FY 2006-2007, requests for the model have been sent on to Dr. Whitcomb for 28 utilities.

As with water reuse, District staff emphasize water conservation measures in both resource regulation and in reviewing proposed comprehensive plan amendments and DRIs. In response to consistent emphasis by the District and other state and regional agencies, most large comprehensive plan amendments and DRIs, particularly within Region II, incorporate broad measures to conserve water. These typically include requirements for drought-tolerant vegetation in landscaping and installation of high efficiency, low volume plumbing fixtures. District staff also encourage local governments to require connection to reclaimed water systems for uses not requiring potable quality water.

These efforts complement measures established under the District's Regulatory program for the coastal WRCA. Under this program, new uses of the Floridan Aquifer for non-potable uses are not permitted. 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 enhanced use of reclaimed water. Examples include Regional Utilities, South Walton Utility Company, the City of Fort Walton Beach, and Okaloosa County Water and Sewer, among many others.

Table 5.6 Water Conservation Coordination

Implementing Agency:	NFWFMD
Proposed FY Expense (FY 08-09):	\$ 10,000
Estimated 5-Year Cost (FY 08-13):	\$ 50,000
Potential Funding Sources:	WMLTF, Local Governments, Utilities
Quantity of Water Made Available:	2.5 MGD
Project Status:	Ongoing

Funding for water conservation efforts is provided through the WMLTF. Ongoing activities will help ensure that conservation efforts will continue through and beyond the RWSP's 20-year planning horizon. As other projects are determined to be viable and cost-effective, increased funding may be made available for implementation.

Strategy 7.0 Regional Water Supply Planning Strategies

Support and oversight of project development, along with update of the RWSP, are essential components of the WRDWP. General activities include coordination and technical support for project implementation and continuing refinement of regional strategies. Coordination with local governments helps ensure a regional focus in the planning and development of AWS projects. This may include assistance to utilities and local governments with hydrogeology and related engineering work for development of unused or underused water sources, including the inland Floridan Aquifer, Sand-and-Gravel Aquifer, and potential surface water sources. Associated administrative activities include project and funding management, coordination with DEP and other agencies, progress reporting, and technical assistance to local governments and utilities.

During the past year, the District continued RWSP implementation tracking, project planning, coordination of the Water Protection and Sustainability Program within Region II, and updated the WRDWP Annual Report. Additionally, staff drafted an update of the District-wide Water Supply Assessment required under section 373.036, F.S. It is anticipated that this assessment will be completed during 2008.

As discussed in the reuse and conservation sections, District staff work with local governments and state and regional agencies to enhance coordination of land use and water supply planning. District staff distributed guidelines and provided technical assistance to local governments for preparing water supply comprehensive plan amendments and water supply facilities work plans. A local government water supply facility work plan amendment workshop sponsored by West Florida Regional Planning Council (WFRPC), with participation by DEP, the Florida Department of Community Affairs (DCA), and the NFWFMD, was held in Niceville in January. Additionally, in cooperation with DCA, District staff reviewed water supply facility work plans submitted by local governments as amendments to their comprehensive plans. Reviews were conducted for the cities of Freeport, Ft. Walton Beach, Jay, Mary Esther and Niceville, and for the counties of Okaloosa and Santa Rosa.

Table 5.7 Regional Water Supply Planning Strategies

Implementing Agency:	NFWFMD
Proposed FY Expense (FY 08-09):	\$ 72,000
Estimated 5-Year Cost (FY 08-13):	\$402,000
Potential Funding Sources:	WMLTF
Quantity of Water Made Available:	N/A
Project Status:	Ongoing

It is possible that additional funding may be needed for further investigation into AWS development options, including hydrogeologic data collection and analysis and preliminary engineering feasibility analyses. Such further investigations lead to additional AWS development assistance or water resource development projects that support dependable and sustainable supplies of water.

Strategy 8.0 Hydrologic Data Collection and Analysis

The NFWFMD has a limited long-term hydrologic data collection network of stream gauges and monitoring wells in Region II. As part of the regional water supply planning process and implementation of the RWSP, the District has enhanced its ground and surface water monitoring capabilities. This includes monitoring operations in cooperation with the U.S. Geological Survey surface water gauging network.

The District will continue to deploy gauging stations on tributaries in the region, including within the Yellow and Choctawhatchee river basins. The expanded monitoring network will continue to be useful for long-term water supply planning, refining ground water models used to make management decisions, and developing water management strategies. In the last year, the District installed a continuous surface water gauge and ground water gauge for the Yellow River in-bank filtration evaluation.

Table 5.8 Hydrologic Data Collection and Analysis

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$170,000
Estimated 5-Year Cost (FY 08-13):	\$570,000
Potential Funding Sources:	WMLTF, WPSPTF
Quantity of Water Made Available:	N/A
Project Status:	Ongoing

The District anticipates that this will be an ongoing project, both up to and beyond the RWSP’s 20-year planning horizon, with an estimated cost of \$170,000 in FY 2008-2009 to provide for annual maintenance, operation, and data analysis costs. Funding is primarily expected from the WMLTF, as well as potential water resource development funding through the WPSPTF. Other possible sources include the District’s General Fund, federal funding, and local governments.

Strategy 9.0 Abandoned Well Plugging

Through September 2008, the District has facilitated the plugging of approximately 3,511 abandoned wells within Region II. The overall goal of this program is to protect available ground water resources from aging, uncontrolled or improperly constructed wells that are no longer in use. During FY 07-08, the District permitted the proper plugging of 445 wells in Santa Rosa, Okaloosa, and Walton counties. 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 to utilities in the plugging of abandoned wells identified as having the potential to adversely affect ground water quality. This is an ongoing project and it is likely that many more wells will be identified for plugging in the future. The District intends to implement this project through regulatory programs to the extent possible.

Table 5.9 Abandoned Well Plugging

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 30,000
Estimated 5-Year Cost (FY 08-13):	\$150,000
Potential Funding Sources:	NWFWMD, WMLTF, Local Governments, Utilities
Quantity of Water Made Available:	N/A
Project Status:	Ongoing

This project supports District efforts to sustain coastal water supply sources. Technical assistance may be funded using the District’s General Fund or the WMLTF. Additional sources for funding abandoned well plugging include federal or state grant funding, individual well owners, and local governments. The District anticipates continued use of these sources to fund well plugging that is not associated with regulatory requirements.

Table 5.10 2008-2013 Region II WRDWP Project Funding

Region II Water Resource Development Projects		RWSP Page #	FY 07-08* Expenditures	Plan Implementation Costs					Estimated Five-Year Cost
				FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	(FY 08/09 – FY 12/13)
1	Floridan Aquifer Sustainability Model	21	\$157,729	\$232,000	\$50,000	\$20,000	\$20,000	\$20,000	\$342,000
2	Inland Sand-and-Gravel Aquifer Sustainability Model	21	\$42,144	\$43,000	\$30,000	\$10,000	\$10,000	\$10,000	\$103,000
3	Development of Feasible Surface Water Sources	22	\$30,508	\$107,000	\$100,000	\$100,000	\$100,000	\$100,000	\$507,000
4	Aquifer Storage and Recovery Feasibility	23	\$0	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
5	Water Reuse Coordination	24	\$7,627	\$21,000	\$15,000	\$15,000	\$15,000	\$15,000	\$81,000
6	Water Conservation Coordination	24	\$10,893	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
7	Regional Water Supply Planning Strategies	25	\$72,404	\$72,000	\$20,000	\$70,000	\$150,000	\$90,000	\$402,000
8	Hydrologic Data Collection & Analysis	26	\$98,337	\$170,000	\$100,000	\$100,000	\$100,000	\$100,000	\$570,000
9	Abandoned Well Plugging	27	\$4,198	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$150,000
TOTAL			\$423,840	\$690,000	\$360,000	\$360,000	\$440,000	\$380,000	\$2,230,000

* Preliminary cost figures; final cost distribution information was unavailable at the time this report was prepared. Figures do not include Water Resource Development expenses funded through the Water Protection Sustainability Program Trust Fund.

Water Resource Development Projects – Region III: Bay County



Figure 5.3 Water Supply Planning Region III

Strategy 1.0 Hydrologic and Water Quality Data Collection, Monitoring, and Analysis

This project supports development of an inland groundwater supply source in cooperation with Bay County Utilities to serve all Region III communities. Implementation of this project provides essential water resource data, analysis, and modeling for determining the location, distribution, and physical characteristics of potential future inland production wells and other alternative water supply sources. The project also provides the monitoring necessary to ensure impacts related to new production wells and other withdrawals are managed to protect the water resource and associated natural systems.

In cooperation with the District, Bay County has been conducting hydrologic and water quality data collection and analysis since 2006. Inland test wells at several locations have been installed, and aquifer testing and analysis are in progress. Test production well development includes lithologic descriptions, geophysical logging, and hydrogeologic formation identification for optimal well construction. Data collected during aquifer pumping tests are analyzed using appropriate analytical and/or numerical methods to evaluate the hydraulic properties of the Floridan aquifer in northwest Bay County. The results of this analysis will be applied to the design, distribution, and operation of production wells so as to provide an alternative water supply while sustaining the water resource and protecting wetlands and other natural systems.

Table 5.11 Hydrologic and Water Quality Data Collection, Monitoring, and Analysis

Implementing Agency:	Bay County, NFWFMD
Proposed FY Expense (FY 08-09):	\$ 16,000
Estimated 5-Year Cost (FY 08-13):	\$ 91,000
Potential Funding Sources:	WMLTF, WPSPTF, Bay County
Quantity of Water Made Available:	10 MGD
Project Status:	Ongoing

Other potential sources of funding include local governments and utilities, District general revenue funds, legislative grants and appropriations, and other state and federal grant programs.

Strategy 2.0 Water Reuse and Conservation Assistance

Reuse is an important component of the regional water supply strategy to reduce demand for potable water, improve water use efficiency, and otherwise sustainably manage water resources. The District's role in developing public access beneficial reuse includes coordinating among local utilities and providing technical and financial assistance for cost-effective reuse projects, including those that provide wastewater treated to public access standards and treated stormwater. District staff will also coordinate with DEP as that agency carries out its reuse regulation responsibilities.

Water conservation opportunities exist that may reduce both current water use and long-term demand. Application of conservation rate structures, conservation measures in local building codes and ordinances, consumptive use permitting conditions, and outreach and education associated with nontraditional source development projects will help constrain future growth in demand. As one example, there is opportunity within the rental lodging sector serving tourists and seasonal residents to increase water use efficiency. The District has expanded the Water CHAMP program to Region III and already has 10 participating hotels in Bay County. Over the past two years, the District has distributed approximately 2,800 water conservation brochures to utilities and local governments in the county. District staff participated in water education and outreach totaling 600 hours in Bay County last year.

Additionally, District staff will continue to review local government comprehensive plan amendments and water supply facility work plans and submit recommendations, as necessary, to local governments and DCA for fully implementing water conservation and reuse opportunities in both existing and newly developing areas. In particular, it is noted that the substantial future development proposed for Bay County provides an opportunity to develop both reclaimed water infrastructure and requirements and to promote water conservation at the earliest stages of community development.

Table 5.12 Water Reuse and Conservation Assistance

Implementing Agency:	NFWFMD
Proposed FY Expense (FY 08-09):	\$ 10,000
Estimated 5-Year Cost (FY 08-13):	\$ 50,000
Potential Funding Sources:	WMLTF, WPSPTF
Quantity of Water Made Available:	TBD
Project Status:	Ongoing

Strategy 3.0 Regional Water Supply Coordination and Technical Assistance

Over the past fiscal year, District staff have developed a RWSP for Region III in cooperation with local utilities. A public workshop was held May 28, 2008, at Gulf Coast Community College. The final plan was approved by the Governing Board in a public hearing on August 28, 2008.

Coordinating plan implementation, project management and tracking, conducting administrative tasks, fulfilling statutory reporting requirements, and related activities are all part of the District's role in carrying out the RWSP for Region III.

Through this strategy, the District will also provide technical assistance to local governments and water suppliers. Local governments in regions covered by a RWSP must abide by state requirements to more directly link land use and water planning. Such local governments are required to amend their comprehensive plans to ensure that water supply will be planned and developed to meet future growth in a manner that is consistent with the RWSP. Comprehensive plans will also be required to incorporate alternative water supply sources and projects as necessary. District staff are working with DCA, DEP, and the WFRPC to schedule a technical workshop to provide guidance to local governments concerning requirements for comprehensive plans that are subject to a regional water supply plan.

Additionally, District staff will continue to coordinate implementation of the RWSP with the Water Protection and Sustainability Program. Progress will be reported annually in the March 1 Consolidated Annual Report.

Table 5.13 Regional Water Supply Coordination and Technical Assistance

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 20,000
Estimated 5-Year Cost (FY 08-13):	\$ 75,000
Potential Funding Sources:	WMLTF, NWFWMD General Fund
Quantity of Water Made Available:	TBD
Project Status:	Ongoing

Table 5.14 2008-2013 Region III WRDWP Project Funding

Region III Water Resource Development Projects		RWSP Page #	FY 07-08* Expenditures	Plan Implementation Costs					Estimated Five-Year Cost
				FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	(FY 08/09 – FY 12/13)
1	Hydrologic and Water Quality Data Collection and Analysis	10	\$380,451	\$16,000	\$15,000	\$20,000	\$20,000	\$20,000	\$91,000
2	Water Reuse and Conservation Assistance	10	\$5,714	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000
3	Regional Water Supply Assistance	10	\$80,723	\$20,000	\$20,000	\$15,000	\$10,000	\$10,000	\$75,000
TOTAL			\$466,888	\$46,000	\$45,000	\$45,000	\$40,000	\$40,000	\$216,000

* Preliminary cost figures; final cost distribution information was unavailable at the time this report was prepared. FY 07-08 expenditures include water resource development assistance funding provided through the Water Protection and Sustainability Program Trust Fund.

Water Resource Development Projects – Region V: Gulf and Franklin Counties

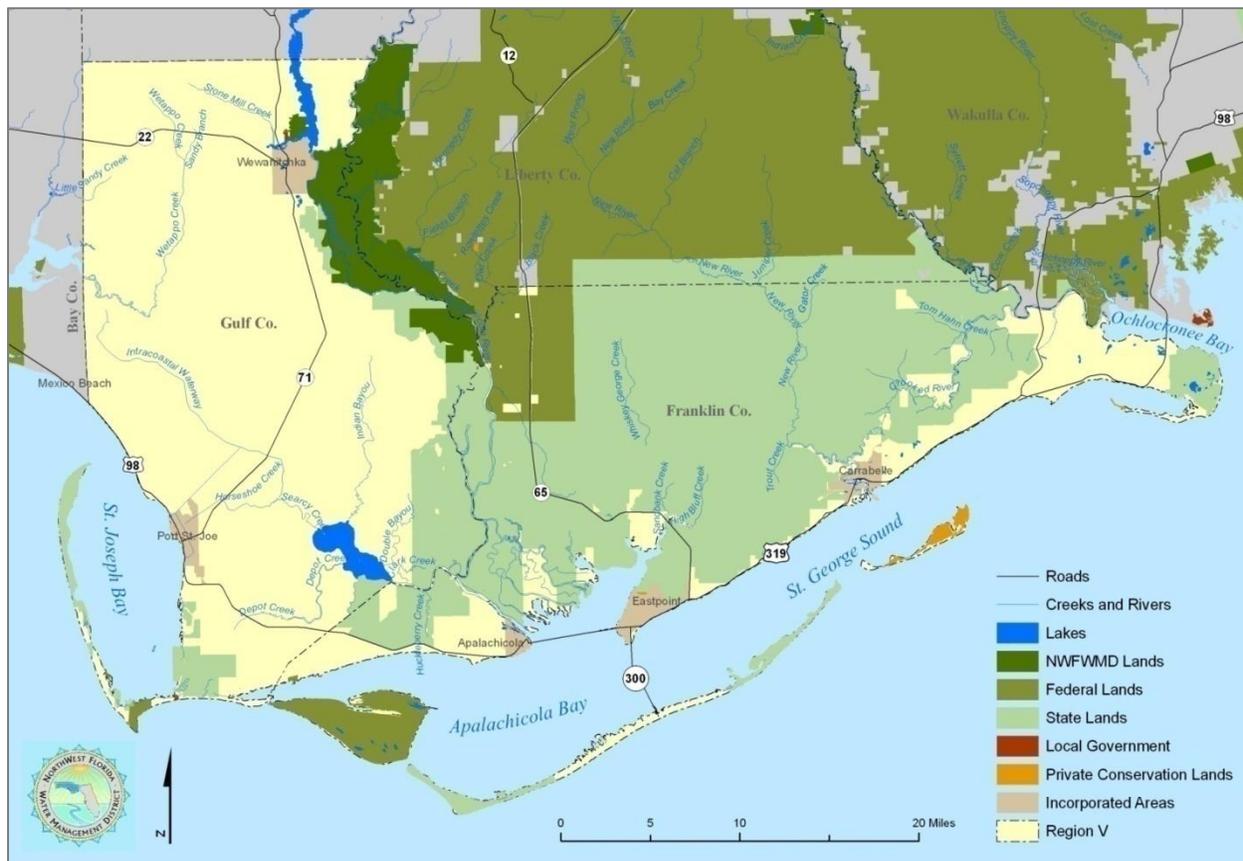


Figure 5.4 Water Supply Planning Region V

Strategy 1.0 Hydrologic and Water Quality Data Collection and Analysis

This activity provides for essential water resource data collection, analysis, and modeling to determine the location and distribution of potential future production wells and other water supply sources. The scope of the project is inclusive of water resource development in support of identifying and developing alternative sources of water supply to serve all Region V communities. Tasks include groundwater modeling, water quality sampling and analysis, hydrologic monitoring and analysis, and preliminary well and facility design for regional AWS development. Longer-term monitoring tasks over the next five years may also include water quality and hydrologic monitoring to manage and protect water resources.

