

Chapter 5: Water Supply

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INTRODUCTION

This chapter includes the Five-Year Water Resource Development Work Program and the Alternative Water Supply Annual Report, as mandated by state law. Subsection 373.536(6)(a)4, Florida Statutes (F.S.), requires each water management district to prepare an annual Five-Year Water Resource Development Work Program describing the agency's implementation strategy for the water resource development component of each approved regional water supply plan developed or revised under Section 373.0361, F.S. In addition, Section 373.1961(2), F.S., requires each water management district to submit an annual report to the Florida legislature and governor on Alternative Water Supply (AWS) funding.

Florida water law identifies two types of projects to meet water needs: Water Resource Development projects and Water Supply Development projects. Water Resource Development projects are regional in nature and support water supply development at the local level. These projects could include data collection and evaluation; water resource management and protection programs; regional water resource implementation programs; major public works facilities projects to provide for flood control, water storage, and groundwater recharge augmentation; and related technical assistance to local governments and water utilities. Water Resource Development projects are primarily the responsibility of the South Florida Water Management District (SFWMD or District) and are intended to assure the availability of adequate water supplies for all competing uses deemed reasonable and beneficial, and to maintain the functions of natural systems. Water Supply Development projects are local in nature and generally involve public or private facilities for water collection, treatment, and transmission. Water Supply Development projects are generally the responsibility of local water users, such as utilities, to implement.

Within the SFWMD, most future water needs will primarily be met through development of alternative water sources, while development of traditional freshwater sources will be limited by environmental protections. Alternative water sources include brackish groundwater, surface water captured during wet weather, and expansion of reclaimed water systems.

In 2005, the Florida legislature revised state law and created the Water Protection and Sustainability Program, which established a recurring state funding source to support AWS development. State funds are matched with District funds and administered through the District's Alternative Water Supply Funding Program specifically for cost-sharing AWS project construction costs. Highlights of the Five-Year Alternative Water Supply Funding Program for Fiscal Years 2007 through 2011 (FY2007–FY2011) and the Alternative Water Supply Annual Report for FY2006 follows the presentation of the *Five-Year Water Resource Development Work Program* section in this chapter.

FIVE-YEAR WATER RESOURCE DEVELOPMENT WORK PROGRAM

The Five-Year Water Resource Development Work Program provides an implementation update of the water resource development component of the SFWMD's regional water supply plans. Pursuant to Chapter 373, F.S., regional water supply plans encompass a 20-year planning horizon and are updated every five years.

Water resource development is defined in Section 373.019(22), F.S., as the formulation and implementation of regional water resource management strategies, including the collection and evaluation of surface water and groundwater data; structural and nonstructural programs to protect and manage water resources; the development of regional water resource implementation programs; the construction, operation, and maintenance of major public works facilities to provide for flood, surface and underground water storage, and groundwater recharge augmentation; and related technical assistance to local governments and to government-owned and privately owned water utilities.

The SFWMD comprises four planning areas: the Upper East Coast (UEC), the Kissimmee Basin (KB), the Lower West Coast (LWC), and the Lower East Coast (LEC). Regional water supply plans for these planning areas were completed in 2000, and the five-year updates to these plans have been completed or are in the process of being completed. The Upper East Coast Water Supply Plan Update (2004 UEC Plan Update) was completed in 2004, and the UEC Plan Amendment was completed in 2006. The 2005–2006 Lower West Coast Water Supply Plan Update (2005–2006 LWC Plan Update) has been completed, and 2005–2006 updates to the KB and LEC water supply plans are under way. The 2005–2006 Water Supply Plan Updates and 2006 UEC Plan Amendment identify Water Resource Development and Water Supply Development projects that will meet the needs of all reasonable-beneficial uses for the year 2025 during a 1-in-10 year drought event, while sustaining the region's water resources and related natural systems.

PLANNING REGION OVERVIEW

District-wide, the population is projected to total approximately 10.6 million by 2025. This represents a population increase of approximately 150 percent in the KB Planning Area and 80 percent in the UEC Planning Area from 2000 through 2025, and a population increase of about 74 percent in the LWC Planning Area and 31 percent in the LEC Planning Area from 2005 through 2025. Accordingly, raw water demand is anticipated to increase District-wide from 3,124 million gallons per day (mgd) in 2005 to 4,136 mgd in 2025. Future water source needs of the planning areas will be met primarily through development and funding of AWS projects, which use nontraditional sources (refer to the *Alternative Water Supply Annual Report* section beginning on page 5-24 for a more complete definition).

WATER RESOURCE DEVELOPMENT PROJECTS

The Water Resource Development projects described in this report—drilling and testing, groundwater and wetland monitoring, groundwater and evapotranspiration assessments, District-wide feasibility studies, modeling, conservation, Minimum Flows and Levels, and Initial Water Reservations—are primarily District-wide projects. In addition, this report describes regional water resource projects that are specific to each planning area. Implementation schedules and costs are provided in this chapter and are summarized in **Tables 5-1** and **5-2**.

Most Water Resource Development projects support and enhance Water Supply Development projects, but do not solely yield specific quantities of water. For example, hydrologic investigations and groundwater monitoring and modeling provide important information about aquifer characteristics, such as hydraulic properties and water quality. All these efforts are useful in developing an appropriate facility design, identifying the safe yield, and evaluating the economic viability of Water Supply Development projects.

District-wide and region-specific Water Resource Development projects are identified in Chapter 6 (Water Resource Development Projects) of the 2005–2006 LWC Plan Update and impending LEC and KB Plan updates. Water Resource Development projects specific to the UEC Planning Area are discussed in the 2004 UEC Plan Update and 2006 UEC Plan Amendment.

Projects highlighted in the 2006 Five-Year Water Resource Development Work Program that provide water supply primarily for the environment are excluded from this report and Chapter 6 of the 2005–2006 Plan Updates and the 2006 UEC Plan Amendment. **Table 5-4** provides a crosswalk reference of these projects.

WATER CONSERVATION PROGRAM

The Comprehensive Water Conservation Program, which includes the Water Savings Incentive Program (WaterSIP) and Mobile Irrigation Laboratory (MIL) Program, encourages water users to make efficient use of water resources through conservation and reuse. In effect, water savings achieved through conservation measures expand current water supplies. Implementation of the WaterSIP and MIL programs are included in this report.

WATER MADE AVAILABLE

The Water Resource Development projects described herein do not directly provide additional water for consumptive use. The District's Comprehensive Water Conservation Program is estimated to result in 2.65 mgd of additional available water in FY2006 and 3.0 mgd of additional available water in FY2007. During FY2007–FY2011, the estimated additional water made available through this program is 15 mgd (**Table 5-3**).

FUNDING

The SFWMD has allocated \$5.9 million in FY2007 for Water Resource Development projects. During the FY2007–FY2011 time frame, the SFWMD anticipates spending \$21.8 million on Water Resource Development projects (the total amounts from **Tables 5-1** and **5-2**). These allocations include \$1.4 million in funding for the Comprehensive Water Conservation Program during FY2007 and \$6.3 million for FY2007–FY2011.

The funding described herein does not include projects associated with the Comprehensive Everglades Restoration Plan (CERP) or Everglades Restoration Accelerated Program (Acceler8). For a full discussion of CERP and Acceler8 projects, see the 2007 SFER Volume I, Chapter 7A.

The funding allocation for FY2006 and projected for FY2006–FY2010 was greater than the current funding allocation for FY2007 and projected for FY2007–FY2011. Funding for primarily environmental projects, such as capital improvement projects in the Big Cypress Basin, Aquifer Storage and Recovery (ASR), and projects not identified in Chapter 6 of the 2005–2006 Plan Updates and 2006 UEC Plan Amendment, are not included in this report.

MEETING WATER SUPPLY NEEDS FOR A 1-IN-10 YEAR DROUGHT EVENT

The goal of the regional water supply plans is to ensure an adequate supply of water to meet the needs of all existing and future reasonable-beneficial uses and to protect natural systems from harm during a 1-in-10 year drought event. Through the SFWMD's Water Shortage Plan, the District implements its water shortage authority by restricting consumptive uses based on the concept of shared adversity between users and water resources (Chapter 40E-21, Florida Administrative Code). Under this plan, different levels or phases of water shortage restrictions with varying levels of severity are imposed relative to the severity of drought conditions. The four phases of current water shortage restrictions are based on progressively increasing resource impacts, leading up to serious harm. Under the District's plan, Phase I and II water shortages primarily reduce water use through conservation measures and minor use restrictions, such as restrictions on or temporary elimination of car washing and lawn watering. Phases III and IV, however, require the use of cutbacks associated with some level of economic impact to the users, such as the potential for crop damage due to agricultural irrigation restrictions.

DISTRICT-WIDE WATER RESOURCE DEVELOPMENT PROJECTS

The following provides project descriptions of the District-wide water resource development efforts funded by the District's Water Supply Department for FY2007. Additional information, including the implementing entities, activities proposed for FY2007, estimated completion dates, and funding sources, is presented in each project summary.

Drilling and Testing Program

A District-wide Drilling and Testing Program is providing an improved understanding of the geology and hydrology of the aquifers in South Florida as new exploratory/test wells are constructed. This improved understanding has translated into more accurate groundwater models and better decisions regarding issuance of new consumptive use permits. Full documentation of each well site is provided in SFWMD technical publications, which are available from the District's intranet. Well and test data are loaded into the District's hydrometeorologic database, DBHYDRO.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- *Floridan Aquifer System.* Thirteen exploratory Floridan Aquifer drilling sites have been completed and documented by the SFWMD over the past 15 years. Four of the 13 sites were fully completed and tested within the FY2002–FY2006 five-year period. Two of the four sites are located in the KB Planning Area, one site is located in the UEC Planning Area, and one site is located in the LEC Planning Area. Three additional well sites are in Phase II of construction and are expected to be completed within FY2007.
- *Surficial Aquifer System.* Drilled and tested nine Surficial Aquifer sites in the LEC Planning Area, seven in the LWC Planning Area (Hendry County), and 32 in the KB Planning Area. The sites in the KB Planning Area were constructed near existing Floridan monitor wells.

Activities proposed for FY2007:

- Two core wells will be drilled in the LEC Planning Area, and sieve analysis will be performed on those two sites; maintain seepage meters in Biscayne Bay, as well as District-wide monitoring well networks.
- No funding has been allocated in FY2007 for new Floridan Aquifer sites. Although many data gaps have been filled over the years, many more remain. Future plans to drill and test Floridan Aquifer sites will be limited to those funded under the AWS Funding Program.

Estimated completion date: Ongoing

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: FY2000–FY2006 — \$10,800,000

Total project cost: Ongoing

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	109	115	121	127	133	605

Groundwater and Evapotranspiration Assessments

A number of specialized hydrogeologic studies were completed by the U.S. Geological Survey (USGS) in cooperation with the District. The information learned from these studies is needed to enhance the understanding of aquifers and evapotranspiration rates across the District. Typically, each project requires several years of focused effort by USGS professionals, giving a continuity and focus unique to the USGS. Some projects have the cooperation of other water management districts or other governmental agencies. The USGS reports, maps, and data are peer reviewed and highly respected in the industry, making them valuable references for groundwater modeling and environmental assessments as well as policy and decision making.

Implementing entity: SFWMD and USGS

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities: Twenty-two USGS groundwater assessments, including evapotranspiration studies, were completed during the FY2002–FY2006 five-year period.

Activities proposed for FY2007:

- Drill three sites for Palm Beach County; continue the Hydrogeology of Palm Beach County Study; continue evapotranspiration data collection; continue lake/aquifer interaction and Highlands County hydrogeologic studies; and maintain web site.

Estimated completion date: Ongoing

Funding sources: SFWMD and USGS

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: FY2000–FY2006 — \$2,000,000

Total project cost: Ongoing

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	405	425	446	468	491	2,235

Groundwater and Wetland Monitoring

Well construction and monitoring efforts provide information about geology, aquifer characteristics, and water level conditions to aid the SFWMD in the development of groundwater models, assessing groundwater conditions, and management of this resource. The District partners with the USGS to provide funding for ongoing monitoring. To better understand the hydrologic systems that support wetlands, the District has also expanded its network of wetland monitoring sites. Data are archived in the District's hydrometeorologic database, DBHYDRO, and published by the USGS annually.

Implementing entity: SFWMD and USGS

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- In FY2001, completed a task force study of the groundwater monitoring network and published the results, which identified several data gaps across the District. The network was subsequently enhanced by adding 83 key recorders to fill data gaps across the agency. Monitoring this network for the water level and water quality of all the aquifers is ongoing.

Activities proposed for FY2007:

- Continue same level of groundwater monitoring as previous year

Estimated completion date: Ongoing

Funding sources: SFWMD and USGS

Total cost: Ongoing

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: FY2000–FY2006 — \$4,400,000

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	581	610	641	673	707	3,212

District-wide Feasibility Studies

The SFWMD is performing feasibility studies to determine the viability of water resource development options in order to increase water supply through water resource alternatives. This effort involves collecting and analyzing data and modeling.