The District has conducted significant data collection and analysis to evaluate the feasibility of an inland ground water source for Franklin County. The work includes test well development, water quality analysis, and aquifer testing. A District consultant has also developed a ground water model to support the project. Work is ongoing to complete the initial data collection and analysis effort. Additional work has been accomplished to assist the Eastpoint Water and Sewer District in test well development and aquifer performance testing.

Table 5.15 Hydrologic and Water Quality Data Collection and Analysis

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 40,000
Estimated 5-Year Cost (FY 08-13):	TBD
Potential Funding Sources:	WMLTF
Quantity of Water Made Available:	3 MGD
Project Status:	Ongoing

It is estimated that up to three MGD of sustainable water supply may be identified and supported through inland ground water source development for Franklin County. Funding is provided from the WMLTF. Additional water resource development funding has previously been provided through the WPSPTF ([Table 5.20](#)). District general funds could also be used for this purpose.

Strategy 2.0 Regional Water Supply Source Protection, Coordination, and Engineering and Technical Assistance

District staff provide technical assistance to help local governments and utilities meet water supply-related source protection, project design and engineering requirements. The District will help support regional coordination and planning on the part of regional water supply entities and local governments. Assistance includes activities related to protection of ground and surface water sources, water resource engineering, coordination with other resource protection and management agencies, and other technical assistance.

Table 5.16 Coordination, Source Protection, and Engineering and Technical Assistance

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 3,000
Estimated 5-Year Cost (FY 08-13):	\$ 38,000
Potential Funding Sources:	WMLTF
Quantity of Water Made Available:	N/A
Project Status:	Ongoing

While this project does not directly provide water, the efforts encompassed do support the long-term development and protection of AWS sources, including the approximately nine MGD estimated to be provided across the region through development of alternative surface water and inland ground water sources. These include up to three MGD from the Franklin County inland ground water source described previously, and up to six MGD from the Port St. Joe alternative surface water source constructed with assistance from the WPSPTF ([Table 5.20](#)).

Strategy 3.0 Water Reuse and Conservation Coordination Assistance

Water reuse is an important component of the long-term regional water supply strategy and is included wherever feasible in Region V as a way to reduce current demand and limit long-term growth in demand for potable water. The District's role in developing public access beneficial reuse includes coordinating among local utilities, inventorying existing and potential beneficial reuse sources and uses, and providing technical and financial assistance for specific reuse projects. In Region V, reuse projects are under development or in preliminary planning for the cities of Apalachicola and Wewahitchka. The City of Wewahitchka is currently evaluating opportunities and funding needs for developing a public access reuse system.

District staff also review local comprehensive plan amendments and development proposals to assist in local reuse and conservation planning, provide normal consumptive use permit review and issuance, and coordinate with DEP’s reuse regulation responsibilities. In reviewing comprehensive plan amendments and proposed DRIs, District staff continue to emphasize both reuse and conservation measures.

Other conservation assistance provided by the District to Region V has been distribution of the water rates model (Whitcomb 2005) to several utilities in the region, and significant dedication of District staff resources to water education and outreach during the last year.

Table 5.17 Water Reuse and Conservation Coordination and Assistance

Implementing Agency:	NWFWMD, Local governments, Utilities
Proposed FY Expense (FY 08-09):	\$ 5,000
Estimated 5-Year Cost (FY 08-13):	\$ 25,000
Potential Funding Sources:	WMLTF, WPSPTF
Quantity of Water Made Available:	TBD
Project Status:	Ongoing

Funding may be provided from the WMLTF and, for construction of approved reuse facilities, the WPSPTF. Funding assistance is also made available on a competitive basis through the Florida Forever Capital Improvement grant program for construction of eligible reuse facilities.

Strategy 4.0 Regional Water Supply Plan Implementation

Implementing the RWSP for Region V encompasses coordinating, managing and tracking projects, completing administrative tasks, fulfilling statutory reporting requirements, and related activities. This strategy also allows for technical assistance to local governments and water suppliers. Working cooperatively with utilities and local governments, District coordination indirectly helps to attain the up to nine MGD of AWS estimated as being available during the planning period.

Activities of the past year have included evaluation of progress in implementing the RWSP, project planning, coordination of the Water Protection and Sustainability Program to further implementation of the plan, and updating this WRDWP Annual Report. District staff coordinated funding assistance through the WPSPTF to the City of Port St. Joe for construction of its surface water facility.

As discussed in the reuse and conservation sections, District staff also work with local governments and state and regional agencies to improve coordination of land use and water supply planning. District staff worked with DEP, DCA, and local governments to develop and distribute updated guidelines for preparing water supply comprehensive plan amendments and water supply facility work plans. A local government water supply facility work plan amendment workshop sponsored by Apalachee Regional Planning Council, with participation by DEP, FDCA, and the NWFWMD, was held in Apalachicola in January. Additionally, in cooperation with DCA, District staff reviewed the water supply facility work plan prepared by Gulf County as an amendment to its comprehensive plan. Technical guidance was also distributed to other local governments to help meet this purpose. District staff may also review water supply portions of Evaluation and Appraisal Reports and other proposed comprehensive plan amendments.

Table 5.18 RWSP Implementation

Implementing Agency:	NWFWMD
Proposed FY Expense (FY 08-09):	\$ 3,000
Estimated 5-Year Cost (FY 08-13):	\$ 61,000
Potential Funding Sources:	WMLTF
Quantity of Water Made Available:	N/A
Project Status:	Ongoing

While this project does not directly provide water, the efforts encompassed do support the long-term development of AWS sources, including the approximately nine MGD estimated to be provided across the region through development of alternative surface water and inland ground water sources. It is anticipated that funding for this project will continue to be provided primarily through the WMLTF.

Table 5.19 2008-2013 Region V WRDWP Project Funding

Region V Water Resource Development Projects		RWSP Page #	FY 07-08* Expenditures	Plan Implementation Costs					Estimated Five-Year Cost
				FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13	(FY 08/09 – FY 12/13)
1	Hydrologic and Water Quality Data Collection and Analysis	10	\$52,325	\$40,000	\$50,000	TBD	TBD	TBD	TBD
2	Source Protection, Coordination, and Engineering and Technical Assistance	11	\$6,977	\$3,000	\$5,000	\$10,000	\$10,000	\$10,000	\$38,000
3	Water Reuse and Conservation Coordination and Assistance	11	\$7,326	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000
4	Regional Water Supply Plan Implementation	11	\$45,059	\$3,000	\$3,000	\$5,000	\$25,000	\$25,000	\$61,000
TOTAL			\$111,686	\$51,000	\$63,000	TBD	TBD	TBD	TBD

* Preliminary cost figures; final cost distribution information was unavailable at the time this report was prepared. Figures do not include Water Resource Development expenses funded through the Water Protection Sustainability Program Trust Fund.

5.2 Alternative Water Supplies Annual Report

Each water management district is required under Section 373.1961(3)(n), F.S., to submit as part of the consolidated annual report a chapter or section that:

- Accounts for the disbursal of all budgeted amounts pursuant to Section 373.1961, F.S.;
- Describes all alternative water supply projects funded;
- Describes the quantity of new water to be created as a result of such projects;
- 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 funded through the Water Protection and Sustainability Program Trust Fund (WPSPTF). A number of these projects help implement past, long-term efforts of the District and local utilities to identify and develop alternative water supplies through dedicated water resource development efforts. It should also be noted that substantial water supply development assistance was provided to local governments and utilities prior to enactment of the WPSPTF. This includes facilitation of a \$3.1 million federal grant for development of the Fairpoint Regional Utility System inland Sand and Gravel Aquifer wellfield and provision of \$750,000 in assistance to the City of Crestview for repairs to an existing inland public supply well and construction of another.

Planning during the year was focused on continued development and implementation of a series of Alternative Water Supply Development and Water Resource Development projects pursuant to the Water Protection and Sustainability Program and the Region II, III and V RWSPs. [Table 5.20](#) provides summary information on these projects.

Table 5.20 NFWFMD Water Protection and Sustainability Program Trust Fund Projects

Project	Local Sponsor	Activity	Status	WPSPTF Fiscal Year Appropriation	Estimated Quantity of Water	WPSPTF Contribution	Local Contribution	Total	Local %
Area-wide Alternative Water Supply Source Expansion	Regional Utilities, South Walton Utility Co., City of Freeport	Inland wellfield expansion	Under construction	FY 2006	9.0	\$6,500,000	\$11,172,750	\$17,672,750	63%
Tram Road Public Access Reuse Facility	City of 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	Okaloosa County	Water reuse	Under construction	FY 2006	1.0	\$2,000,000	\$4,000,000	\$6,000,000	67%
Inland Floridan Aquifer Source - WRD	NFWFMD; Franklin County Utilities	Inland source evaluation	Complete	FY 2006	3.0	\$300,000	\$0	\$300,000	0%
Ground Water Modeling & Aquifer Testing - WRD	Bay County	Inland source evaluation	In progress	FY 2006; FY 2007	*	\$350,000	\$800,000	\$1,150,000	70%
Surface Water Treatment Plant	Port St. Joe	Surface water	Final construction	FY 2007	6.0	\$4,000,000	\$16,000,000	\$20,000,000	80%
City of Chipley Reuse Project	Chipley	Water reuse	Complete	FY 2007	0.83	\$500,000	\$4,500,000	\$5,000,000	90%
Wakulla County Reuse Project	Wakulla County	Water reuse	Engineering	FY 2007	0.35	\$500,000	\$750,000	\$1,250,000	60%
Advanced Wastewater Treatment & Water Reuse Facilities	City of Tallahassee	Water resource development/springs protection	Engineering	FY 2007	4.5	\$500,000	\$5,800,000	\$6,300,000	92%
Inland Ground Water Source Development	Bay County	Inland source development	In progress	FY 2008	10.0	\$5,470,000	\$9,530,000	\$15,000,000	64%
Total					35.88	\$21,470,000	\$57,802,750	\$79,272,750	72%

*Ground Water Modeling and Aquifer Testing was used to determine that about 10.0 mgd of water may be available for the Inland Ground Water Source Development project. 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.

6 Florida Forever Water Management District Work Plan Annual Report

6.1 Land Acquisition Five Year Work Plan

Introduction

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 218,000 acres have been protected for water resource purposes through the land acquisition efforts of the District either in fee simple or through conservation easements.

In 1981 the Florida Legislature established the Water Management Lands Trust Fund (“Save Our Rivers”) to provide funds to the state’s five water management districts to acquire the fee or other “less-than-fee” interests in lands needed for water management, water supply or conservation and protection of water resources. Revenues for this program are derived from a statewide documentary stamp tax on real estate sales.

In 1990 the Florida Legislature began the Preservation 2000 program. For 10 years, Preservation 2000 focused on accelerating the purchase of unspoiled lands needed to maintain the state’s quality of life. Under these two programs the District acquired thousands of acres of valuable wetlands.

Florida Forever Program

In 1999 the Florida Legislature passed the Florida Forever Act (Section 259.105, F.S.) which continues 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 authorizes 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). Together, the WMDs receive up to \$90 million annually ([Table 6.1](#)).

Table 6.1 Florida Forever Trust Fund Funding Allocations by Water Management District

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

While the 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 the “discretionary” 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.

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.

This year the District’s acquisition efforts 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. District staff shall continue to coordinate the Land Acquisition Five Year Plan with the District’s DOT regional mitigation plan developed under section 373.4137 F.S. to ensure the greatest possible cumulative benefit for water resources, wetland functions, and public benefits.

Approved Acquisition Areas

The approved acquisition areas listed below ([Table 6.2](#) and [Table 6.3](#)) are not presented on a priority basis. For each of these waterbodies, it is desirable to acquire both the floodplain and a natural buffer zone to provide further water resource protection.

Table 6.2 Approved Acquisition Areas by Waterbody Type

Rivers & Creeks Originating in Florida	Rivers and Creeks Originating Outside Florida	Springs	Lakes & Ponds	Other Ecosystems, Basins and Buffers
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 others flowing into Deer Point Lake	Blackwater River including Juniper, Big Coldwater & Coldwater creeks	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
	Chipola River	Morrison Springs		
	Ochlockonee River & its major tributaries	Gainer Springs		
	Yellow & Shoal Rivers			
	Perdido River & Bay			

Table 6.3 Additional Approved Acquisition Areas and Methods

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 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 paramount, the District at times must acquire or manage isolated tracts.	

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

Florida’s commitment to acquire the lands needed to permanently protect local water and environmental resources has resulted in the most successful program in the United States. However, there is not, and probably never will be, sufficient public funding available to acquire outright all the important water resource lands that need protection. Accordingly, the Florida Legislature has directed the state’s water management districts to expend part of their land acquisition funding to purchase eligible properties using alternatives to “fee simple” acquisition. Under this scenario, the District buys a significant portion of the property rights the seller owns. 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 remains 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.

Land Acquisition Projects

The Florida Forever Act, in particular Section 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 6.1](#) through 6.3 illustrate the proposed land acquisition projects by region.



Figure 6.1 2009 Proposed Land Acquisition Areas (West Region)

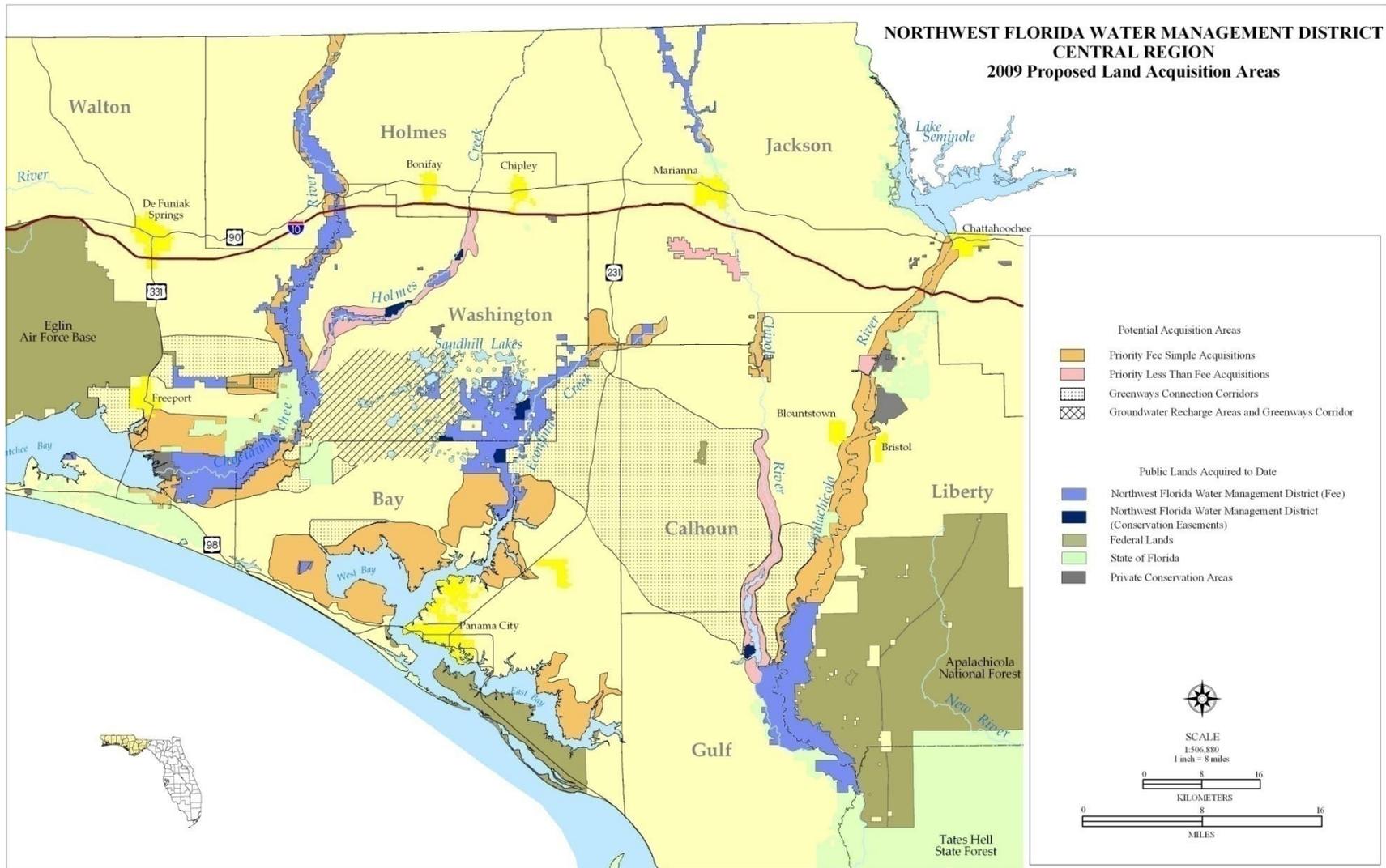


Figure 6.2 2009 Proposed Land Acquisition Areas (Central Region)

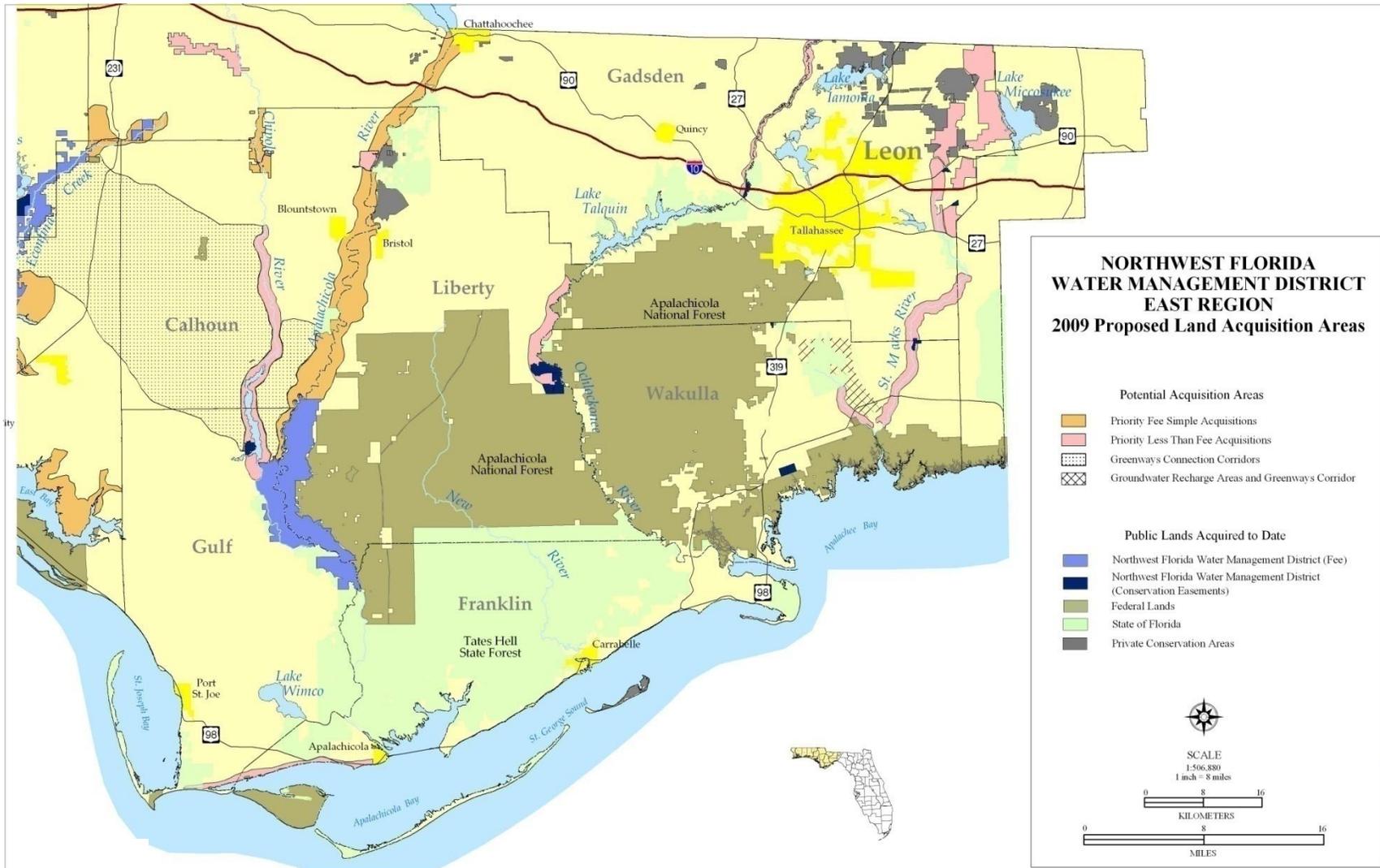


Figure 6.3 2009 Proposed Land Acquisition Areas (East Region)

Florida Forever Land Acquisition Project: Perdido River and Bay

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 5,451 acres in fee and 4 acres in less-than-fee.