Implementing entity: SFWMD in partnership with local water utilities

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- *Water User and Supply Cost Relationships Feasibility Study.* The objective of this project is to develop engineering cost estimation relationships for evaluating water supply alternatives for the District's four planning areas. This effort will include options using groundwater, surface water, seawater, ASR, and reclaimed water for reuse. The final cost study report is expected by the end of calendar year 2006.
- *Satellite Treatment Reuse Feasibility Study (LEC Planning Area).* This pilot testing project, in partnership with Palm Beach County, began operation in January 2006 and was completed by the end of March 2006. If the project is technically and economically feasible, it could treat wastewater for irrigation use in its vicinity, including the Palm Beach International Airport, Trump International Golf Club, Palm Beach County Sheriff's Office, and areas along Gun Club Road. The initial estimate of water made available is between 1 mgd and 1.5 mgd.
- *Canal Recharge Feasibility Study (LEC Planning Area).* Phase I Data Collection was completed in October 2005, and a draft report was submitted to the Florida Department of Environmental Protection (FDEP) for review and recommendation to the Florida legislature. More than 100 mgd could become available for canal recharge should the concept be technically, environmentally, and economically feasible.
- *Co-Located Desalination Feasibility Study (LEC and LWC Planning Areas).* To demonstrate the feasibility of coastal water desalination and the benefits of co-locating large desalination plants with existing power plants or wastewater treatment facilities in South Florida, the current study builds on the results obtained from the initial 2002 Desalination Feasibility Study. The study area will be streamlined to a small number of site-specific demonstration projects throughout the District, and final site selection will be based on the availability of willing partners, future water demand, and technical, regulatory, and economic criteria. The study, completed in October 2006, recommends specific demonstration projects and provides conceptual designs.

Activities proposed for FY2007:

- *Satellite Treatment Reuse Feasibility Study.* Design of pilot demonstration project in Palm Beach County, with the county providing additional resources in the form of in-kind services.
- *Canal Recharge Feasibility Study.* An advanced wastewater treatment pilot study (an extension of Canal Recharge Feasibility Study) has been approved for FY2006–FY2007. The pilot study will be conducted at the City of Plantation

Wastewater Treatment facility. The City of Plantation will provide additional resources in the form of in-kind services.

- *Co-Located Desalination Feasibility Study.* Complete detailed site-specific analysis design and construct a demonstration project.

Estimated completion date:

- Satellite Treatment Reuse Feasibility Facility Design: FY2007
- Canal Recharge Feasibility Study – AWS Pilot Study: FY2007
- Co-Located Desalination Feasibility Study pilot design and construction: FY2007–FY2008

Funding sources: SFWMD, cost-share with local water utilities

Cost per thousand gallons: Project not designed to make water available

Total money spent to date:

- Water User and Supply Cost Relationships Feasibility Study: \$140,000 in FY2006
- Satellite Treatment Reuse Feasibility Study: \$75,000 in FY2006
- Co-Located Desalination Feasibility Study: \$195,000 in FY2002; \$230,000 in FY2006

Total project cost: \$3,740,000 through FY2011

Proposed expenditures: (estimated)

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	450	1,450*	600	600	0	3,100

*Desalination Feasibility Pilot Project construction

Modeling

The SFWMD funds modeling efforts in the District's four regional planning areas and for Minimum Flows and Levels (MFLs) and Initial Water Reservations.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- LWC Planning Area: Completed in FY2006
- LEC Planning Area: Peer reviewed in FY2006

Simulations for MFLs and Initial Water Reservations were completed in FY2006 for the Loxahatchee River and associated tributaries.

Modeling support was provided for Initial Water Reservations/Lake Okeechobee drought projects and the LEC Water Supply Plan update (regional model).

Activities proposed for FY2007:

- LWC Planning Area: Potential regional irrigation distribution system (RIDS) simulations
- LEC Planning Area: Implement core District projects
- KB Planning Area: Complete peer review and implementation of model and begin application of model
- Finalize Loxahatchee River and tributaries MFL and Initial Water Reservations
- Potential implementation of Initial Water Reservations for G-160 and G-161
- Continue modeling support for Initial Water Reservations/Lake Okeechobee drought projects and the LEC Water Supply Plan Update (regional model)

Estimated completion dates:

- Implement plan recommendations for LEC, LWC, and KB Planning Areas in FY2007
- KB Planning Area peer review to be completed in FY2007
- MFLs and Initial Water Reservations to be completed in FY2007
- Modeling support for Initial Water Reservations/Lake Okeechobee drought projects in FY2008
- Ongoing modeling support for regional model

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: Modeling efforts in the District's four regional planning areas and for MFLs and Initial Water Reservations, \$1,000,000 (FY2004–FY2006); modeling support for Initial Water Reservations/Lake Okeechobee drought project, \$111,000 (FY2006); modeling support for regional model LEC Water Supply Plan Update, \$332,264 (FY2004–FY2006).

Total project cost: Modeling efforts in the District's four regional planning areas and for MFLs and Initial Water Reservations, \$1,250,000; modeling support for Initial Water Reservations/Lake Okeechobee drought project, \$388,255.

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	592	493	421	452	475	2,433

Comprehensive Water Conservation Program

The SFWMD's overall water conservation goal is to prevent and reduce wasteful, uneconomical, impractical, or unreasonable uses of water resources. In addition to improving efficiency of water use, the statewide Water Conservation Program, known as "Conserve Florida," strives to improve management of traditional supplies and encourage development of alternative or diverse water supply sources. To better promote the conservation goal, the SFWMD funds outreach and educational programs. These programs encourage water users to make efficient use of water resources through conservation and reuse.

Through WaterSIP, the SFWMD provides matching funds of up to \$50,000 to water providers, such as utilities and homeowners associations, for water-saving technologies. These technologies include low-flow plumbing fixtures, rain sensors, fire hydrant flushing devices, and other hardware. The MIL Program consists of specialized equipment in vans designed to conduct irrigation audits of agricultural and urban irrigation systems. The MILs are operated by the Soil and Water Conservation Districts and provide recommendations to water users who implement the water-saving recommendations.

Implementing entity:

- WaterSIP Program: SFWMD
- MIL Program: SFWMD and Soil and Water Conservation Districts

Estimate of quantity of water produced by project:

- *WaterSIP Program.* During FY2002–FY2006, 41 projects cumulatively made 2.5 mgd of water available, and in FY2006, 0.65 mgd was made available. For FY2007, 14 proposed projects are anticipated to make 0.9 mgd available; for FY2007–FY2011, 5.0 mgd is expected to be made available.
- *MIL Program.* From the MIL Program's inception in FY1989 through FY2006, an estimated 106 mgd has been made available. In FY2006, an estimated 2.0 mgd was made available; for FY2007, an estimated 2.0 mgd will be made available. The estimated quantity of water to be made available by the MIL Program during FY2007–FY2011 is 10 mgd.

Completed implementation activities:

- WaterSIP Program: Funded 41 projects District-wide for FY2002–FY2006
- MIL Program: 15 operational MILs District-wide, 10 funded by the District

Activities proposed for FY2007:

- WaterSIP Program: Fourteen projects are proposed for funding in FY2007
- MIL Program: Provide an additional agricultural lab in the UEC Planning Area; purchase evaluations from Highlands Soil and Water Conservation District

Estimated completion date: Ongoing

Funding sources:

- WaterSIP Program. SFWMD, utilities and homeowners associations
- MIL Program. SFWMD, Big Cypress Basin Board, U.S. Department of Agriculture–Natural Resources Conservation Service, Florida Department of Agriculture and Consumer Services, Soil and Water Conservation Districts, and county and local governments

Cost per thousand gallons:

- Showerhead retrofit, \$0.06/1,000 gallons; toilet retrofit, \$0.25/1,000 gallons; rain sensor installation, \$1.07/ 1,000 gallons
- Low-volume spray valves in restaurants, \$0.21/1,000 gallons
- Showerhead and faucet retrofit in hotels/motels, \$0.08/1,000 gallons
- MIL programmatic cost for agriculture, \$0.38/1,000 gallons; programmatic cost for urban, \$2.38/1,000 gallons

Total money spent to date: FY2003–FY2006 — \$6,785,205 (includes the Conservation Program, \$1,315,000; WaterSIP Program, \$1,932,000; and MIL Program, \$3,538,205)

Total project cost: Ongoing

Proposed expenditures: Comprehensive Water Conservation Program, including WaterSIP and MIL programs

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	1,381	1,331	1,181	1,181	1,181	6,255

MFL Activities

Minimum Flows and Levels (MFLs) are being developed pursuant to the requirements contained within the Water Resources Act and Sections 373.042 and 373.0421, F.S., as part of a comprehensive water resources management approach to assure the sustainability of South Florida's water resources. As part of the process of establishing and maintaining MFLs, the SFWMD is developing and implementing an electronic tracking system to determine whether MFL criteria are being met. Other efforts include producing documents and conducting scientific and peer reviews. Additional information about MFLs is presented in the 2007 SFER Volume II, Chapter 3.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- MFLs have been adopted for the Everglades, Biscayne Aquifer, Lake Okeechobee, Caloosahatchee River and Estuary, LWC aquifers, St. Lucie River and Estuary, Northwest Fork of the Loxahatchee River, and Lake Istokpoga

Activities proposed for FY2007:

- Continue monitoring of previously established MFLs
- Complete final rule adoption for Florida Bay MFL
- Prepare technical documentation and rule language, and hold workshops for Loxahatchee River tributaries
- Continue efforts to develop MFL criteria for southern Biscayne Bay

Estimated completion date:

- Adopt MFL rule for Loxahatchee River by December 2007
- Adopt MFL rule for southern Biscayne Bay by December 2008

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: FY2006 — \$75,000

Total project cost: Ongoing

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	183	183	123	123	123	735

Initial Water Reservation Activities

The District is developing Initial Water Reservations for the Everglades, Northwest Fork of the Loxahatchee River, and four major estuaries (Caloosahatchee, Biscayne Bay, Florida Bay, and St. Lucie). The process of establishing Initial Water Reservations involves developing a methodology and technical approach for quantifying existing water needed for the protection of fish and wildlife; documenting all methods and results used to quantify existing water in a draft technical document; conducting peer review of the draft document; developing draft rule language based on the findings of the technical report; holding public rule development workshops; and, obtaining the District's Governing Board approval of a draft rule. In some cases, the District assembles a team of experts to assist with the analysis, interpretation, and presentation of technical data and information needed to develop and implement a standardized methodology/approach for Initial Water Reservations. The water quantification criteria contained in the draft rule will be used by the Water Use Regulation Division to issue consumptive use permits.

Implementing entity: SFWMD, Water Use Regulation Division

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- The District has received a draft report (Task 1.0) on Phase I of the project from the contractor entitled "Review of Methods and Data for Hydrologic Analysis"

Activities proposed for FY2007:

Complete development of Initial Water Reservations for the Everglades and four estuaries (Caloosahatchee, Biscayne Bay, Florida Bay, and St. Lucie). Receive approval for a scope of work for Phase II of the project, which includes development of an Initial Water Reservation concept for the Everglades and the major estuaries; quantification of existing water needed for the protection of fish and wildlife; documentation of all methods and results in a draft technical document; peer review; developing draft rule language; and conducting rule development workshop meetings. For development of Initial Water Reservations for the Northwest Fork of the Loxahatchee River, a peer review of the technical information to be used to develop the Initial Water Reservation is scheduled for the first quarter of FY2007.

Estimated completion date: FY2007

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: June 1 through September 30, 2006 — \$18,473

Total project cost: \$249,914

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	To Be Determined (TBD)	TBD	TBD	TBD	TBD	TBD

Floridan Aquifer Groundwater Model and Database Development

In the LEC Planning Area, the District is using density-dependent models to quantitatively assess the Floridan Aquifer System along the east coast of Florida. Phase I modeling of this effort was completed in FY2006. As new Floridan exploratory wells and water supply wells are drilled, assessment of aquifer capacity will evolve by updating the database and models. Additionally, existing monitor well networks are being processed, analyzed, and brought into the model. Water quality sampling will continue in conjunction with the new exploratory wells installed within the LEC Planning Area. Phase II, which will be expanded to include the UEC Planning Area, aims to improve the model calibration in the LEC Planning Area.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- The LEC Planning Area portion of the model area was completed in FY2006

Activities proposed for FY2007:

- Expand and complete model to include UEC Planning Area; continue database development and water quality sampling

Estimated completion date:

- The UEC Planning Area portion of the model area to be completed in FY2007

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: Floridan Model, \$150,000. Database development, \$600,000

Total project cost: Floridan Model, \$300,000. Database development, ongoing

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	375	236	248	260	273	1,392

REGIONAL WATER RESOURCE DEVELOPMENT PROJECTS

The following provides project descriptions of the region-specific water resource development efforts funded by the SFWMD's Water Supply Department for FY2007. Additional information, such as the implementing entities, activities proposed for FY2007, estimated completion dates, and funding sources, is included in each project summary.