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 around the river mouth and designated tributaries.

The Perdido Bay is an estuarine system which receives fresh water from the Perdido River. Other bays in the immediate area include Tarkiln Bay, Arnica Bay, Bay La Launch and Bayou St. John. Perdido Key separates Perdido, Tarkiln, and Arnica bays, Bay La Launch and Bayou St. John from the Gulf of Mexico. Two barrier islands, Perdido Key and Santa Rosa Island, surround Perdido Bay.

Priority purchases will be concentrated on parcels adjacent to the bay which can enhance water quality protection of the bay 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 Pensacola and Perdido bays. The proposed acquisition borders a major urban area and is under rapid 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 uses will be maintained 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 Buffer 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 emptying 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 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 34,919 acres 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 7,138 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 in Pensacola Bay. 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 Pensacola Bay, 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.

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 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 and 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 Alabama Conecuh National Forest, 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. Acquisition by the Florida Division of Forestry will bring into public ownership much of the lower, least protected portion of river floodplain and estuary. The District will assist in these acquisitions as needed. Currently the District owns 380 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 Alabama's Conecuh National Forest 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, 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 39,982 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 would protect recharge areas that are particularly important for future water supply sources.

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.

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 drains roughly 3,300 square miles of northwest Florida, the second largest floodplain in the state. Although the river basin exhibits more localized water quality problems than most in northwest Florida, 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 over 62,000 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 56,280 acres have been identified for fee simple acquisition on the Choctawhatchee River, 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 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 the 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 43,600 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 39,900 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, salt marshes, 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.

Florida Forever Land Acquisition Project: Chipola River Basin

A new area along the Middle Chipola River has been identified for fee acquisition. The area is comprised of 3,952 acres in northern Calhoun and southern Jackson counties. Acquisition of this tract will protect over seven miles of the west bank and 10 miles of the east bank of the Chipola River. In addition, three 3rd magnitude springs (Barrel, Grotto and Sally) and both sides of “Look-N-Tremble” rapids will be protected. In addition, a less-than-fee acquisition, containing 123 acres, will protect an additional 1.5 miles of riverfront along the Chipola River.

Two additional areas have been identified for less-than-fee acquisition along the Chipola River. The first proposed less-than-fee acquisition 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. The District owns 7,377 acres of river floodplain and holds a conservation easement on 810 acres.

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 3,952 acres has been identified for possible fee acquisition and 26,648 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 35,506 acres of river floodplain and holds a conservation easement on 1,544 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 51,449 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 Piedmont hills 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 of 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 3,565 acres under less-than-fee acquisition 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 11,876 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 1,181 acres under less-than-fee acquisition in the area.

BluePrint 2000

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 in December 2003, to work cooperatively to acquire property to protect and preserve the water resources of the St. Marks River basin in Leon County. Each agency has dedicated \$500,000 per year for land acquisition purposes, subject to the availability of funds. The District will endeavor to acquire “less-than-fee” or conservation easements with willing sellers within the basin. Nearly 28,000 acres (Priority 1 and 2 areas) have been identified for possible “less-than-fee simple” acquisition. To date, the District and BluePrint 2000 have purchased a conservation easement on a 132.62-acre tract in Leon County.

Land Acquisition

Approximately 45,650 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.

6.2 Land Acquisition Work Plan Annual Report

Implementation of the 2007-2008 Work Plan

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 218,750 acres have been protected for water resource purposes through the land acquisition efforts of the District either through fee simple purchase or through conservation easements.

During the 2007-2008 fiscal year, the District completed 770.30 acres of fee simple land acquisitions and 1,724.43 acres of less-than-fee acquisitions. In addition, 3.59 acres of land in the Econfina Creek Water Management Area were surplused through the end of calendar year 2008. Highlights of the projects are listed below and a summary of all acquisition activities is included in [Table 6.4](#).

- Acquisition of 31 acres, including a fee simple access, was approved in January 2008. The parcel is located off Acuff Road, a county maintained paved/dirt road, and is contiguous to District property on the east and south sides. This purchase provides public access to 475 acres of District lands along Holmes Creek and provides a second land management access point for District staff and its contractors.
- The District acquired a 20-acre parcel on Live Oak Point Peninsula. The property, located southeast of existing District lands, consists primarily of forested wetlands and estuarine marsh. The parcel was acquired to satisfy mitigation needs of the Florida Department of Transportation (DOT) due to highway construction on US 331. Thus, the project was funded solely with DOT mitigation funds.
- In February 2008, the District acquired 719.3 acres in Bay County from St. Joe Timberland Company of Delaware. This acquisition is a critical component of the District's Northwest Florida Watershed-based Umbrella Regional Mitigation Plan, and it provides essential wetland mitigation for multiple past, current and future DOT projects in Bay County. The property lies on the west side of Highway 79 and consists primarily of slash pine plantations of various ages within a mosaic of wetland communities. The property also contains ditches which promote drainage of the surrounding area to facilitate silvicultural activities. This purchase will mitigate wetland impacts associated with DOT's capacity expansion of Highway 79. It may also free credits previously assessed against the District's mitigation bank and provide additional credits for future DOT mitigation needs. This purchase was funded solely with DOT Mitigation funds.
- A conservation easement was acquired on 1,573.66 acres in Liberty County along the Ochlockonee River. The easement is bordered on the east by the Ochlockonee River and the Apalachicola National Forest and on the south by another District conservation easement. The property is a mosaic of mixed bottomland hardwood forest, pine plantations and mesic pine/hardwood upland habitat types and includes over one mile of frontage on the Ochlockonee River. Purchase of this easement will protect over one mile of frontage on the Ochlockonee River and also serve as an offsite mitigation area for future DOT construction impacts along Interstate 10 and Highways 90, 20, 65, and 98. This purchase was funded solely with DOT Mitigation funds.

- A 150.77-acre conservation easement was donated by Coastal Forest Resources Company in August 2008. Approved by the Governing Board in 2007, this easement provides about three miles of riverbank frontage along the Ochlockonee River in Gadsden County. The property consists of mixed bottomland hardwood habitat interspersed with some areas of upland pine plantation.

Table 6.4 Summary of Land Transactions Completed in 2008

Property	Date Purchased	Acres	Cost	Funding Source(s)	Water Management Area
Fee Simple Acquisitions					
Ward Creek West	2/29/08	719.30	\$1,936,700.00	DOT Mitigation	Econfina Creek
Varn	4/28/08	31.00	\$180,000.00	Florida Forever	Choctawhatchee River/Holmes Creek
Lee	8/29/08	20.00	\$133,000.00	DOT Mitigation	Choctawhatchee River/Holmes Creek
SUB-TOTAL		770.30	\$2,249,700.00		
Less-Than-Fee Acquisitions					
Shuler	7/28/08	1,573.66	\$2,045,758.00	DOT Mitigation	Ochlockonee River
Coastal Forest Resources Co.	8/28/08	150.77	\$0.00	Donation	Ochlockonee River
SUB-TOTAL		1,724.43	\$2,045,758.00		
Surplused Lands					
Bay County	11/20/08	(0.23)	\$0.00	Donation	Econfina Creek
Bay County	11/20/08	(3.36)	\$0.00	Donation	Econfina Creek
SUB-TOTAL		(3.59)	\$0.00		
GRAND TOTAL		2,491.14	\$4,295,458.00		

The District also completed several land management activities during 2007-2008. Management and restoration efforts, including prescribed burns, native species planting and timber harvesting, continue across the District’s 207,751 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. [Table 6.5](#) and [Table 6.6](#) provide additional information on specific land restoration activities completed during the year. The projected 2008-2009 staffing and management budget by water management area can be found in [Table 6.7](#).

- Approximately six miles of hiking trail that traverses the District’s Lafayette Creek portion of the Choctawhatchee River Water Management Area were designated part of the Florida National Scenic Trail in October 2008. This dedication is part of a 20-mile addition to the 1,400-mile trail system and represents a vital connector segment between SR 81 and US 331 in southern Walton County. This designation was achieved through collaboration with federal, state and local agencies, non-profit organizations and private partners. All of the hiking trail planning and construction was completed by a dedicated team of volunteers from the Florida Trail Association.

- Restoration and management continued within the Sand Hill Lakes Mitigation Bank in Washington County. In February 2008, a hydrologic restoration project was completed through removal of a failed dam and construction of the Black Pond control structure, a sheet pile weir with water level control. Removal of sand pine plantations, shrub reduction, re-planting of wiregrass and longleaf pine, native and exotic species surveys, fire management, water level monitoring, and exotics removal all continue on the property.
- In February 2008, District contractors completed construction of the replacement bridge to Florida River Island in Liberty County, an extremely popular portion of the Apalachicola River Water Management Area. The replacement bridge provides public access to approximately 6,000 acres of floodplain lands with excellent hunting, fishing, and hiking opportunities. In September, District staff held a workshop to obtain public input concerning vehicle access on the island's roads and other related land management issues. The workshop participants were quite supportive of the enhanced public access and encouraged the District to enhance and stabilize the existing road network. One primary road was stabilized in 2008 and plans were developed to stabilize the remaining primary roads on the island.
- During FY 2007-2008, habitat restoration was completed on 1,588 acres of District lands. Approximately 601,000 longleaf pine, 21,000 slash pine, 2,100 hardwoods/cypress, and 994,600 wiregrass tubelings were planted across the District.
- District staff continue to work with equestrian users to evaluate and develop horse trails on the Econfina Creek and Perdido River Water Management Areas. Designs and preliminary improvements were undertaken to facilitate construction of the Perdido River Fillingim Landing canoe launch in 2009.
- In 2007, the District began a planning process to address resource protection and recreation facility issues Pitt, Sylvan, and Williford springs on Econfina Creek. Proposed changes include replacing the retaining wall at Pitt Spring with natural limestone and vegetation, enhancing the canoe dock with ladders, adding a tube launch dock with ladders, constructing decks to overlook spring pools, extending boardwalks over sensitive natural areas, building an elevated observation deck at Williford, installing a permanent restroom facility and more. This process continued in 2008 with the development of final plans and designs for Pitt and Sylvan Springs and coordination with the permitting and project review agencies.

Table 6.5 Land Management Activities: Restoration, Enhancement and Maintenance (2008)

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															12
Garcon Point	3,158	3000			158	60		31	29						8
Blackwater River															3
Yellow River	369	369													10
Perdido River	118	118				12		12			58	58			130
Choctawhatchee River	3,113	2176	805	132		1,083	211	872							239
Econfina Creek	3,593	2104	42	1319	128	66	10	26	20						732
St. Andrew	22			22											
Carter Restoration	698	199	364	135		473	79	394			52		52		
Ward Creek West											127		127		
Devils Swamp Restoration	316			316											
Upper Chipola River															
Apalachicola River															
Lake Jackson	192	192													
Totals	11,579	8,158	1,211	1,924	286	1,694	300	1,335	49		237	58	179	1,134	

Table 6.6 Lands Management Activities: Access and Recreation Management (2008)

Water Management Area	Primitive Campsites	Picnic Grounds	Public Parks	Parking Areas	Reserved Group Sites	Boat Landings	Portolet 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	10			1	2		27	18				50	2
Garcon Point				3						3			3					10	
Blackwater River		1				1												10	1
Yellow River	9	2	7	6		4	3		50				47					30	
Perdido River		2	2	3		2	2	3	9				31					80	
Choctawhatchee River	8	9	12	12		10	8		15				40					80	4
Econfina Creek	10	13	8	18	4	3	12	45	22	18	2		23	168				279	8
Upper Chipola River	1		1	1		1		2	10	2	1	2	3						
Apalachicola River	2	1	1	2		2	1				4		4						
Lake Jackson			1	2				9		5	1	9	4	4					
Totals	43	37	40	56	5	31	36	59	106	29	10	11	182	190	0	0	0	539	15

Table 6.7 Projected Funding, Staffing and Resource Management for FY 2008-2009

Region	Water Management Area	Acres	Assigned Staff	Total Funding	Funding for Resource Management
Western	Escambia	34,919		\$586,604	\$515,100
	Escambia Conservation Easements	19		\$2,689	\$500
	Garcon Point	3,245		\$159,978	\$99,303
	Yellow/Escribano	17,742		\$413,822	\$366,600
	Blackwater	380		\$26,130	\$12,550
	Perdido	5,455		\$670,784	\$563,050
	Western Region Total	61,760	3	\$1,860,007	\$1,557,103
Central	Choctawhatchee	60,687		\$1,302,330	\$1,139,850
	Choctawhatchee/Holmes Conservation Easements	1,442		\$28,258	\$25,500
	Econfina	39,049		\$2,522,043	\$2,237,050
	St. Andrew/Econfina Conservation Easements	2,433		\$3,258	\$500
	Ward Creek West	719		\$73,628	\$54,000
	Carter Restoration	2,155		\$250,214	\$134,500
	Central Region Total	106,485	5	\$4,179,731	\$3,351,400
Eastern	Upper Chipola	7,377		\$109,270	\$68,900
	Apalachicola	35,506		\$380,474	\$274,850
	Apalachicola/Chipola Conservation Easements	2,360		\$4,087	\$500
	Lake Jackson	516		\$104,709	\$34,200
	St. Marks Conservation Easements	1,181		\$3,508	\$750
	Ochlockonee Conservation Easements	3,565		\$2,425	\$500
	Eastern Region Total	50,505	2	\$604,473	\$379,700
Regional Totals	218,750	10	\$6,644,211	\$5,528,203	
	Management Administration		4	\$1,480,389	\$1,085,500
Grand Total		218,750	14	\$8,124,600	\$6,613,703

This page intentionally left blank.

6.3 Florida Forever Capital Improvement Work Plan

Introduction

This section describes restoration, stormwater retrofit, and water resource development projects funded pursuant to the Florida Forever Five Year Work Plan, as referenced in section 373.199(7), F.S. The District's Five Year Work Plan was initially approved in 2001 (NFWFMD 2001), and it is updated annually through this report. As required by section 373.199(2), F.S., the five-year work plan includes projects that further the goals of the Florida Forever Act (section 259.105, F.S.). In so doing, the plan integrates activities encompassed within SWIM plans; stormwater management projects; water resource development projects; waterbody restoration projects; and capital improvement projects that promote reclamation, storage, or recovery of water.

Plan Components

In accordance with s. 373.199(3)(a), F.S., the NFWFMD Florida Forever Capital Improvements Five Year Work Plan incorporates:

- Watershed resource restoration and protection projects addressing priorities identified in approved SWIM plans, as identified in Chapter 8 of this Consolidated Annual Report;
- Water resource development projects addressing priorities identified in regional water supply plans, as identified in Chapter 5 of this Consolidated Annual Report;
- Wetland resource restoration and enhancement projects that assist in implementation of priority projects identified in the NFWFMD Umbrella, Watershed-Based Regional Mitigation Plan (UWRMP) (www.nfwfmdwetlands.com);
- Capital improvement grant projects, as approved by the Governing Board, through implementation of the District's Florida Forever Capital Improvement Grant Program; and
- Other improvements to District lands and facilities, as approved by the Governing Board.

Priority waterbody and water resource descriptions are as outlined in NFWFMD (2001) and approved SWIM and RWSP plans, as identified in Chapters [5](#) and [8](#) respectively. Watershed descriptions District-wide were updated by NFWFMD (2005). Performance measures for capital improvement projects are as outlined in NFWFMD (2001), as well as within the plan components listed above.