Subregional Feasibility Study of Water Supply Integration for St. Lucie County Area (UEC Planning Area)

The SFWMD is supporting and funding Phase II of the Subregional Feasibility Study of Water Supply Integration for St. Lucie County. Phase II consists of the development of a conceptual master plan for integration and development of an institutional framework for merging utility systems in northern St. Lucie County. Phase I, which was initiated and completed in FY2006, was for the consideration of water supply integration in the St. Lucie County area. A utility regionalization task force has been established to evaluate the study information and to develop an operating agreement between the entities. Task force members represent the City of Fort Pierce, St. Lucie County, and the Fort Pierce Utility Authority. This study will provide the task force with engineering alternatives to consider for integrating the existing and future water supply systems in the county.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to produce water

Completed implementation activities:

- Initial engineering feasibility report completed

Activities proposed for FY2007:

- Development of a conceptual Master Plan for integration projects and development of an institutional framework for merging the utility systems

Estimated completion date: FY2007

Funding sources: SFWMD

Cost per thousand gallons: Not applicable

Total money spent to date: \$0

Total project cost: \$98,900

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	99	0 Complete	0	0	0	99

Central Florida Aquifer Recharge Feasibility Study

Part of the effort in studying the Kissimmee Chain of Lakes supply availability is a feasibility assessment of how best to use the available water from the system. The availability of supply from the Kissimmee Chain of Lakes and Shingle, Boggy, and Reedy creeks is projected to be highly variable. As such, surface water from these systems may, in part, be a product of opportunity rather than a consistent daily alternative source. While this makes direct use more difficult, it offers opportunities to use surface water for aquifer recharge to offset some of the projected groundwater withdrawal impacts during periods of high availability. Because the western portions of Central Florida are high recharge areas to the Floridan Aquifer, rapid infiltration basins may be a feasible means of using surface water from these sources for implementing aquifer recharge. Similar studies have been completed in Orange County for the use of reclaimed water for aquifer recharge. An effort is proposed to expand this study into parts of Osceola, Polk, and Lake counties to determine opportunities for aquifer recharge.

Implementing entity: SFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities: Not applicable

Activities proposed for FY2007:

- Gather data on existing rapid infiltration basin locations and capacity; research potential lands for purchase and opportunities for basin development within development projects

Estimated completion date: FY2009

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: \$0

Total project cost: \$200,000

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	100	100	0 Complete	0	0	200

Kissimmee Chain of Lakes Management Plan

A resolution in the 2000 Kissimmee Basin Water Supply Plan directed the SFWMD to work with other agencies to develop a plan for improving the health and stability of the Kissimmee Chain of Lakes. Development of the Kissimmee Chain of Lakes Long-Term Management Plan requires an extensive modeling effort to estimate the performance of the many competing uses for the Chain of Lakes and the Kissimmee River.

The Kissimmee Basin Hydrologic, Modeling and Operations Study is an initiative to construct an advanced hydrologic/hydraulic model to be used to simulate alternative structure operation criteria to meet identified objectives. The study is constrained to evaluating modifications of the existing control infrastructure limitations in an effort to improve operations. The purpose of the study is to find a means of operating the Kissimmee Basin system to achieve a more acceptable balance among flood control, water supply, aquatic plant management, navigation, water quality, and natural resource management, while continuing to address impacts to downstream systems, including Lake Okeechobee and the Caloosahatchee and St. Lucie estuary discharges. Another aspect of this effort involves evaluating the lakes and their tributaries to better understand superior alternatives of available water use in the system.

Implementing entity: SFWMD with state and local government support

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- Initiated public participation in the development of performance measures and model construction

Activities proposed for FY2007:

- Development of an integrated surface water/groundwater model using MIKE SHE/11 software; continue public outreach and performance measure development

Estimated completion date: FY2009

Funding sources: SFWMD and other state governmental agencies

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: Kissimmee Chain of Lakes Long-Term Management Plan, FY2003–FY2006 — \$240,257

Total project cost: \$1,815,257 through FY2011

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	1,575	Staff time	0 Complete	0	0	1,575

Central Florida Water Supply Coordination Initiative

Hydrologic groundwater basins do not follow water management district boundaries; therefore, coordination among the SFWMD, St. Johns River Water Management District (SJRWMD), and Southwest Florida Water Management District (SWFWMD) is critical to the water supply planning process. This is particularly true in the region of Orange, Osceola, Polk, southern Lake, and eastern Brevard counties. Efforts to continue and improve this coordination in the areas of planning, permitting, and assessment tool development are important to the uniform implementation of water resource projects across the three districts. These districts have reached agreement on a set of guiding principles to help direct these coordination efforts in the future, and have committed to developing a work plan of tasks that will address inconsistencies in the areas of water supply planning, permitting, and assessment tool development. The effort includes coordination and joint funding of water supply alternatives needed for the region.

Implementing entity: SFWMD, SJRWMD, SWFWMD

Estimate of quantity of water produced by project: Project not designed to make water available

Completed implementation activities:

- Development of a revised Memorandum of Understanding/Memorandum of Agreement between the three districts outlining planning and regulatory activities

Activities proposed for FY2007: Coordination meetings

Estimated completion date: FY2009 for first phase and, thereafter, a continuing effort

Funding sources: SFWMD

Cost per thousand gallons: Project not designed to make water available

Total money spent to date: \$0

Total project cost: Staff time only

Proposed expenditures:

Cost	FY2007	FY2008	FY2009	FY2010	FY2011	Total
Dollars (\$1,000)	Staff time					

Table 5-1. Implementation schedule and costs for District-wide Water Resource Development projects.

Water Resource Development Projects	Plan Implementation Schedule and Costs (\$ in thousands)					
	FY2007	FY2008	FY2009	FY2010	FY2011	Total
	\$	\$	\$	\$	\$	\$
Drilling and Testing Est. start date: 1990 Est. finish date: ongoing	109	115	121	127	133	605
Groundwater and Evapotranspiration Assessments Est. start date: 1954 and 2002, respectively Est. finish date: ongoing	405	425	446	468	491	2,235
Groundwater and Wetland Monitoring Est. start date: 2002 Est. finish date: ongoing	581	610	641	673	707	3,212
District-wide Feasibility Studies Est. start date: 2001 Est. finish date: ongoing	450	1,450	600	600	0	3,100
Modeling Est. start date: 1998 Est. finish date: ongoing	592	493	421	452	475	2,433
Water Conservation Program Est. start date: 1977 Est. finish date: ongoing	1,381	1,331	1,181	1,181	1,181	6,255
MFLs Activities Est. start date: 1995 Est. finish date: ongoing	183	183	123	123	123	735
Initial Water Reservations Activities Est. start date: 2004 Est. finish date: ongoing	TBD	TBD	TBD	TBD	TBD	TBD
Floridan Aquifer Groundwater Model and Database Development Est. start date: 2006 and 2000, respectively Est. finish date: 2007 and ongoing, respectively	375	236	248	260	273	1,392
Total	4,076	4,843	3,781	3,884	3,383	19,967

TBD To Be Determined

Table 5-2. Implementation schedule and costs for regional Water Resource Development projects.

Water Resource Development Projects	Plan Implementation Schedule and Costs (\$ in thousands)					
	FY2007	FY2008	FY2009	FY2010	FY2011	Total
	\$	\$	\$	\$	\$	\$
Subregional Feasibility Study of Water Supply Integration-St. Lucie County Area Est. start date: 2006 Est. finish date: 2007	99	0 Complete	0	0	0	99
Central Florida Recharge Feasibility Study Est. start date: 2006 Est. finish date: 2008	100	100	0	0	0	200
Kissimmee Chain of Lakes Management Plan Est. start date: 2004 Est. finish date: 2008	1,575	Staff time	0 Complete	0	0	1,575
Central Florida Water Supply Coordination Est. start date: 2006 Est. finish date: 2008	Staff time	Staff time	Staff time	Staff time	Staff time	Staff time
Total	1,774	100	0	0	0	1,874

Table 5-3. Estimate of water to be made available by the Conservation Program.

Conservation Program	FY2007	FY2008	FY2009	FY2010	FY2011	Total
WaterSIP	1.0	1.0	1.0	1.0	1.0	5.00
Mobil Irrigation Laboratories	2.0	2.0	2.0	2.0	2.0	10.00
Total (mgd)	3.0	3.0	3.0	3.0	3.0	15.00

Table 5-4. Cross-walk for environmental projects included in the 2006 Five-Year Water Resource Development Work Program.

Project	Other District Efforts			
	CERP	Big Cypress Basin	Coastal Ecosystems	Cooperative Project
Upper East Coast				
Northern Palm Beach County Comprehensive Water Management Plan	X			
Northwest Fork of the Loxahatchee River Restoration Plan			X	
Lower West Coast				
Lake Trafford Restoration		X		
Henderson Creek Restoration		X		
Henderson Creek Improvements		X		
Belle Meade Rehydration		X		
Golden Gate Canal Weir #3 Retrofit		X		
Golden Gate Canal Weir #6 and #7 Retrofit		X		
Baron River Canal Structures Retrofit Phase 1		X		
Henderson Creek Spreader Channel		X		
Golden Gate Canal Weir #5		X		
Baron River Canal Structures Retrofit Phase II		X		
Ester Bay Salinity Tracer			X	X
Lower East Coast				
Broward Urban Enhancement				X
Other Projects				
Regional Aquifer Storage and Recovery (ASR) Development				X
Cooperative projects to support water resource and water supply development				X

ALTERNATIVE WATER SUPPLY ANNUAL REPORT

For more than a decade, the SFWMD has been engaged in cooperative funding agreements for AWS systems. From 1997 through 2003, the District provided annual grants to entities pursuant to Chapter 373.1961, F.S., which directed the water management districts to share their *ad valorem* tax revenues with public and private entities willing to develop suitable alternative water resources. In that time period, the SFWMD funded 169 projects with \$35 million and created 400 mgd of additional alternative water capacity, leveraging half a billion dollars in total construction costs.

INAUGURAL YEAR FOR THE WATER PROTECTION AND SUSTAINABILITY PROGRAM

During the 2005 state legislative session, a bill creating the Water Protection and Sustainability Program (WPSP), or Senate Bill 444, was enacted, providing significant state funding for construction of AWS projects. The state appropriated \$100 million for the program to be divided among the water management districts, with the stipulation that each district match the funding provided by the state for activities involving or supporting AWS development. The new legislation defined AWS projects as saltwater and brackish water projects; surface water captured predominately during wet-weather flows; sources made available through the addition of new storage capacity; reclaimed water; stormwater (for use by a consumptive use permittee); and any other source designated as nontraditional in a regional water supply plan.

The District satisfied the funding match requirements for the first year of the program with an existing budget for new and on-going AWS projects, conservation efforts, and water resource development projects that support AWS. In FY2006, the District funded 80 projects of which 71 were completed, creating 133 mgd of AWS capacity. Beginning in FY2007, the District has committed to match the state funds with monies strictly to finance new AWS projects.

FY2007 PROJECT FUNDING

For FY2007, the WPSP provided the SFWMD with \$18 million in state funding, based on the distribution formula found in the legislation. The SFWMD matched this amount with \$20.1 million of *ad valorem* funding. Additionally, \$3.3 million of unspent FY2006 funding was re-allocated for the FY2007 AWS projects, bringing the total available funding in FY2007 to \$41.4 million.

During the FY2007 solicitation, the District received 73 applications and funded 62 projects (**Table 5-5**) for a total of \$40.5 million, with \$0.9 million unallocated. **Table 5-5** summarizes the AWS projects funded for FY2007. Funding for these projects was limited to construction portions of the projects that could be completed by August 1, 2007. The associated water made available was reported in two parts: the quantity of water to be made available during this phase (by August 1, 2007) and the total water made available upon project completion. In some cases, water not made available during the current phase is accounted for in a previous phase or, for distribution system construction, is accounted for in the treatment plant capacity (see footnotes of **Table 5-5**).

Table 5-5. FY2007 Alternative Water Supply projects.

Entity	Kissimmee Basin Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase by 08/01/2007	Total			
Four K Ranch, Inc.	Rothert Farms Stormwater Recycling System	Stormwater/irrigation runoff capture	Okeechobee	2.00	2.00	\$272,520	\$349,700	\$109,000
Joe Hall	Raulerson & Son Ranch Stormwater Recycling Project	Stormwater/irrigation runoff capture	Okeechobee	1.15	1.15	\$417,250	\$724,000	\$167,000
Total for Okeechobee County				3.15	3.15	\$689,770	\$1,073,700	\$276,000
Toho Water Authority	Westside Reclaimed Water Main Project (3.2 miles)	Reclaimed Water	Osceola	0.00	^a 3.00	\$4,000,000	\$4,000,000	\$1,600,000
St. Cloud	Reclaimed Water Extension from Southside Waste Water Treatment Facility (WWTF) to Narcoossee Road (1.1 miles)	Reclaimed Water	Osceola	0.00	^a 4.00	\$821,434	\$1,014,712	\$328,000
Total for Osceola County				0.00	0.00	\$4,821,434	\$5,014,712	\$1,928,000
Orange County	Eastern Water Reclamation Facility (E WTF) Public Access Reuse Storage and Pumping Facility	Reclaimed Water	Orange	0.00	^a 1.60	\$2,925,000	\$4,500,000	\$300,000
Orange County	Hidden Springs Storage and Repump Facility Ph 1**	Reclaimed Water	Orange	0.00	^a 3.00	\$700,000	\$987,500	\$280,000
Orange County	Resubmission of Universal South Reuse Transmission Main Ph 2 - Canadian Court (1.1 miles)	Reclaimed Water	Orange	0.00	^a 9.00	\$1,000,000	\$3,700,000	\$300,000
Orange County	South Service Area Reuse System Expansion - International Drive (1.5 miles)	Reclaimed Water	Orange	0.00	^a 1.00	\$3,250,000	\$3,250,000	\$1,300,000
Total for Orange County				0.00	0.00	\$7,875,000	\$12,437,500	\$2,180,000
KISSIMMEE BASIN TOTAL				3.15	3.15	\$13,386,204	\$18,525,912	\$4,384,000