Capital Improvement Grant Program

The Governing Board has directed the implementation of a competitive grant program for local governments and other government entities in northwest Florida as a means of identifying and implementing capital improvements, with emphasis on those that help implement the District's SWIM and regional water supply plans. Projects may also be approved to implement stormwater master plans and waterbody restoration projects, and reuse projects per s. 373.199(3)(a), F.S. To date, 55 projects (totaling over \$23 million) have been funded under the program. These grants have leveraged very significant additional funding for regional priorities, with over \$47 million in local and other match funding being allocated to the approved projects. Facility ownership, permitting, and long-term maintenance are the responsibilities of the entities receiving grant funds, as provided through cooperative grant agreements.

The capital improvement grant program is implemented annually, as directed by the Governing Board. The current Board-approved grant criteria are provided in [Table 6.11](#). Prior to implementation, approved projects are submitted to the Department of Environmental Protection for review to ensure the eligibility

of each project for Florida Forever capital improvement funding. Due to budgetary constraints, the 2007-2008 grant cycle was not completed and no competitive grant program is anticipated for fiscal year 2008-2009. Additional information may be found at www.nfwmd.state.fl.us/rmd/swim/fla_forever_grants/fla_forever_grants.htm.

Implementation of the 2007-2008 Work Plan

The FY 2007-2008 NFWMD work plan listed five District capital improvement projects for implementation. These projects are eligible for capital improvement funding from Florida Forever, SWIM, legislative special appropriation, federal grants, local government funding, and other sources. Included in these five projects is the District's Florida Forever Capital Improvement Grant program, which provides specified project activities approved for funding under this program.

Capital improvement projects completed during fiscal year 2007-2008 include the following:

- Lamb Eddy Road Stormwater Treatment. With a \$451,198 grant from the District, Calhoun County used best management practices and provided stormwater treatment for 1.1 miles of dirt road discharging directly to the Chipola River, a SWIM priority waterbody. The County contributed \$113,519 towards completion of this project.
- Carpenter Creek (Basin 5-16) Stormwater Retrofit. This project provided for the installation of in-line stormwater pollutant separator units to treat runoff before entering Bayou Texar and Pensacola Bay. The District provided \$250,000 in funding and the City of Pensacola contributed \$312,554 towards this project.
- Deer Point Lake Dirt Road Stabilization III. The District provided funding to assist Bay County in improving the water quality of Deer Point Lake Reservoir, a Class I and SWIM priority waterbody. The county used best management practices to stabilize and provide stormwater treatment for dirt roads within the Deer Point Lake Protection Zone. The project was accomplished with a \$500,000 Florida Forever grant together with \$506,839 in local funding.
- Gibby Pond Regional Stormwater Facility. The Blueprint 2000 and Beyond Intergovernmental Agency received a District grant for \$732,160 to construct a 15-acre regional stormwater treatment facility for water quality improvement and reduction of downstream flood hazards. The facility treats stormwater from a 264-acre basin draining to Lake Munson. The Agency provided additional funding of over \$5.5 million of match spending for the project.
- Killearn Lakes Restoration. Leon County, the Killearn Lakes Homeowners Association and the District worked in partnership to complete an ecological restoration and water quality improvement project on Lake Blue Heron in the Lake Iamonia watershed. The participants constructed catch basins, treatment swales, and an artificial marsh as well as removed sediments from the lake. The District provided a grant for \$293,377, while the County and partners provided \$247,000 in matching funds.
- John Redd Road Stabilization. The District provided grant funding in the amount of \$793,109 to stabilize and construct stormwater treatment for 1.3 miles of dirt road discharging directly to the Apalachicola River. Calhoun County contributed \$103,488 toward this water quality improvement project.
- Choctawhatchee Bay Stormwater Improvements. Through this project, Walton County stabilized and provided stormwater treatment for several dirt roadways within a 40-acre area discharging directly into Choctawhatchee Bay. The District provided a grant for \$500,000 and the County matched this contribution with \$572,120 of project funding.

- Harbinwood Estates Drainage Improvements. This project involved construction of two, wet-detention facilities and improvements to the existing stormwater conveyances to provide stability and maximize stormwater treatment prior to discharge into Lake Jackson, a SWIM priority waterbody and Outstanding Florida Water. A District grant for \$1,000,000 along with over \$6,000,000 in local funding from Leon County accomplished these necessary water quality improvements.

Capital improvement projects completed during calendar year 2008 (through December 31) include the following:

- Morrison Springs Stormwater Improvements. This project provided several improvements for public access and stormwater treatment at Morrison Springs, a second magnitude spring in northern Walton County. A District grant for \$500,000 along with over \$475,200 in local funding from Walton County, Florida Fish and Wildlife Conservation Commission, and other project partners accomplished these necessary water quality improvements.
- Lower Choctawhatchee Stream Crossing Stabilization. The final unpaved road stream crossing site was stabilized in December 2008. At McCarnley Road in Holmes County, best management practices were applied to prevent sediment from entering a tributary of Holmes Creek. In total, ten sites within Washington, Jackson and Holmes Counties were stabilized with a total grant of \$495,000 from the District and \$174,700 in match funds from the Orange Hill Soil and Water Conservation District and county partners.

Fiscal Year 2008-2009 Capital Improvement Work Plan

As noted previously, the Florida Forever Act was amended and extended until 2018. [Table 6.8](#) provides anticipated Florida Forever capital improvement expenditures through fiscal year 2012-13. These funding estimates will be updated annually.

Table 6.8 Anticipated Florida Forever Work Plan Capital Improvement Expenditures

	FY 08-09	FY 09-10	FY 10-11	FY 11-12	FY 12-13
Capital Improvement Grant Program	\$6,900,796	\$3,691,132	\$TBD	\$TBD	\$TBD
Other Capital Improvements	\$1,475,000	\$1,075,000	\$TBD	\$TBD	\$TBD
Total	\$8,375,796	\$4,766,132	\$TBD	\$TBD	\$TBD

[Table 6.9](#) lists capital improvement projects proposed for implementation over the next five years, depending on funding availability. Basic project descriptions are provided, and progress and modifications from the previous year’s project plans are described as proposed.

Table 6.9 NFWFMD Florida Forever Capital Improvement Projects (revised 4-23-09)

Project	Description	Progress/Modification from Previous Year	Estimated Funding
Apalachicola River and Bay Wetland Restoration	Water quality improvement and habitat restoration. Overall project initiative includes restoration of Apalachicola River floodplain resources and functions, Tates Hell Swamp restoration, and other watershed projects as approved by the Governing Board.	May be partially funded through other state appropriations and used as federal match.	\$1,075,000
Florida Forever Competitive Grant Program	Competitive grants for cooperative grant projects. Approved projects described below.	Funding includes ongoing projects.	\$10,696,743
Okecheepkee-Prairie Regional Stormwater Treatment Facility	Lake Jackson stormwater retrofit project with Leon County.	Continuation of long-term SWIM program priority.	\$400,000
Perdido River Canoe Launch*	Construction of a boat launch within the District's Perdido River WMA for public access to the Perdido River.	New project to increase public access.	\$50,000
West Region Land Management Field Office*	Construction of a facility to provide management of 62,000 acres of District property.	New project to allow for long-term management and restoration activities.	\$625,000
Ecological Restoration	Restoration of wetland, riparian and associated watershed habitats. May include Live Oak Point and other priorities pursuant to approved SWIM plans.	Continuation of long-term SWIM program priority. May also be funded through other state or federal funding sources.	\$350,000
Choctawhatchee Bay Stormwater Retrofit	Construction of stormwater retrofit projects for water quality and hydrologic restoration, pursuant to Choctawhatchee River and Bay SWIM plan. Anticipated focus on Gap Creek basin.	Continuation of long-term SWIM program priority. May also be funded through other local, state, or federal funding sources.	\$500,000
St. Marks River Watershed Stormwater Retrofit	Construction of stormwater retrofit projects for water quality and hydrologic restoration, pursuant to St. Marks River Watershed SWIM plan.	Continuation of long-term SWIM program priority. May also be funded through other local, state, or federal sources.	\$500,000
West Bay Hydrologic Restoration	Restoration of impacts caused by extensive silviculture operations and artificial drainage.	Ongoing St. Andrew Bay SWIM and DOT priority. Ward Creek West parcel acquired in 2008. May be funded through other state or federal funding sources.	\$400,000
Total			\$14,596,743

*Approved by NFWFMD Governing Board on April 23, 2009.

All currently active and approved local government grant projects are listed in [Table 6.10](#). Implementation of these projects will substantially assist in overall implementation of approved NFWFMD SWIM plans for the Apalachicola, Choctawhatchee, Pensacola Bay, St. Andrew Bay, and St. Marks watersheds.

Table 6.10 NFWFMD Local Government Florida Forever Capital Improvement Grant Projects

Recipient	Project	Watershed	Description	Year Approved	Grant Amount
Santa Rosa Island Authority	Little Sabine Bay Circulation Project	Pensacola Bay/Santa Rosa Sound	May include construction of circulation facility, stormwater treatment systems, and sediment removal	2003	\$375,000
Walton County	Oyster Lake Restoration	Choctawhatchee River and Bay/Oyster Lake	Restore lake and wetland habitat and associated hydrology	2003	\$487,500
Escambia County	East Ten Mile Creek Stream Restoration	Ten Mile Creek/ Perdido Bay	Stream restoration of second reach of Ten Mile Creek	2005	\$500,000
Escambia County	Blue Pit Ecosystem Enhancement and Water Quality Improvement	Ten Mile Creek/ Perdido Bay	Ecological restoration and water quality improvement	2005	\$500,000
Washington County	Rolling Pines Road Stabilization	St. Andrew Bay Watershed; Econfina Recharge Area	Sedimentation abatement; stormwater retrofit	2005	\$440,500
Choctawhatchee Basin Alliance	Santa Rosa Sound Ecosystem Restoration	Santa Rosa Sound Choctawhatchee Bay	Stream restoration and stormwater enhancement	2006-07	\$199,000
City of Destin	Destin Harbor Water Quality Improvements	Choctawhatchee River and Bay	Stormwater retrofit for water quality improvements	2006-07	\$201,950
City of Fort Walton Beach	Lower Choctawhatchee Bay Stormwater Initiative	Santa Rosa Sound/ Choctawhatchee Bay	Stormwater retrofit for four sites discharging to Choctawhatchee Bay and Santa Rosa Sound	2006-07	\$306,435
City of Panama City	St. Andrew Bay Yacht Club Stormwater Improvements	St. Andrew Bay	Stormwater retrofit for water quality improvements	2006-07	\$81,000
City of Port St. Joe	Fourth Street Stormwater Pond	St. Joseph Bay	Construct urban stormwater retrofit	2006-07	\$300,000
City of Springfield	Robindale Subdivision Stormwater Improvements	Martin Lake/ St. Andrew Bay	Construct urban stormwater retrofit	2006-07	\$500,000
City of Tallahassee	Sharer Road Stormwater Improvements	Meginnis Creek/ Lake Jackson	Construct retrofit for urban stormwater facility	2006-07	\$500,000
City of Vernon	Vernon Stormwater Retrofit	Holmes Creek/ Choctawhatchee River and Bay	Stormwater retrofit for water quality improvements to Holmes Creek	2006-07	\$200,000
Escambia County	Jones Swamp Ecosystem Restoration	Jones Swamp/ Pensacola Bay	Wetland and stream restoration	2006-07	\$500,000

Recipient	Project	Watershed	Description	Year Approved	Grant Amount
Orange Hill Soil and Water Conservation District	Lower Choctawhatchee Stream Crossing Stabilization	Choctawhatchee River and Bay	Unpaved road/ stream crossing stabilization and sediment removal at ten sites	2006-07	\$495,000
Washington County	Chain Lake Road Stabilization	Pine Log Creek/ Choctawhatchee River and Bay	Unpaved road/ stream crossing stabilization and sediment removal	2006-07	\$262,500
Washington County	River Road Stabilization	Choctawhatchee River and Bay	Sediment abatement and stabilization for adjacent wetlands	2006-07	\$450,000
City of Apalachicola	Water Street & Avenue G Stormwater Improvements	Apalachicola River and Bay	Stormwater retrofit for water quality improvements	2007-08	\$500,000
City of Port St. Joe	Sand Hills Pond Stormwater Improvement	St. Andrew Bay/ St. Joe Bay	Regional stormwater retrofit facility to benefit St. Joseph Bay	2007-08	\$300,000
Florida DEP, NWD	Project Green-shores Site 2	Pensacola Bay	Ecological restoration of Pensacola Bay	2007-08	\$150,000
City of Carrabelle	10 th Street Stormwater Improvements	Apalachicola/ St. George Sound	Stormwater treatment facility for water quality and flood control.	2007-08	\$662,582
City of Fort Walton Beach	Eglin Parkway Stormwater Initiative	Choctawhatchee River and Bay	Construct urban stormwater retrofit	2007-08	\$150,000
Gulf County	Iola Road Stabilization and Erosion Control	Apalachicola River and Bay	Sediment abatement and stabilization for Apalachicola River and floodplain	2007-08	\$950,000
Bay County	Deer Point Lake Dirt Road Stabilization Phase IV	St. Andrew Bay/ Deer Point Lake Reservoir	Stabilize unpaved roads to reduce sedimentation and improve water quality	2007-08	\$726,176
Okaloosa County	Mainsail Drive Stormwater Retrofit	Choctawhatchee Bay/Rocky Bayou	Stormwater retrofit for water quality improvements	2007-08	\$33,800
Escambia County	Second & Sunset Wetland Water Quality Improvement	Pensacola Bay/ Davenport Bayou	Urban stormwater wetland retrofit & restoration	2007-08	\$350,000
Okaloosa County	Rocky Drive Stormwater Retrofit	Choctawhatchee Bay/Rocky Bayou	Stormwater retrofit for water quality improvements	2007-08	\$75,300
City of Gulf Breeze	Gulf Breeze Stormwater Improvements	Pensacola Bay System	Stormwater retrofit for water quality and flood projection	2007-08	\$500,000
Total					\$10,696,743

The current Governing Board approved local government capital improvement grant criteria are provided below in [Table 6.11](#). The distribution of approved Florida Forever Capital Improvement Grant projects, along with other District capital improvement projects, is presented in [Figure 8.2](#), within Chapter VII.

Table 6.11 NFWFMD Local Government Florida Forever Grant Review Criteria

Item	Criterion	Maximum Points	Explanation Of Criterion	Scoring Approach	Guidelines for Point Distribution
1.	Support of District's mission	30	How well does the project correspond to the mission, goals, priorities and strategies as specified in the District Water Management Plan, SWIM Plans, Regional Water Supply Plan?	<i>Objectively link points to District's mission and identified goals.</i>	<ul style="list-style-type: none"> • 10 points if project can be considered part of a District watershed plan, SWIM Plan, Water Supply Plan, Florida Forever Work Plan, or similar. • 5 points for each of the following areas for which benefits are expected: Flood Protection, Water Supply, Natural Systems, Water Quality (20 points maximum). • 5 points if project will directly enhance or add to an ongoing District project; or for project specified within another appropriate plan consistent with the DWMP. • Reject project if zero points earned from this criteria.
2.	Type and extent of existing problem	15	Is there a documented problem? What is the significance of this problem regarding water resources?	<i>Objectively link points to extent and type of existing problem to be addressed.</i>	<ul style="list-style-type: none"> • 15 points for a significant problem affecting a large area or population. • 10 points for localized problem that contributes significantly to adverse cumulative impacts on watershed conditions. • 5 points for a local problem affecting a small part of a watershed or population. • 0 points if problem is not well-defined or the problem can be solved without the proposed project. • Reject project if zero points earned from this criteria.
3.	Effectiveness of Proposed Solution	10	How well does the project address the specific problems and needs identified?	<i>Objectively link points to effectiveness of approach to addressing identified problem.</i>	<ul style="list-style-type: none"> • 1-10 points awarded based on percentage of project's improvements that address identified problems (i.e., 100 percent, 10 points; 50 percent, 5 points). • Reject project if proposed solution will not effectively address the problem.

Item	Criterion	Maximum Points	Explanation Of Criterion	Scoring Approach	Guidelines for Point Distribution
4.	Recognized significance of site or affected waterbody.	15	What is the classification and/or designated importance of the receiving waterbody? Would important and/or sensitive resources be protected or restored?	<i>Objectively link points to recognized priority water resources and significant ecosystems and features.</i>	<ul style="list-style-type: none"> • 15 points for OFW, Class I, or other priority area identified by the District. • 5-10 points awarded for project that benefits public waterbody with documented regionally important habitats or water resource functions. • 1-5 points awarded for project with potential for indirect benefits for public waterbody with regionally important habitats or functions. • 0 points if no known ecosystem benefits would be provided or affected water resources are not otherwise public resources of regional significance.
5.	Ability to implement and maintain the project	15	Does the applicant have the ability to see the project through to completion and provide long-term ownership, operation and maintenance? Has the applicant established a stable, dedicated funding source to maintain the project? Does the applicant propose to share in the cost of the project? If so, at what level?	<i>Scale permitting and cost-share arrangements.</i>	<ul style="list-style-type: none"> • 1 to 5 points based on projected ease of obtaining permits. • 0 to 5 points based on availability and level of completion of detailed designs. • 5 points for entities having some direct match from a 3rd party source (e.g. federal grant, stormwater utility, private partner). • 0 to 10 points based on ability and commitment of applicant to provide for long-term maintenance. • Reject project if zero points earned from this criteria.
6.	Financial need of applicant	15	What financial resources are available? Would the project be completed without funding assistance?	<i>Provide framework linking points to community size and funding levels.</i>	<ul style="list-style-type: none"> • 15 points awarded to financially disadvantaged small communities with insufficient financial resources to complete the project. • 5 points for larger entities with some direct match but which cannot complete the project without the proposed grant. • 0 points if project could be completed without funding assistance.
	TOTAL	100			

7 Mitigation Donation Annual Report

Section 373.414(1)(b)2, Florida Statutes, 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 Section 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 section 373.4137, F.S. (regional mitigation for specified transportation impacts).

Because the Northwest Florida Water Management District does not yet implement Phase II (wetland resource permitting) of the District's Environmental Resource Permitting (ERP) program, and because section 373.4137, F.S. (DOT Mitigation) is specifically excluded from this report, this annual requirement is fulfilled separately by DEP. It is anticipated that wetland resource protection aspects of ERP will be implemented within the Northwest Florida Water Management District, jointly by the District and DEP, in mid-2009. After that time, this report will be revised to include a report on any cash donations accepted as mitigation, as regulated by the District. The District may also receive funds in the future through its agreement with the U.S. Army Corps of Engineers under the Umbrella Watershed Based Regional Mitigation plan. Thus far no donations have been received or planned through this agreement.

8 Surface Water Improvement and Management Program and Watershed Restoration Summary Report

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. Northwest Florida Water Management District has a long-term program to protect and restore watershed resources District-wide. The planning framework for this program is the Surface Water Improvement and Management (SWIM) program, through which watershed and project planning are accomplished for major riverine-estuarine watersheds as indicated below ([Figure 8.1](#)).

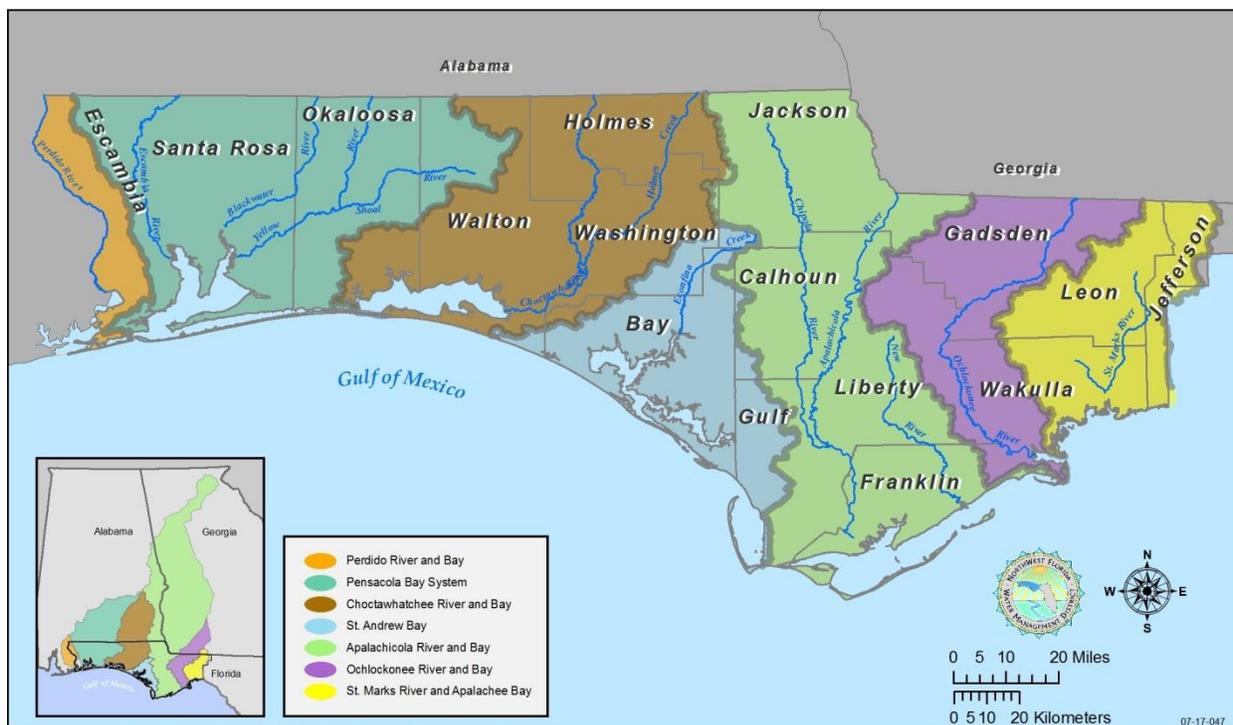


Figure 8.1 NFWWMD SWIM Priority Watersheds

Status of Watershed Planning

The Northwest Florida Water Management District’s SWIM Priority list was updated in 2006 (NFWWMD 2006a). The District’s designated priority waterbodies are listed in [Table 8.1](#). In addition to respective watersheds, the list identifies major tributaries and waterbodies. All other tributaries, sub-embayments, and contributing watershed areas are also considered as being within the listed priority waterbodies.

Table 8.1 NFWWMD SWIM Priority List

Apalachicola River and Bay Watershed	
Apalachicola River	New River
Apalachicola Bay	Lake Seminole
Chipola River	
Pensacola Bay Watershed	
Escambia River	Escambia Bay
Blackwater River	East Bay
Yellow River	Blackwater Bay
Shoal River	Western and Central Santa Rosa Sound
East Bay River	Big Lagoon
Pensacola Bay	
Choctawhatchee River and Bay Watershed	
Choctawhatchee River	Eastern Santa Rosa Sound
Holmes Creek	Choctawhatchee Bay
St. Andrew Bay Watershed	
St. Andrew Bay	St. Joseph Bay
North Bay	Deer Point Lake Reservoir
West Bay	Econfina Creek
East Bay	
St. Marks River and Apalachee Bay Watershed	
St. Marks River	Lake Lafayette
Wakulla River & Wakulla Springs	Lake Munson
Lake Miccosukee	Apalachee Bay
Ochlockonee River and Bay Watershed	
Ochlockonee Bay	Lake Jackson
Ochlockonee River	Lake Iamonia
Perdido River and Bay Watershed	
Perdido River	Perdido Bay

Currently approved SWIM plans include the following:

- Apalachicola River and Bay Management Plan
- Pensacola Bay System SWIM Plan
- Lake Jackson Management Plan
- Choctawhatchee River and Bay System SWIM Plan
- St. Andrew Bay Watershed SWIM Plan
- St. Marks River and Apalachee Bay Watershed SWIM Plan

Related Programs

The SWIM program supports associated District programs, including regional wetland mitigation, Florida Forever capital improvements, land acquisition, flood map modernization, and ETDM. Plan implementation is accomplished through a variety of activities, including stormwater retrofit for water quality improvement and flood protection, wetland and aquatic habitat restoration, resource assessments, floodplain mapping, public outreach and awareness initiatives, and intergovernmental review of proposed land use changes and other activities.

Implementation integrates and leverages 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 capital improvement funding (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 local government contributions. Additionally, regional mitigation projects funded by Florida Department of Transportation (DOT) and

implemented by the District are planned on a watershed basis and complement SWIM and other watershed protection and restoration efforts. Cumulatively, the overall effort results in significant protection and improvement of watershed resources District-wide.

SWIM Activities and Program Implementation Update

[Table 8.2](#) provides a planning-level update of anticipated SWIM project funding for fiscal year 2008-2009. Funding amounts indicated are inclusive of SWIM funding, Water Management Land Trust Fund, anticipated legislative appropriations, and other state and federal grant sources. Additional local and state match funding amounts are not included in the figures provided. Related Florida Forever Capital Improvement funding is discussed in Chapter VI.

Table 8.2 SWIM Work Plan for FY 2008-2009

SWIM Program Activities	Purpose	Estimated FY 08/09 Funding
Apalachicola River and Bay System		
Apalachicola River and Bay Wetland Restoration	Floodplain, hydrologic and riverine habitat restoration in the Apalachicola Watershed, including Tates Hell Swamp, East Bay and Whiskey George basin	\$2,970,000
Eastpoint Stormwater Plan	Stormwater plan development for community of Eastpoint	\$178,000
IFAS No-Till Study	Agricultural BMP validation	\$35,000
Pensacola Bay System		
Bayou Chico Restoration	Estuarine restoration, including sediment sampling and analysis	\$300,000
Yellow River Analysis	Collection and analysis of long-term hydrologic and water quality data	\$250,000
Choctawhatchee River and Bay Watershed		
Urban Stormwater Retrofit	Basin-wide urban stormwater planning and retrofit, including construction of Clement Taylor Park retrofit	\$282,000
Ecological Restoration	Wetland and riparian habitat restoration	\$350,000
Gap Creek Stormwater Planning	Development of retrofit feasibility analysis and recommendations	\$59,000
St. Andrew Bay Watershed		
Urban Stormwater Retrofit	Includes Henry Davis Park retrofit project and basin-wide stormwater planning in cooperation with local governments and stakeholders	\$2,700,000
Ecological Restoration	Planning and implementation of shoreline, wetland, and watershed restoration	\$100,000
St. Marks River/Apalachee Bay Watershed		
Watershed Planning	SWIM plan update and project planning	\$50,000

SWIM Program Activities	Purpose	Estimated FY 08/09 Funding
Stormwater plan development	Stormwater retrofit planning in cooperation with local governments	\$200,000
District-Wide Activities		
Research, Data Collection, and Monitoring	Water resource data collection and monitoring; detailed elevation data collection	\$635,000
Minimum Flows and Levels	Fresh water need determinations	\$303,000
Water Resource Education	Public outreach for water resource education	\$131,000
Technical Assistance	Assistance to local governments and watershed initiatives; review of local government comprehensive plans and DRIs; coordination with state and federal agencies; planning in support of mitigation and ETDM; program monitoring and reporting	\$400,000
Watershed Project Development	Preliminary stormwater and restoration project planning; coordination with local governments cooperating agencies and initiatives	\$300,000
Florida Forever Program Administration	Administration of District-wide grant program	\$90,000

Watershed Resource Restoration Capital Improvement Summary Table

Summary information on watershed restoration projects ongoing during fiscal year 2007-2008 is presented in [Table 8.3](#). The table compiles information concerning projects implemented through the SWIM, regional wetland mitigation, and Florida Forever capital improvement grant programs. These projects are implemented in cooperation with numerous local governments, as well as state and federal agencies. The current projects represent long-term watershed resource restoration and wetland mitigation efforts encompassing nearly 40,000 acres District-wide.

Table 8.3 NFWFMD Watershed Restoration Capital Improvements

Project Name	Purpose	Cooperator	Program	Status
Apalachicola River and Bay System				
Apalachicola River and Bay Wetland Restoration	Restoration of floodplain resources, including removal of approximately 337,000 cubic yards of dredge spoil and additional slough restoration. Overall project initiative also includes Tates Hell projects listed below.	Gulf County	SWIM; Florida Forever	Implementation
Eastpoint Stormwater Retrofit	Stormwater retrofit encompassing 166 acres within coastal community along Apalachicola Bay.	Eastpoint W&SD, U.S. EPA	SWIM; U.S. EPA 319	Complete
Tates Hell Swamp Restoration	Hydrologic restoration of approximately 19,300 acres of Tates Hell Swamp, including Gator Creek, Gully Branch, Big Slough, and Sand Beach Branch.	FDACS DOF, NFWFMD	SWIM; Florida Forever	Implementation
Doyle Creek Basin Restoration	Additional hydrologic and vegetation restoration on 25 acres to enhance 1,820 acres within Tates Hell Swamp.	DOT, FDACS DOF	DOT Mitigation	Complete; Monitoring
Whiskey George Basin Restoration	Additional hydrologic restoration for 2,850 acre basin within Tates Hell Swamp.	FDACS DOF, DOT	DOT Mitigation, SWIM	Implementation
Cat Point Breakwater	Breakwater construction and marsh restoration along Apalachicola Bay.	DOT Mitigation	SWIM; DOT Mitigation	Implementation
Juniper Creek Headwaters Preserve	Preservation and enhancement of Juniper Creek headwater wetlands.	DOT; Bay Co. Conservancy	DOT Mitigation	Implementation; monitoring
John Redd Road Stabilization	Stabilization of unpaved road and removal of direct sediment discharge into the Apalachicola River.	Calhoun County	Florida Forever	Complete
Water St. & Ave. G Stormwater	Stormwater retrofit of eight-acre portion of downtown Apalachicola that discharges to lower Apalachicola River.	City of Apalachicola	Florida Forever	Engineering/ Design
10 th Street Stormwater	Stormwater retrofit for approximately 145 acres discharging into St. George Sound.	City of Carrabelle	Florida Forever	Engineering/ Design

Project Name	Purpose	Cooperator	Program	Status
Pensacola Bay System				
19 th Avenue & Brainerd Street Stormwater	Regional stormwater retrofit 160-acre basin discharging to Bayou Texar.	Pensacola	SWIM	Complete
Palafox Basin Alum Injection System	Regional stormwater retrofit for 266-acre basin discharging into Pensacola Bay; includes L-Street Pond Alum injection system within downtown Pensacola.	Pensacola	SWIM: U.S. EPA (319)	Implementation
Little Sabine Bay Circulation Project	Circulation facility construction, stormwater retrofit for about five-acre area, and sediment removal/ habitat restoration	Santa Rosa Island Authority	Florida Forever	Permitting
Rogers Tract Mitigation	Mitigation preservation and enhancement for 40 acres within the Blackwater River watershed.	DOT	DOT Mitigation	Preservation; monitoring
Bluff Springs Mitigation	Mitigation preservation and enhancement encompassing 311 acres within the Escambia River watershed.	DOT	DOT Mitigation; Florida Forever	Preservation; monitoring
Yellow River Ranch	Mitigation restoration project for 280 acres within the Yellow River watershed.	DOT	DOT Mitigation	Implementation
Brewer Tract Mitigation	Mitigation preservation and enhancement encompassing 73 acres within the Blackwater River watershed.	DOT	DOT Mitigation	Preservation; monitoring
Jones Swamp Wetland & Floodplain Restoration	Wetland restoration project for four-acre area within Jones Swamp.	Escambia County	Florida Forever	Implementation
Project Greenshores, Site 2	Establishment of approximately 15 acres of salt marsh/oyster reef along Bayfront Parkway in Pensacola Bay.	DEP	Florida Forever	Implementation
Second & Sunset Wetland Water Quality Improvement	Stormwater retrofit for 33-acre area discharging to Davenport Bayou and Pensacola Bay.	Escambia County	Florida Forever	Implementation
Gulf Breeze Stormwater Improvement, Phase II	Additional regional stormwater retrofit for 46-acre area discharging into Pensacola Bay and Santa Rosa Sound.	Gulf Breeze	Florida Forever	Implementation

Project Name	Purpose	Cooperator	Program	Status
Choctawhatchee River and Bay Watershed				
Cessna Park Stormwater Remediation	Stormwater BMPs, habitat restoration & public education at park on Hogtown Bayou in Walton County	Choctawhatchee Basin Alliance	SWIM	Complete
Oyster Lake Restoration	Wetland restoration project to re-establish hydrologic flow patterns within 60-acre portion of a coastal dune lake system.	Walton County	Florida Forever	Implementation
Freeport Public Access Reuse Project	Development of 53-acre public access reuse capability, including storage and ancillary facilities, to reduce pollutant loading to Choctawhatchee Bay.	City of Freeport	SWIM, Florida Forever	Implementation
Clement Taylor Park Retrofit and Ecological Restoration	Stormwater retrofit and habitat restoration within Destin city park. Encompasses 43-acre treatment area.	Choctawhatchee Basin Alliance; Destin	SWIM	Implementation
Lafayette Creek Mitigation	Mitigation wetland protection and enhancement encompassing 3,160 acres within the Lafayette Creek basin.	DOT	DOT Mitigation, Florida Forever	Implementation; monitoring
Live Oak Point	Preservation and enhancement of 475 acres of major salt marsh on Choctawhatchee Bay.	DOT Mitigation	DOT Mitigation	Implementation; monitoring
Choctawhatchee-Caryville Mitigation	Hydrologic enhancement for 100 acres in the Upper Choctawhatchee Water Management Area.	DOT Mitigation	DOT Mitigation	Complete
Devil's Swamp Mitigation	Hydrologic enhancement and vegetation restoration for 4,850 acres in southern Walton County.	DOT Mitigation	DOT Mitigation	Implementation; monitoring
Sand Hill Lakes Mitigation Bank	Ecological restoration and public access, encompassing approximately 2,155 acres of wetland mitigation. Also includes recharge area for Econfina Creek and Deer Point Lake Reservoir.	NFWFMD	DOT Mitigation	Implementation
Choctawhatchee Bay Stormwater Phase I	NPS pollution abatement and removal of direct sediment discharges from Choctawhatchee Bay.	Walton County	Florida Forever	Complete
Lower Choctawhatchee Stream Crossing Stabilization	Stabilization of ten unpaved road stream crossings and removal of direct sediment discharges into tributary streams.	Orange Hill SWCD	Florida Forever	Complete

Project Name	Purpose	Cooperator	Program	Status
Morrison Springs Stormwater Improvement	NPS pollution abatement and stormwater improvements at a second magnitude spring. Encompasses about 15 acres of stormwater retrofit.	Walton County	Florida Forever	Complete
Santa Rosa Sound Ecosystem Restoration	Stream restoration and stormwater enhancement for a portion of Fort Walton Beach discharging to Santa Rosa Sound. Includes 63 acres of stormwater retrofit.	Choctawhatchee Basin Alliance	Florida Forever	Implementation
Destin Harbor Water Quality Improvement	Stormwater retrofit for 31-acre urban watershed discharging to Destin Harbor.	Destin	Florida Forever	Implementation
Lower Choctawhatchee Bay Stormwater Initiative	Stormwater retrofit treating four sites and 283 acres discharging into Choctawhatchee Bay.	Fort Walton Beach	Florida Forever	Implementation
Chain Lake Road Stabilization	NPS pollution abatement and sediment removal of an unpaved stream crossing on Pine Log Creek.	Washington County	Florida Forever	Implementation
River Road Stabilization	Stabilization of unpaved road and removal of direct sediment discharges into adjacent wetlands.	Washington County	Florida Forever	Implementation
Vernon Stormwater Retrofit	Stormwater retrofit for 15 acre area directly discharging to Holmes Creek.	Vernon	Florida Forever	Implementation
Eglin Parkway Stormwater Initiative	Stormwater retrofit treating 62 acre urbanized area in the Choctawhatchee Bay watershed.	City of Fort Walton Beach	Florida Forever	Implementation
Mainsail Drive Stormwater Retrofit	Stormwater retrofit treating four acres discharging to Rocky Bayou and Choctawhatchee Bay.	Okaloosa County	Florida Forever	Implementation
Rocky Drive Stormwater Retrofit	Stormwater retrofit treating six acres discharging to Rocky Bayou and Choctawhatchee Bay.	Okaloosa County	Florida Forever	Implementation
St. Andrew Bay Watershed				
Lake Powell Stormwater Retrofit	Construction of stormwater retrofit; exfiltration system treating about three acres discharging to Lake Powell.	Bay County	SWIM	Complete
Henry Davis Park Stormwater Retrofit	Construction of stormwater retrofit treating about 137 acres within Panama City	Panama City	SWIM	Complete