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Upper East Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase by 08/01/2007	Total			
Stuart	1.33 mgd Reclaimed Water Production Facilities Ph III	Reclaimed Water	Martin	1.33	1.33	\$500,000	\$4,642,375	\$200,000
Indiantown Company	1 mgd Reclaimed Water Production Facility	Reclaimed Water	Martin	1.00	1.00	\$1,388,832	\$5,467,211	\$555,500
Martin County	Resubmission Tropical Farms 8 mgd Reverse Osmosis (RO) Expansion - Trains A, B, and D	Brackish Water	Martin	0.00	^b 8.00	\$2,903,000	\$12,900,000	\$1,160,000
Martin County	3.75 mgd Tropical Farms Reclaimed Water Production Facility Expansion Ph II	Reclaimed Water	Martin	0.00	^b 3.75	\$105,000	\$16,210,000	\$42,000
Martin County	SW High Meadow Ave Reclaimed Water Transmission Main - St. Lucie Canal to Highlands Reserve (0.5 miles)	Reclaimed Water	Martin	0.00	^a 1.93	\$454,810	\$3,315,810	\$181,900
South Martin Regional Utility	South End Ph 2 - Reclaimed Water Pumping and Storage Facilities	Reclaimed Water	Martin	0.00	^a 1.40	\$740,000	\$1,600,000	\$296,000
Total for Martin County				2.33	2.33	\$6,091,642	\$44,135,396	\$2,435,400
Fort Pierce Utilities Authority	Floridan Aquifer Well Field Capacity Improvements Ph 3	Brackish Water	St. Lucie	0.00	12.92	\$1,290,000	\$21,600,000	\$516,000
Port St. Lucie	James E. Anderson (JEA) 16.5 mgd Floridan Wellfield and RO Expansion Ph II	Brackish Water	St. Lucie	0.00	16.50	\$17,526,000	\$5,288,000	\$4,500,000
Total for St. Lucie County				0.00	29.42	\$18,816,000	\$26,888,000	\$5,016,000
UPPER EAST COAST TOTAL				2.33	31.75	\$24,907,642	\$71,023,396	\$7,451,400

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Lower East Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase -by 08/01/2007	Total			
14th Street Townhomes Association	Reclaimed Water Pipeline	Reclaimed Water	Broward	0.00	^a 0.04	\$28,620	\$28,620	\$11,400
Fort Lauderdale	Floridan Aquifer wells (2) at Dixie wellfield	Brackish Water	Broward	0.00	^b 12.00	\$1,700,000	\$22,885,000	\$325,000
Hollywood	Floridan Aquifer wells (2) & 2 mgd RO expansion	Brackish Water	Broward	0.60	2.90	\$2,459,000	\$4,459,000	\$1,000,000
Sunrise	Springtree ASR Expansion	ASR	Broward	2.00	2.00	\$1,500,000	\$1,500,000	\$600,000
Pompano Beach	Reuse Distribution System Expansion Services Areas I and II	Reclaimed Water	Broward	0.00	^a 0.11	\$368,000		\$147,200
Total for Broward County				2.60	4.90	\$6,055,620	\$28,872,620	\$2,083,600
Florida City	Floridan Aquifer Test/Production Well	Brackish Water	Miami-Dade	0.00	9.00	\$520,000	\$39,200,000	\$208,000
North Miami Beach	Resubmission - 6.5 mgd RO Facility	Brackish Water	Miami-Dade	0.00	^b 6.50	\$2,769,850	\$20,000,000	\$750,000
Florida Power & Light	Turkey Point Expansion Project, Unit 5 - FL Aq Wellheads (3), piping & pretreatment	Brackish Water	Miami-Dade	0.00	^b 14.06	\$2,500,000	\$9,456,575	\$500,000
Total for Miami-Dade County				0.00	9.00	\$5,789,850	\$68,656,575	\$1,458,000
Marathon	Sombrero Beach Rd Reclaimed Water Main (1.7 miles)	Reclaimed Water	Monroe	0.00	^a 0.90	\$570,400	\$70,539,313	\$228,000
Total for Monroe County				0.00	0.00	\$570,400	\$70,539,313	\$228,000
Boca Raton	Reclaimed water transmission main from WWTF to Airport Rd	Reclaimed Water	Palm Beach	0.00	^a 8.00	\$300,000	\$300,000	\$120,000
Boca Raton	Reclaimed water transmission main to Boca Raton High School	Reclaimed Water	Palm Beach	0.00	^a 0.62	\$101,000	\$101,000	\$40,400
Boca Raton	Reclaimed water transmission main to Corinthian Gardens	Reclaimed Water	Palm Beach	0.00	^a 0.01	\$120,000	\$120,000	\$48,000

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Lower East Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase by 08/01/2007	Total			
<i>Lake Worth RO Total (following 4 items)</i>							\$27,000,000	\$387,500
Lake Worth	Floridan Aquifer well No. F-3	Brackish Water	Palm Beach	0.00	^b 4.50	\$860,000		
Lake Worth	Raw Water Transmission Main for Floridan Aquifer Well F-3	Brackish Water	Palm Beach	0.00	^b 4.50	\$700,000		
Lake Worth	Wellhead Equipment for Floridan Aquifer Well No. F-3	Brackish Water	Palm Beach	0.00	^b 4.50	\$950,000		
Lake Worth	Concentrate Discharge Pipeline	Brackish Water	Palm Beach	0.00	^b 4.50	\$2,210,000		
West Palm Beach	Wetlands Based Water Reclamation Project Ph 5 - Section 16 North Distribution	Reclaimed Water	Palm Beach	0.00	^a 10.00	\$750,000	\$12,000,000	\$300,000
Florida Power & Light	West County Energy Center Floridan Well	Brackish Water	Palm Beach	0.00	15.20	\$1,000,000	\$20,100,000	\$400,000
Loxahatchee River ECD	3 mgd Reclaimed Water Production Expansion Ph 2	Reclaimed Water	Palm Beach	0.00	^b 3.00	\$2,246,000	\$3,600,000	\$700,000
Palm Beach County	Lake Region Water Treatment Plant Ph 1B	Brackish Water	Palm Beach	0.00	^b 10.00	\$17,000,000	\$47,000,000	\$1,000,000
Palm Beach County	Century Village 3 mgd Reclaimed Water Production Facility Ph 1	Reclaimed Water	Palm Beach	3.00	3.00	\$4,829,000	\$5,796,000	\$1,000,000
KRG/Atlantic Delray Beach LLC	Montage Pointe Planned Unit Development (PUD) and Delray Market place Reclaimed Water Pipeline	Reclaimed Water	Palm Beach	0.00	^a 7.00	\$1,291,800	\$1,291,800	\$500,000
Seacoast Utility Authority	Test/Production Floridan Well #1	Brackish Water	Palm Beach	0.00	4.30	\$950,000	\$950,000	\$380,000
South Central Regional WT & Disposal Board	6 mgd Reclaimed Water Treatment Expansion	Reclaimed Water	Palm Beach	0.00	^b 6.00	\$5,315,000	\$20,510,732	\$1,000,000
Town of Jupiter	Surface Water Recharge System Improvements	Above ground impoundment/ Other	Palm Beach	16.70	16.70	\$966,000	\$966,000	\$386,400
Total for Palm Beach County				19.70	39.20	\$39,588,800	\$139,735,532	\$6,262,300
LOWER EAST COAST TOTAL				22.30	53.10	\$52,004,670	\$307,804,040	\$10,031,900