SWIM Program and Watershed Restoration Summary Report

Project Name	Purpose	Cooperator	Program	Status
Deer Point Lake Unpaved Roads Phases IV	Unpaved road stabilization to remove sediment discharges from Deer Point Lake Reservoir.	Bay County	Florida Forever	Implementation
11th Street Stormwater Retrofit	Stormwater retrofit for urban development discharging into Watson Bayou.	Bay County	SWIM, Florida Forever	Planning
Ward Creek West Hydrologic Restoration	Vegetation and wetland restoration for 719 acres in the West Bay watershed.	NFWFMD	DOT Mitigation	Implementation
Lynn Haven Breakwater and Retrofit	Stormwater retrofit and shoreline wetland habitat restoration along St. Andrew Bay.	Lynn Haven; DOT	SWIM; Florida Forever; DOT Mitigation	Complete; Monitoring
Rolling Pines Road Stabilization	Unpaved road stabilization to eliminate sedimentation within the Econfina Recharge Area.	Washington County	Florida Forever	Implementation
Fourth Street Stormwater Pond	Stormwater retrofit treating 17 acre urban watershed discharging to St. Joseph Bay.	City of Port St. Joe	Florida Forever	Implementation
Robindale Subdivision Stormwater Improvement	Stormwater retrofit treating 53 acres that discharge to Martin Lake and St. Andrew Bay.	Springfield	Florida Forever	Implementation
St. Andrew Bay Yacht Club Stormwater Improvement	Stormwater retrofit treating 25 acres discharging to St. Andrew Bay and affecting approximately 28,000 square feet of seagrass.	Panama City	Florida Forever	Implementation
Sand Hills Stormwater Pond	Stormwater retrofit treating 29 acres of Port St. Joe discharging to St. Joseph Bay.	City of Port St. Joe	Florida Forever	Implementation
Iola Road Stabilization & Erosion Control	Unpaved road stabilization to eliminate sedimentation to the Apalachicola River and adjacent wetlands.	Gulf County	Florida Forever	Implementation
Ochlockonee River and Bay Watershed/Lake Jackson				
Okeehoopkee Prairie Stormwater Mgmt. Facility	Regional stormwater retrofit for area of Tallahassee discharging into Lake Jackson.	Leon County	Florida Forever	Permitting
Harbinwood Estates Retrofit	Stormwater retrofit and erosion control to retrofit 200 acre residential and commercial area discharging into Lake Jackson.	Leon County	Florida Forever	Complete

Project Name	Purpose	Cooperator	Program	Status
Meginnis Arm Shoreline	Shoreline restoration for 17 acres on Lake Jackson for wetland mitigation.	DOT	DOT Mitigation	Implementation; monitoring
Womack Creek Restoration	Vegetation restoration for 70 acres within Tates Hell Swamp.	DOT	DOT Mitigation	Complete; monitoring
Killearn Lakes Restoration	Habitat restoration and water quality improvement for approximately 73 acres in the Lake Iamonia and Ochlockonee River watershed.	Leon County	Florida Forever	Complete
Sharer Road Stormwater Improvement	Stormwater retrofit for 1,500 acres discharging to Meginnis Creek tributary and Lake Jackson.	Tallahassee	Florida Forever	Implementation
St. Marks River/Apalachee Bay Watershed				
Gibby Pond Retrofit	Regional stormwater retrofit for 327 acres within the St. Marks River and Apalachee Bay watershed.	Blueprint 2000; DOT	Florida Forever	Complete
St. Marks River Watershed Stormwater Retrofit	Construction of stormwater retrofit projects for water quality and hydrologic restoration, pursuant to St. Marks River Watershed SWIM plan.	Local governments	SWIM; Florida Forever	Planning
Perdido River and Bay Watershed				
Perdido River Mitigation Phases I & II	Preservation of 216 acres and hydrologic/vegetation restoration of 67 acres within Perdido River WMA	DOT Mitigation	DOT Mitigation	Implementation; monitoring
Ten Mile Creek Restoration	Major environmental stream restoration encompassing approximately 237 acres and one mile of Ten Mile Creek (East Ten Mile Creek).	Escambia County	Florida Forever	Implementation
Blue Pit Ecosystem Enhancement and Water Quality Improvement	Stormwater retrofit and restoration of about ten acres in the Ten Mile Creek basin.	Escambia County	Florida Forever	Implementation

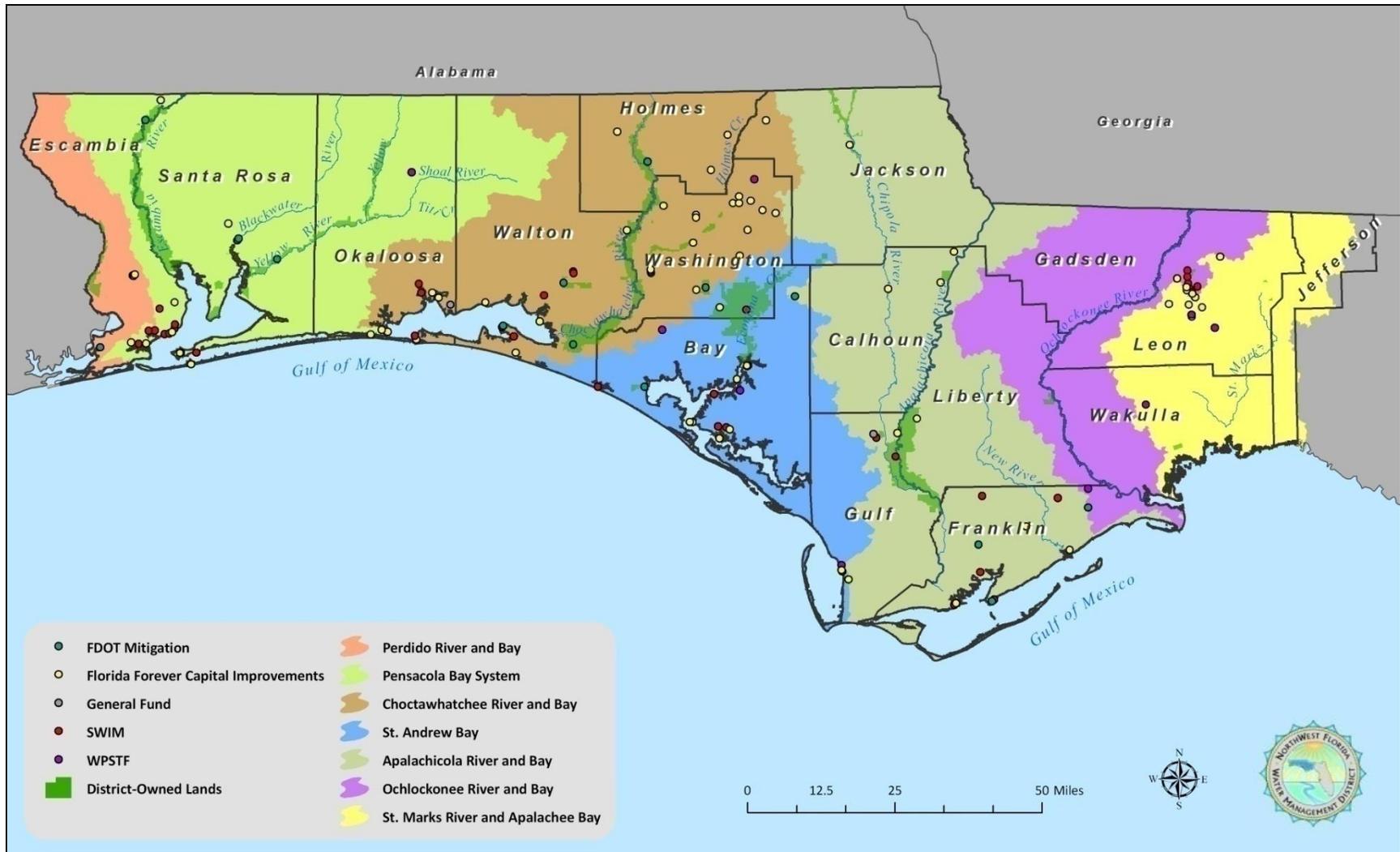


Figure 8.2 NFWMD Capital Project Distribution

9 References

- Bartel, R., Pratt, T., Macmillan, T., Potts, R., Richards, C., Womble, J., et al. (2000). *Regional water supply plan for Santa Rosa, Okaloosa, and Walton Counties* (Water Resources Assessment 2000-1). Havana, FL: Northwest Florida Water Management District.
www.nfwmd.state.fl.us/pubs/r2wsp/rwsp.htm
- Bonekemper, J., Macmillan, T., Bartel, R., Thorpe, P. Marchman, G., Layfield, H., et al. (2001). *Florida Forever 2001 five-year work plan* (Project Development Series 2001-1). Havana, FL: Northwest Florida Water Management District.
http://www.nfwmd.state.fl.us/pubs/florida_forever/florida_forever.htm
- Bonekemper, J. 2003. *Northwest Florida Water Management District Water Supply Projections 2005-2025* (Water Resources Assessment 03-01). Havana, FL: Northwest Florida Water Management District.
http://www.nfwmd.state.fl.us/rmd/water_supply_projections/water_supply_projections.htm
- Chelette, A., T.R. Pratt, and B.G. Katz. (2002). *Nitrate Loading as an Indicator of Nonpoint Source Pollution in the Lower St. Marks-Wakulla Rivers Watershed* (Water Resources Special Report 02-1). Havana, FL: Northwest Florida Water Management District.
www.nfwmd.state.fl.us/pubs/nitrate/wrsp02-1.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). Havana, FL: Northwest Florida Water Management District. www.nfwmd.state.fl.us/pubs/wrtfr04-01/wrtfr04-01.htm
- Florida Department of Environmental Protection. (2005). *Water quality assessment report: Apalachicola–Chipola*. Tallahassee, FL: Author.
<ftp://ftp.dep.state.fl.us/pub/water/basin411/apalach/assessment/Apalach-LORES.pdf>
- Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Watershed Management. (2006). *Integrated water quality assessment for Florida: 2006 305(b) report and 303(d) list update*. Tallahassee, FL: Author.
www.dep.state.fl.us/water/tmdl/docs/2006_Integrated_Report.pdf
- Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Watershed Management. (2006). *Water quality assessment report Choctawhatchee–St. Andrew*. Tallahassee, FL: Author. <ftp://ftp.dep.state.fl.us/pub/water/basin411/csa/assessment/G3AS-Chocta-LR-Merge.pdf>
- Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Watershed Management. (2006). *Water quality assessment report Perdido River and Bay*. Tallahassee, FL: Author. <ftp://ftp.dep.state.fl.us/pub/water/basin411/perdido/status/Perdido.pdf>
- Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Watershed Management. (2007). *Water quality assessment report Pensacola Bay*. Tallahassee, FL: Author. ftp://ftp.dep.state.fl.us/pub/water/basin411/pensacola/assessment/Pensacola_Bay.pdf

References

- Florida Department of Environmental Protection, Division of Water Resource Management, Water Reuse Program . (2008-revised). *2006 reuse inventory*. Tallahassee, FL: Author...
www.dep.state.fl.us/water/reuse/inventory.htm
- Florida Department of Environmental Protection, Division of Water Resource Management, Bureau of Watershed Management (2005). *Water quality assessment report Apalachicola–Chipola: Draft Verified List*. Tallahassee, FL: Author. http://www.dep.state.fl.us/water/tmdl/verified_gp2-c2.htm
- HydroGeoLogic, Inc. (2005). *Saltwater intrusion in the Floridan Aquifer in Walton, Okaloosa, and Santa Rosa Counties, Florida: Western model domain*. Herndon, VA: Author.
www.nfwmd.state.fl.us/pubs/hgl_western_domain/hgl_western_domain.html
- Macmillan, T.L. (1997). *Lake Jackson management plan addendum* (Program Development Series 97-4). Havana, FL: Northwest Florida Water Management District.
- Macmillan, T.L., and Diamond, C. (1994). *Lake Jackson management plan: A comprehensive plan for the restoration and preservation of Lake Jackson*. Havana, FL: Northwest Florida Water Management District.
- Northwest Florida Water Management District. (1998). *District water supply assessment* (Water Resources Assessment 98-2). Havana, FL: Author.
www.nfwmd.state.fl.us/rmd/wsa/wsamain.htm
- Northwest Florida Water Management District. (2007). *Regional Water Supply Plan: Region V, Franklin and Gulf Counties* (Water Resources Assessment 07-01). Havana, FL: Author.
www.nfwmd.state.fl.us/pubs/rwsp/plan.htm
- Northwest Florida Water Management District. (2008). *Consolidated Annual Report: March 1, 2008*. Havana, FL: Author. www.nfwmd.state.fl.us/pubs/consolidatedAR/consolAR.html
- Northwest Florida Water Management District. (2008b). *Region III Regional Water Supply Plan, Bay County, Florida* (Program Development Series 08-02). Havana, FL: Author.
www.nfwmd.state.fl.us/rmd/water_supply_planning/region_III_wsp.html
- Northwest Florida Water Management District. (2000). *St. Andrew Bay Watershed Surface Water Improvement and Management Plan* (Program Development Series 00-02).Havana, FL: Author.
www.nfwmd.state.fl.us/pubs/sabswim/sabswim.htm
- Northwest Florida Water Management District. (2005). *District Water Management Plan* (Program Development Series 2005-1). Havana, FL: Author.
www.nfwmd.state.fl.us/pubs/dwmp2005/dwmp05.htm.
- Northwest Florida Water Management District. (2006a). *Surface Water Improvement and Management Program Priority List* (Program Development Series 2006-02). Havana, FL: Author.
www.nfwmd.state.fl.us/rmd/rmd.htm
- Northwest Florida Water Management District. (2006b). *Florida Forever Land Acquisition Five Year Work Plan* (Program Development Series 2006-01). Havana, FL: Author.
www.nfwmd.state.fl.us/lands/lands.htm

- Northwest Florida Water Management District. (2006c). *Northwest Florida Umbrella, Watershed-Based, Regional Mitigation Plan. Exhibit A, Agreement between the Northwest Florida Water Management District and the U.S. Army Corps of Engineers, Jacksonville District for Department of Transportation and other Wetlands Mitigation*. Havana, FL: Author. www.nwfwmdwetlands.com/index.php?Page=11
- Northwest Florida Water Management District. (2006d). *Regional Water Supply Plan for Santa Rosa, Okaloosa, and Walton Counties: Water Supply Planning Region II* (Water Resources Assessment 06-01). Havana, FL: Author. www.nwfwmd.state.fl.us/pubsdata/generalpubs.html
- Northwest Florida Water Management District. (2007). *Five-Year Water Resource Development Work Program: Fiscal Year 2005-2006 Update* (Program Development Series 2006-3). Havana, FL: Author.
- PBS&J. (2000a). *Water Conservation Task Summary Report*. Tallahassee, FL: Author.
- PBS&J. (2000b). *Reuse Task Summary Report*. Tallahassee, FL: Author.
- PBS&J. (2006). *Final Report: Conceptual alternative water supply development projects and planning level cost estimates: Water supply planning Region II*. Tallahassee, FL: Author. www.nwfwmd.state.fl.us/pubs/final_%20water_Report/Final%20Water%20Supply%20Study%20Report.pdf
- Pratt, Thomas R. (2001). *Results of Floridan Aquifer Drilling Program in Santa Rosa, Okaloosa, and Walton Counties, Florida* (Technical File Report 01-1). Havana, FL: Northwest Florida Water Management District. www.nwfwmd.state.fl.us/pubs/tfr01-1/tfr01-1.htm
- Pratt, T.L., C.J. Richards, K.A. Milla, J.R. Wagner, J.L. Johnson, and R.J. Curry. (1996). *Hydrogeology of the Northwest Florida Water Management District* (Water Resources Special Report 96-4). Havana, FL: Northwest Florida Water Management District. www.nwfwmd.state.fl.us/pubs/hydrogeo/gwhydro.pdf
- Ryan, P.L., and E. Hemmert. (1997). *St. Marks River Watershed Surface Water Improvement and Management Plan* (Program Development Series 97-1). Havana, FL: Northwest Florida Water Management District.
- Scott, T.M., R.P. Meegan, R.C. Means, S.B. Upchurch, R.E. Copeland, J. Jones, T. Roberts, and A. Willet. (2004). *Springs of Florida*. FGS Bulletin No. 66. Tallahassee, FL: Florida Department of Environmental Protection, Florida Geological Survey.
- Thorpe, P.J., and P.L. Ryan. (1996). *Choctawhatchee River and Bay System Surface Water Improvement and Management Plan* (Program Development Series 96-4). Havana, FL: Northwest Florida Water Management District.
- Thorpe, P.J., R. Bartel, P.L. Ryan, K. Albertson, T. Pratt, and D.J. Cairns. (1997). *Pensacola Bay System Surface Water Improvement and Management Plan* (Program Development Series 97-2). Havana, FL: Northwest Florida Water Management District. www.nwfwmd.state.fl.us/pubs/swimpens/pbsswim.htm

References

- Thorpe, P.J., F. Sultana, and C. Stafford. (2002). *Choctawhatchee River and Bay System Surface Water Improvement and Management Plan, 2002 Update* (Program Development Series 02-2). Havana, FL: Northwest Florida Water Management District.
www.nfwmd.state.fl.us/pubs/chocswim/choc_swim_update.htm
- Tonsmeire, D., D.J. Cairns, E. Hemmert, and P.L. Ryan. (1996). *Apalachicola River and Bay Management Plan* (Program Development Series 96-1). Havana, FL: Northwest Florida Water Management District.
- Whitcomb, John B. (2005). *Florida Water Rates Evaluation of Single Family Homes*. Boulder, CO: Author. www.nfwmd.state.fl.us/permits/waterratesreport.pdf

Appendix: District Water Management Plan Annual Performance Measures

The water management districts, DEP, and the Executive Office of the Governor developed core annual performance measures for the district water management plans. These measures are intended as a means of evaluating programs and budgets on an annual basis. While individual districts are free to develop additional strategies and measures specific to the needs of their region, these core measures are intended to reflect statewide priorities. A number of measures are provided for each area of responsibility, as is a category called “Common Measures.” This latter category reflects measures that apply to more than one responsibility and are therefore grouped as a common set. It should be noted that a number of the statewide performance measures apply to programs not implemented by the Northwest Florida Water Management District. Values and trends reported in these cases reflect values and results provided by DEP or other agency staff.

Water Supply

Water Supply Objective 1: Increase available water supplies and maximize overall water use efficiency.

WS 1(a) Percentage of Domestic Wastewater Reuse

The state and water management districts continue to emphasize wastewater reuse. This resource as a result has become an important alternative to the use of potable supplies for such beneficial uses as landscape irrigation, industrial processing and power generation. This measure is intended to identify on an annual basis the wastewater reuse capacity of facilities within the NFWMD and the proportion of wastewater effluent actually reused. As of the most recent DEP reuse report, there were 53 reuse facilities in the District. Of the 107 MGD of domestic wastewater reuse capacity, 54 MGD were used during 2006, or about 51 percent. Of this, approximately 21.4 percent was allocated to beneficial public access irrigation. For more information on wastewater reuse within the NFWMD, please visit <http://www.dep.state.fl.us/water/reuse/inventory.htm>.

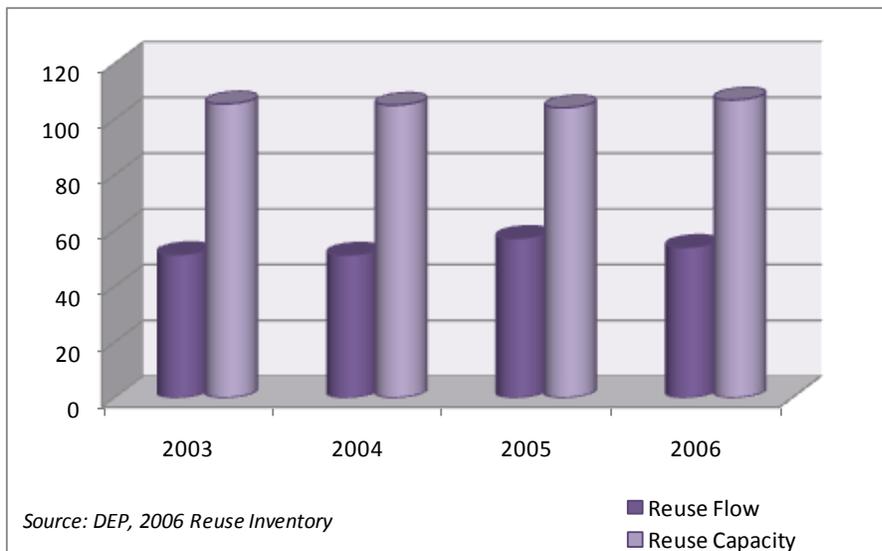
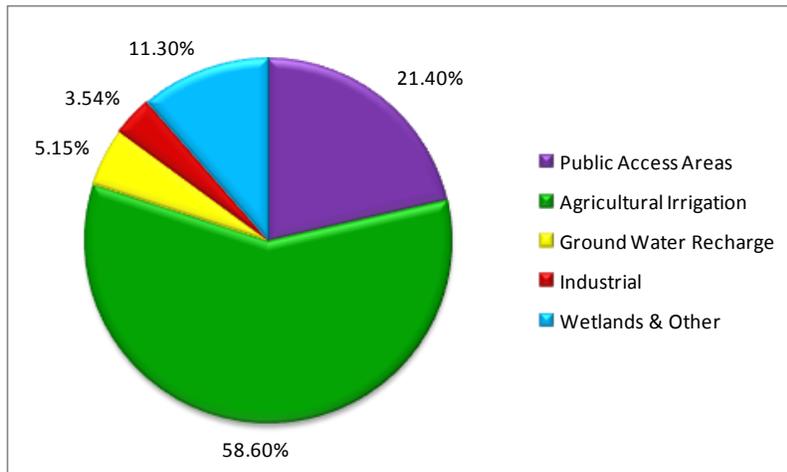


Figure A.1 Percent of Reuse Capacity Used in NFWMD

Table A.1 Percent of Reuse Capacity Used by County

County	Reuse Capacity (MGD)	Reuse Flow (MGD)	Percent of reuse capacity used	Percent change in reuse capacity 2005-2006
Bay	9.26	2.7	29.16%	28.79%
Escambia	13.48	6.08	45.10%	0.82%
Franklin	0.71	0.34	47.89%	0%
Gadsden	1.42	0.58	40.85%	0%
Gulf	0.35	0.29	82.86%	0%
Jackson	1.64	0.79	48.17%	0%
Jefferson	1.35	0.71	52.59%	3.85%
Leon	25.34	18.01	71.07%	-11.55%
Liberty	0.2	0.16	80.00%	0%
Okaloosa	30.31	16.19	53.41%	4.27%
Santa Rosa	5.56	2.77	49.82%	-0.36%
Wakulla	1.1	0.57	51.82%	11.11%
Walton	15.91	4.6	28.91%	19.00%
Washington	0.27	0.2	74.07%	0%
Total	106.9	53.99	50.51%	2.68%

Source: DEP, Division of Water Resource Management, Water Reuse Program, 2006 Reuse Inventory. [Holmes and Calhoun County omitted as reuse capacity is negligible in both locations.]



Source: DEP, Division of Water Resource Management, Water Reuse Program, 2006 Reuse Inventory.

Figure A.2 Reuse Allocation

WS 1(b) Gross Per Capita Water Use (Public Supply) by District and Water Supply Planning Regions

Public supply represents one of the two primary water use sectors (along with commercial-industrial), and it is experiencing the greatest growth in use levels District-wide. This measure is intended to show the trend of such use, recognizing that water conservation can serve as a significant source of “new water” to meet public needs. Gross per capita public supply use is calculated by dividing the total publicly supplied water used (in gallons per day) by the population served. However, because service population by utility has not been gathered consistently, gross per capita as presented below has been calculated by dividing the total publicly supplied and domestic self-supplied water used (in gallons per day) by the total county population. For more information, please see the final draft of the Water Supply Assessment Update at http://www.nfwmd.state.fl.us/rmd/water_supply_planning/regional_water_supply_planning.html.

The update to the District’s water supply assessment for the 2010-2030 planning period is nearly complete. The information contained in the table below contains the draft water use data using 2005 as the base year and illustrates the differences in current water use and the forecasted water use for regions within the District. The projections indicate that each region will see an increase in the amount of water required for average daily use, while the per capita rates across the District have decreased since 2000.

Table A.2. Public Supply Water Use Estimates and Projections by Region

Region	Total Public Supply Water Use (mgd)		Average Uniform Gross Per Capita (gal/d)	Primary Water Source	
	2005	2030	2005		
I	Escambia	40.45	54.42	Sand-and-Gravel Aquifer	
	Total	40.45	54.42		140
II	Santa Rosa	14.07	23.22	Floridan Aquifer/ Sand-and-Gravel Aquifer	
	Okaloosa	22.73	31.64		106
	Walton	8.10	15.74		125
	Total	44.91	70.60		196
III	Bay	28.92	56.94	Deer Point Lake Reservoir	
	Total	28.92	56.94		198
IV	Calhoun	0.63	0.95	Floridan Aquifer	
	Holmes	1.20	1.72		148
	Jackson	2.12	2.55		205
	Liberty	0.33	0.71		143
	Washington	1.02	1.23		118
	Total	5.08	7.15		133
V	Gulf	1.82	3.49	Floridan & Surficial Aquifers/ Gulf County Canal	
	Franklin	2.03	2.82		128
	Total	3.85	6.31		199
VI	Gadsden	4.01	6.67	Floridan Aquifer/ Surface Water	
	Total	4.01	6.67		126
VII	Jefferson*	0.73	1.05	Floridan Aquifer	
	Leon	33.57	51.14		153
	Wakulla	1.76	4.12		148
	Total	36.05	56.32		131
District Total		163.50	258.40	145 (avg.)	

Source: Water Supply Assessment Update (2008).

*Reflects approximately 60% of the county that resides within the NFWFMD.

WS 1(c) Within each water supply planning region:

- 1) The estimated amount of water supply to be made available through the water resource development component of the regional water supply plan (RWSP);**
- 2) Percent of estimated amount under development; and**
- 3) Percent of estimated amount of water actually made available.**

The districts are charged with expanding the “water pie” to assure future water supply availability. This is accomplished through water resource development, or regional projects designed to create, from traditional or alternative sources, an identifiable, quantifiable supply of water for existing and/or future reasonable and beneficial uses. The estimated quantity of water needed and the water resource development activities of the District are included in Regional Water Supply Plans and in Table A.3 below.

Table A.3 Water Resources Development by Region (2007-2010)

Quantity (MGD)	Region II	Region III	Region V
Made Available	16.7	0.0	6.0
Under Development	11.4	10.0	0.0
Future Development	27.4	0.0	3.0
Total	55.5	10.0	9.0
% made available	30%	0%	67%

Source: NFWWMD Staff, 2009

The Regional Water Supply Plan (RWSP) for Region II was updated in 2006. It estimates an additional 55.5 MGD of alternative supplies can be made available through implementation of the Water Resources Development component of the plan. This amount does not include 25.0 MGD of alternative surface water sources that are identified for needs beyond the 2025 planning horizon. Approximately 16.7 MGD or 30% have already been made available to coastal utilities in Region II and another 11.4 MGD or 21% are under development. Thus, approximately 51% of the total alternative sources identified in the WRD component are either under development or have already been developed; the remaining 49% are for future development as determined by future demand through 2025.

A RWSP for Region III, Bay County, was approved in August 2008. The plan identifies approximately 10 MGD of water available from inland sources, as well as additional water available from reuse and conservation in quantities to be determined.

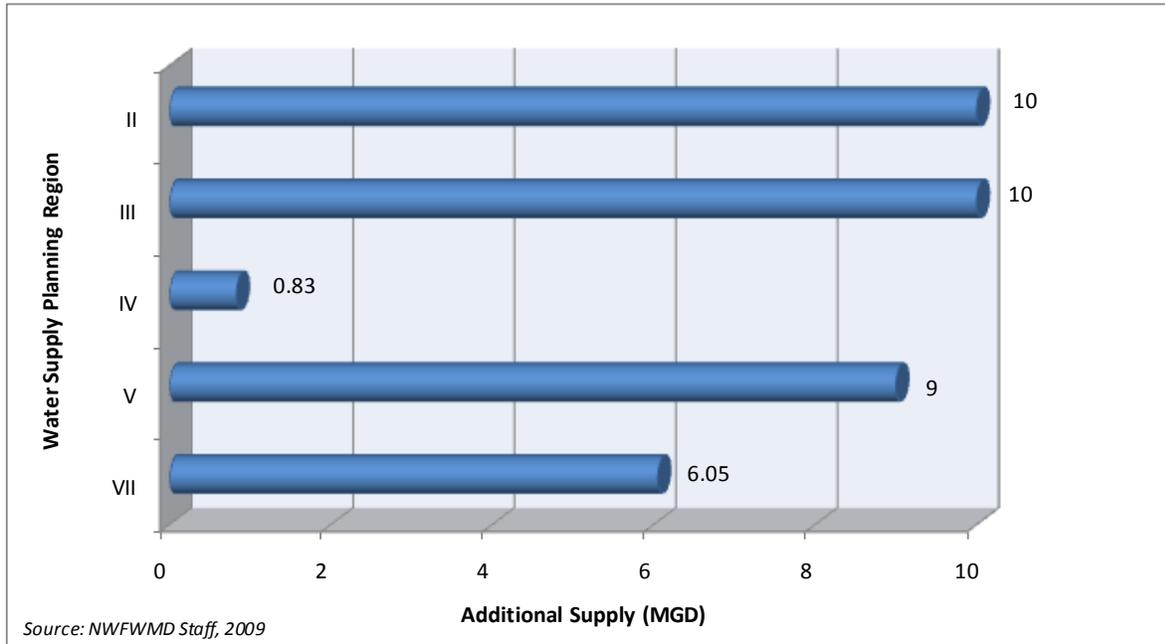
For Region V, the estimated amount of alternative supplies that can be made available through the Water Resource Development component of the plan is 9.0 MGD. This includes 3.0 MGD for an alternative inland groundwater source for eastern Franklin County and 6.0 MGD for an alternative surface water source for Port St. Joe via the Gulf County Fresh Water Supply Canal. The Port St. Joe alternative water source is in the final stages of construction.

WS 1(d) Within each water supply planning region, the estimated additional quantities of water supply made available through District water supply development assistance

“Water Supply Development” is defined as the planning, design, construction, operation and maintenance of public or private facilities for water collection, production, treatment, transmission or distribution for sale, resale or end use. Although this is primarily the responsibility of local and regional water supply providers, this measure is intended to identify the extent to which the District assists water suppliers in developing additional capacity.

During fiscal year 2007-2008, the District provided water supply development assistance in Regions II, III, IV, V, and VII through the Water Protection and Sustainability Program. It is anticipated that over 35.88 MGD will be made available within these regions. Specific water resource and water supply development projects are described in [Chapter 5.2](#) of this report.

Figure A.4 District-Assisted Water Supply Development by Planning Region



Water Supply Objective 2: Prevent contamination of water supplies.

WS 2(a) Percentage of surface water supply sources for which water quality fully attains the designated use

Under Florida’s water quality monitoring and reporting program developed pursuant to the federal Clean Water Act, surface waterbodies are regularly assessed for a variety of water quality parameters. Surface waters supply drinking water to about 13 percent of Florida’s population (DEP 2006). Of the approximately 7,200 public drinking-water systems in the state, only 19 systems utilize surface water. In the Northwest Florida Water Management District, Bay County relies on surface water for its water supply, and the City of Port St. Joe is transitioning to a surface water source.

The following discussion relates to waters designated as Class I for potable water supply. Bayou George and Creek (tributary of the Deer Point Lake Reservoir supplying water to Panama City) is listed as meeting planning list criteria as potentially impaired for dissolved oxygen in the DEP 2006 Water Quality Assessment Report, Choctawhatchee–St. Andrew. No other of the eight segments or tributaries of Deer Point Lake Reservoir are listed as impaired. Updates to this list should be available from DEP by late 2009 or early 2010.

The City of Port St. Joe diverts water from the Chipola River to the city via the Port St. Joe fresh water canal. The city is outside of the Apalachicola watershed so the canal is not included in the water quality assessment; however the source for this fresh water, the Chipola River, is a Class III waterbody listed as impaired for several parameters on the DEP 2008 Verified List. Mosquito Creek, a tributary of the Apalachicola River in Gadsden County, is listed as impaired; however it is not currently used for public water supply (DEP 2008).

Within the Ochlockonee watershed, Quincy Creek was listed as impaired for fecal coliform and iron in the updated impaired water list (June 2008). However, although still listed as a Class I waterbody, it is no longer used as a public supply source for the City of Quincy (ceased in 2005).

Of eight Class I segments currently providing surface water supply within the NFWFMD, one is potentially impaired and seven are not listed. Therefore, 87.5% can be considered as attaining their designated use.

Flood Protection and Floodplain Management

Flood Protection/Floodplain Management Objective 1: Minimize damage from flooding.

FP 1(a) Percentage of District works maintained on schedule

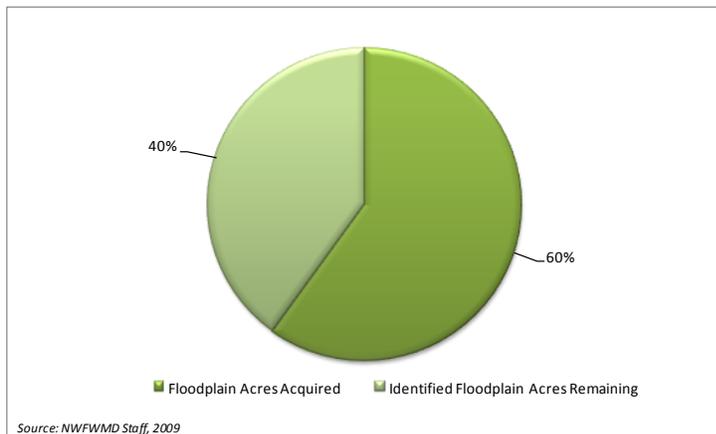
The District does not own or operate any facilities that provide flood protection. Since the structural approach tends to be more expensive, less effective, and involve greater risks, a nonstructural approach is preferred for flood protection and floodplain management.

Flood Protection/Floodplain Management Objective 2: Promote non-structural approaches to achieve flood protection and to protect and restore the natural features and functions of the 100-year floodplain.

FP 2(a) Number of acres identified for acquisition to minimize damage from flooding and the percentage of those acquired

The majority of lands purchased by the District encompass important natural flood storage areas. By protecting these areas, the District ensures that floodplain functions will be sustained. These land purchases protect people and communities located downstream, which could otherwise be impacted by lost floodplain functions. Less-than-fee acquisitions (e.g., conservation easements) are also useful for flood protection purposes. Through the end of calendar year 2008, the District has acquired 218,751 of the 380,160 acres identified in the District's 2009 Florida Forever Land Acquisition Work Plan through fee and less-than-fee purchases and donation. Of this, 172,997 acres of floodplain have been acquired of the 286,738 floodplain acres identified. This comprises 60 percent of the priority acquisition area identified as vulnerable to flooding and represents significant progress in floodplain protection.

Figure A.5 Land Acquisition to Minimize Flood Damage



Water Quality

Water Quality Objective 1: Protect and improve surface water quality.

WQ 1(a) Percentage of water segments that fully meet, partially meet, and do not meet their designated uses under the TMDL program

Under Florida's water quality protection programs, waters are classified for uses, including drinking water, shellfish harvesting, fish and wildlife maintenance, agriculture, and navigation, utility and industrial use. This performance measure indicates the extent to which the water quality needed to support the designated use(s) is being attained. The TMDL program is implemented in northwest Florida by the Department of Environmental Protection. For more information on the TMDL program, as well as the 2008 Integrated Assessment 305(b) report and 303(d) List Update, visit www.dep.state.fl.us/water/tmdl/index.htm.

Water Quality Objective 2: Protect and improve groundwater quality.

WQ 2(a) Improving, degrading, and stable trends in groundwater quality

Groundwater is a major source of potable water for the NFWFMD and the state as a whole. Close attention to changes and trends in quality is critical to the maintenance of public health and safety, as well as the protection of the natural systems that are dependent upon these water resources. Under Florida's water quality monitoring programs, groundwater aquifers are regularly assessed for a variety of water quality criteria. Ground water quality monitoring is also required by the District's consumptive use permitting program. These measures are intended to identify groundwater quality trends in order to assure protection of water resources. The data necessary to report trends are not currently available. The collection of this data is ongoing and the District will provide such analysis in the future within priority areas.

WQ 2(b) Improving, degrading, and stable trends in nitrate concentrations in springs

Increasing nitrate levels have been documented to affect spring water clarity and the composition of the aquatic plant community. Under Florida's water quality monitoring programs, groundwater aquifers are regularly assessed for a variety of water quality parameters. This measure is intended to identify groundwater trends as measured in spring flow quality to assure protection of water resources.

Insufficient data are available to establish nitrate levels and trends for the majority of northwest Florida springs. However, existing data indicate a long-term increasing nitrate concentration in Jackson Blue Springs and a stable trend for St. Marks Rise. Wakulla Springs previously showed an increasing trend, though over the past ten years there has been a decline and subsequent stabilization of nitrate concentrations to about 0.6 to 0.8 mg/L. The District's 1999-2000 study of nitrate sources in the Wakulla Spring basin helped bring awareness to the problem, influenced changes in the City of Tallahassee's sprayfield management, and provided the basis for further study that led to the City's investment in advanced wastewater treatment. The District participates in working groups for both Wakulla and Jackson Blue springs with the goal of increasing awareness and communication between interests in the spring basins, monitoring water quality and spring flow, and providing a forum for cooperation between agencies.

Table A.3 Nitrate Trends at Selected NFWWMD Springs

Spring	Nitrate Trend
Jackson Blue Spring	30 year degrading trend
Wakulla Springs	10 year stable trend
St. Marks Rise	20 year stable trend

Sources: NFWWMD Water Resources Special Report 02-1; 05-1; 06-1; NFWWMD staff, January 2009.

Natural Systems

Natural Systems Objective 1: Maintain the integrity and functions of water resources and related natural systems.

NS 1(a) Number and percentage of established minimum flows and levels (MFLs) being maintained consistently with established recovery or prevention strategies

Minimum Flows and Levels can be set for streams, rivers, and other flowing watercourses; lake and wetland levels; aquifers; and springs. This measure is aimed at identifying the MFLs that, once established, are being maintained. No MFLs have been established in northwest Florida. The District Governing Board declared a reservation on the water resources of the Apalachicola River, including the Chipola River, in January 2006.

NS 1(b) Percentage of MFLs established in accordance with the previous year’s schedule

The District’s MFL Priority List and Schedule identifies those lakes/wetlands, rivers/streams and aquifers for which MFLs are to be established over time. The schedule is updated annually and submitted to DEP for approval. This measure compares the scheduled waterbodies with those actually established to track progress in implementing MFLs. As noted previously, no MFLs have been established in northwest Florida.

NS 1(c) For the previous fiscal year, the total acres of wetlands or other surface waters authorized by Environmental Resource Permit to be impacted and the number of acres required to be created, enhanced, restored and preserved.

The Northwest Florida Water Management District began implementing the Environmental Resource Permitting program for stormwater permits on October 1, 2007. Rulemaking for wetland permitting is underway and the program is scheduled to begin in mid-2009.

Natural Systems Objective 2: Restore degraded water resources and related natural systems to a naturally functioning condition.

NS 2(a) Acres of invasive non-native aquatic plants in inventoried public waters

Protection and management of natural surface waters cannot be accomplished without effectively managing invasive exotic aquatic plant species that can reduce the abundance and diversity of native plant populations, hinder navigation and recreational use, degrade water quality, impact fish and wildlife habitat, and impede water flow. Aquatic plant management operations conducted on publicly accessible natural waters in northwest Florida are funded and coordinated primarily by the Florida Fish and Wildlife Conservation Commission (FFWCC), DEP and local governments. Among the invasive nonnative

aquatic plants of concern in northwest Florida waters are hydrilla (*Hydrilla verticillata*), torpedo grass (*Panicum repens*), wild taro (*Colocasia esculenta*), water-hyacinth (*Eichhornia crassipes*) and Chinese tallow (*Sapium sebiferum*). The District does not have a program to manage invasive aquatic plants. For more information on aquatic plant management in Northwest Florida, please contact the FFWCC at (850) 245-2809 or at <http://www.myfwc.com/nonnatives/InvasivePlants/index.htm>.

NS 2(b) Acres of District managed lands infested with invasive non-native upland plants

Exotic plant infestations have the potential to significantly impact the ecological integrity of areas the District has acquired for protection and preservation. This problem is recognized as a major threat to the remaining natural areas in Florida. As a major public landholder and manager of natural lands, the District cooperates with state, federal, and local government agencies to develop and implement effective invasive plant control and management strategies. This measure is intended to monitor how well the District manages invasive terrestrial plants.

Due to funding limitations, the District has not completed a survey to specifically identify the spatial distribution of invasive exotic plant infestation on District lands. It is known, however, that invasive plant problems exist at varying levels on some District lands, including at Phipps Park (Lake Jackson watershed) and within the floodplains of the Apalachicola, Chipola, Choctawhatchee, Escambia, and Perdido rivers. Species of concern include Japanese climbing fern (*Lygodium japonicum*), cogon grass (*Imperata cylindrica*), coral ardisia (*Ardisia crenata*), Chinese tallow (*Sapium sebiferum*), and Chinese privet (*Ligustrum sinense*).

No invasive non-native plant species control projects were undertaken for the 2008 calendar year for any of the Water Management Areas within the Eastern Region. At Elinor Klapp Phipps Park (Phipps Park) a noticeable increase in Japanese climbing fern, coral ardisia, tung oil trees and other invasive non-native plant species has occurred. The park is eligible for a Florida Department of Environmental Protection upland invasive species grant, which the District will submit during the 2009-2010 fiscal year. The project proposal will include maintenance control of invasive species for the entire park (516 acres), which includes District lands and sections of the park owned by the City of Tallahassee that also have extensive invasive non-native plant problems. Major treatments are required when these plant species populations have a noticeable increase.

Additionally, the Japanese climbing fern remains a problem at the Apalachicola River Water Management Area. A major management effort in this area is currently being planned for future fiscal years.

NS 2(c) Acres of District-owned lands identified in land management plans as needing restoration, acres undergoing restoration, and acres with restoration activities completed

The primary goal of the District's restoration program is to reestablish natural plant and animal communities on District managed lands that have been disturbed or impacted by past land uses such as silviculture and agriculture. This parameter is intended to measure whether progress is being made toward accomplishing planned restoration activities.

In 2008, 1,658 acres in Santa Rosa, Walton, Washington, Franklin, Liberty and Leon counties were planted with trees and/or wiregrass. Of this total, 481 acres were for mitigation restoration (some of which was not on District-owned land), and the remaining 1,177 acres were non-mitigation related areas of District-owned land that were restored out of the 29,021 acres identified as needing restoration District-wide. The Mitigation restoration activities included 70 acres of restoration work in Tates Hell State Forest. The Walton and Washington county sites were on the Lafayette Creek Tract and the Econfina

Recharge Area, both of which are xeric uplands being restored with longleaf pines after clearcut harvest of off-site sand pines. The Santa Rosa County site included restoration of 14 acres that had previously been subject to a salvage timber sale following a wildfire and the Escambia County site included a small area impacted by wildfire. In Leon County, the District planted about 160,000 wiregrass plugs at Phipps Park. Total planting was 626,967 trees and 1,159,495 wiregrass plugs.

To date, an estimated 18,010 acres have been restored on District lands. This equates to nearly 62% of the lands identified as needing restoration.

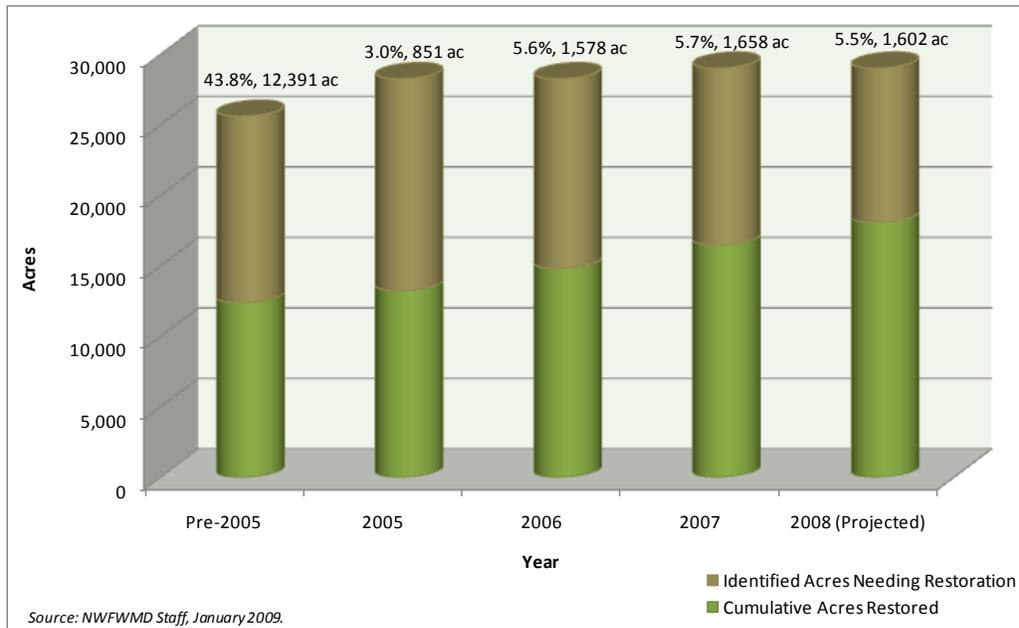


Figure A.7 District-Owned Lands Restored by Year

Common Measures

CM (a) Acres of land acquired through fee simple and less than fee simple, respectively, on an annual and cumulative basis

Acquisition of land, or specific interests in such land, provide significant water resource benefits and is often the most effective way to protect water and related natural resources in the future. Annual acquisitions vary widely, due in large part to specific opportunities for land acquisition in any given year. In calendar year 2008, the District acquired 766.71 acres through purchase, donation and exchange (Table A.4). Since 1984, the District has increased its fee-simple landholdings by an average of about 1.1% per year. Note that negative acres reflect District lands that are considered surplus (and sold) or exchanged lands.

Table A.4. NFWFMD Fee Simple Acquisition Acres

Calendar Year	Annual Acres	Cumulative Acres
Pre-2000	-	187,864.91
2000	439.20	188,304.11
2001	6,499.65	194,803.76
2002	2,392.00	197,195.76
2003	-92.79	197,102.97
2004	-0.83	197,102.14
2005	4,855.90	201,958.04
2006	4,990.14	206,948.18
2007	35.78	206,983.96
2008	766.71	207,750.67

“Less-than-fee” refers to a group of techniques (e.g. conservation easements) that involve acquisition of limited interests in property, as opposed to outright, or fee-simple, purchase (e.g. conservation easements). Generally, less-than-fee methods should be used when resource protection benefits can be obtained without fee simple ownership, when intensive land management or restoration is not necessary, and when the cost to the public is reasonable. In 2008, the District received 1,722.80 acres in conservation easements (Figure A.8). Since 1995, the District has increased its less-than-fee landholdings by an average of about 2.8% per year.

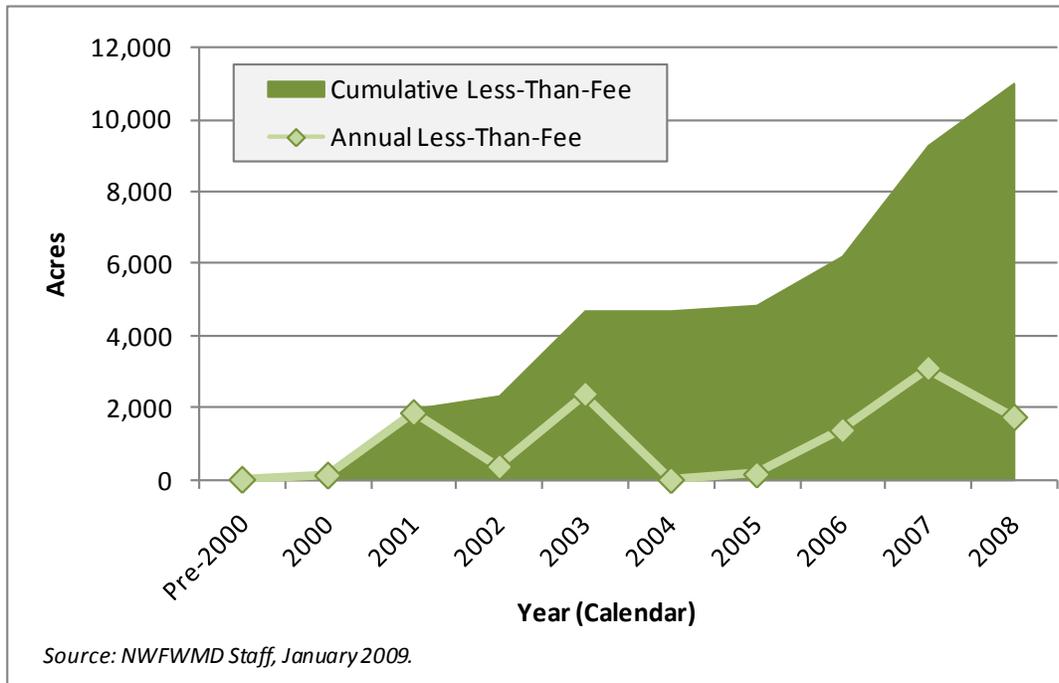


Figure A.8 NFWFMD Less-Than-Fee Acquisition Acres

To date, the District has acquired a total of 218,750.91 acres. Of this total, approximately 95% are fee-simple, donation and exchange lands, with the remaining 5% in conservation easements (Figure A.9). Overall, the District’s land acquisition program increases in acreage by an average of 1.7% per year.

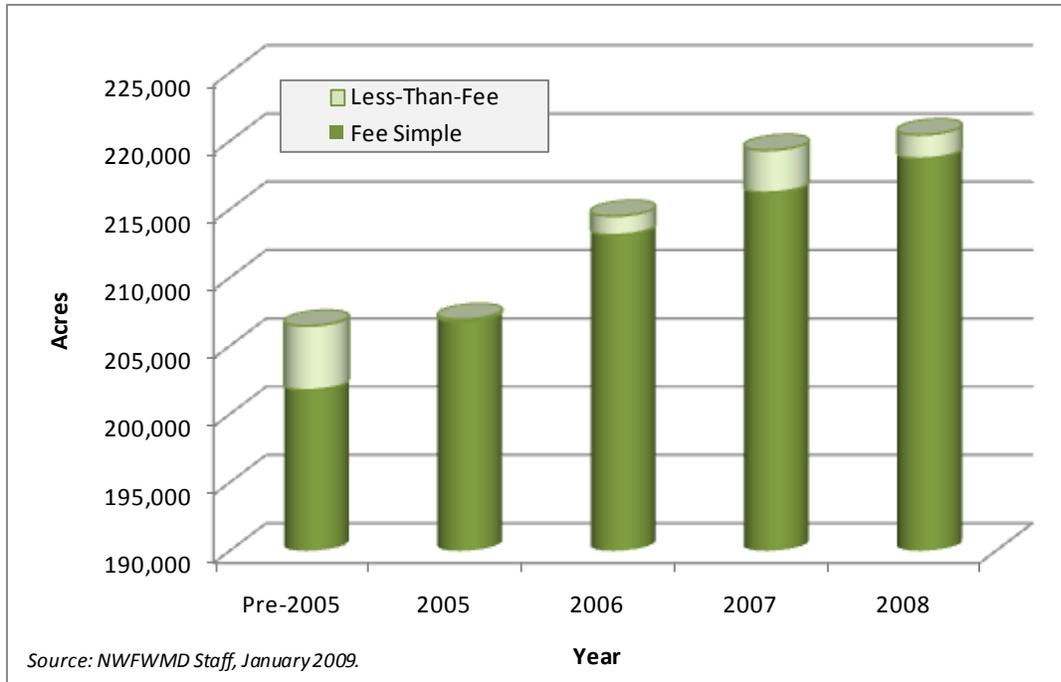


Figure A.9 Total NFWMD Lands by Type

CM (b) Number and percent of land management plan activities being implemented according to plan schedules

Water management districts and state agencies are given the responsibility to develop management plans for lands on which they are lead managers. Water management districts are not required to complete such plans within a specific time horizon. No management plans were required for FY 2007-2008.

Site-specific land use and management activities are typically focused on such aspects as public recreation, prescribed burning, exotic vegetation control, restoration, timber and wildlife management and resource monitoring. Any activities undertaken must meet the statutory charge to manage lands in such a way as to ensure a balance between public access, general public recreational purposes, and restoration, as well as protection of their natural state and condition. Virtually all District-owned lands are open for appropriate public recreation uses. Due to the open nature of the lands, the District does not currently have data to report specific activities and schedules of use.