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Lower West Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase -by 08/01/2007	Total			
Ave Maria Utility	Reclaimed Water Phase 2 storage lake, pump station, and distribution piping	Reclaimed Water	Collier	0.00	^a 3.01	\$1,058,400	\$4,980,000	\$423,000
Naples	Reclaimed Water Expansion Ph 1A - Port Royal Reclaimed Water Mains	Reclaimed Water	Collier	0.00	^a 10.00	\$4,783,963	\$17,383,047	\$850,000
Collier County	North East Water Treatment Plant (WTP) Phase 1B Floridan Aquifer Test/Production Wells (4 production; 5 monitoring)	Brackish Water	Collier	0.00	10.00	\$815,000	\$45,200,000	\$326,000
Collier County	Pelican Bay Reclaimed Water Storage and Re-Pump Facility Ph II	Reclaimed Water	Collier	0.00	^a 1.00	\$560,000	\$650,000	\$224,000
Collier County	Reclaimed Water Booster Pump Station (North-South Interconnect Pipes under Livingston Road)	Reclaimed Water	Collier	0.00	^a 10.00	\$648,000	\$1,700,000	\$259,200
<i>Total Collier County South RO (following 3 items)</i>								\$2,200,000
Collier County	South - 12 mgd RO Expansion	Brackish Water	Collier	4.00	12.00	\$11,500,000	\$24,400,000	
Collier County	South - Floridan Aquifer Wellfield Expansion	Brackish Water	Collier	0.00	^b 15.00	\$13,482,083	\$38,000,000	
Collier County	South - Hawthorn Reliability Wells No. 39S-42S	Brackish Water	Collier	0.00	^b 3.00	\$5,900,000	\$5,900,000	
Total for Collier County				4.00	22.00	\$38,747,446	\$138,213,047	\$4,282,200

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Lower West Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase by August 1, 2007	Total			
Bonita Springs	East Water Reclamation Facility	Reclaimed Water	Lee	0.00	^b 4.00	\$18,269,046	\$38,129,374	\$1,000,000
<i>Total Cape Coral North RO (following 2 items)</i>								\$1,500,000
Cape Coral	North RO Floridan Aq Wells (15 wells)	Brackish Water	Lee	0.00	^b 15.00	\$4,500,000	\$24,900,000	\$0
Cape Coral	North 12 mgd RO Plant - Ph 1	Brackish Water	Lee	0.00	12.00	\$15,000,000	\$80,000,000	\$0
Cape Coral	Surface Water Aquifer Storage and Recovery Wells (3 wells, 6 monitoring wells)	ASR	Lee	1.70	1.70	\$4,900,000	\$4,900,000	\$700,000
Cape Coral	Everest 4.9 mgd Water Reclamation Facility Expansion	Reclaimed Water	Lee	0.00	4.90	\$7,800,000	\$72,900,000	\$360,000
Cape Coral	Southwest 8.4 mgd Water Reclamation Facility Expansion Ph 1 (site work & storage tanks)	Reclaimed Water	Lee	0.00	8.50	\$11,000,000	\$112,000,000	\$570,000
Cape Coral	Reclaimed Water Distribution Expansion - Area SW 4	Reclaimed Water	Lee	0.00	^a 1.90	\$3,080,000	\$18,500,000	\$1,232,000
Cape Coral	Weir Improvements (Gator Slough, Weir 19)	Above ground impoundment (240 mgd)	Lee	2.00	2.00	\$600,000	\$600,000	\$240,000
Fort Myers	Resubmission of Central Point 4 mgd Reclaimed Water Expansion	Reclaimed Water	Lee	0.00	0.00	\$5,515,000	\$7,700,000	\$660,000
Fort Myers	Floridan Aquifer Wellfield Expansion - 3 wells, wellheads and transmission piping	Brackish Water	Lee	0.00	5.00	\$5,745,850	\$11,123,380	\$500,000
Lee County	Pinewoods RO Treatment Plant and Wellfield Phase II	Brackish Water	Lee	0.00	^b 3.00	\$6,668,449	\$10,199,826	\$1,300,000
Total for Lee County				3.70	34.10	\$83,078,345	\$380,952,580	\$8,062,000

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project; water made available accounted for in treatment plant capacity

b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.

Table 5-5. Continued.

Entity	Lower West Coast Projects	Alternative Water Source	County	Quantity of Water Made Available (mgd)		Construction Cost This Phase	Total Project Cost	State & SFWMD Funding*
				This Phase by August 1, 2007	Total			
Clewiston	Clewiston RO Water Treatment Plant	Brackish Water	Hendry	0.00	^b 3.00	\$6,000,000	\$20,038,153	\$3,900,000
Total for Hendry County				0.00	0.00	\$6,000,000	\$20,038,153	\$3,900,000
LOWER WEST COAST TOTAL				7.70	56.10	\$127,825,791	\$539,203,780	\$16,244,200
Entity	Big Cypress Basin	Alternative Water Source	County	This Phase by August 1, 2007	Total	Construction Cost This Phase	Total Project Cost	SFWMD BCBB Funding
Collier County	South 20 mgd Floridan Well Field Expansion	Hawthorne Aquifer	Collier	12.00	20.00	\$12,500,000	\$36,000,000	\$900,000
Everglades City	Reclaimed Water Facilities	Groundwater	Collier	Not Applicable	Not Applicable	\$200,000	\$1,277,000	\$50,000
Marco Island	Finished Water Storage Tank	Surface Water and Brackish Groundwater	Collier	12.50	12.50	\$6,800,000	\$6,800,000	\$100,000
Marco Island	Reuse Water System Expansion	Reclaimed Water	Collier	3.00	4.00	\$4,300,000	\$14,461,875	\$460,000
Marco Island	Reclaimed Water System***	Reclaimed Water	Collier	***	***	***	***	\$270,000
Naples	Reclaimed Water System Exp.	Reclaimed Water	Collier	2.50	3.00	\$3,700,000	\$17,000,000	\$490,000
Naples	Golden Gate Main Excess Flow Reuse Project (Study)	Reclaimed Water, Stormwater, and Surface Water	Collier	Not Applicable	Not Applicable	Not Applicable	\$250,000	\$100,000
BIG CYPRESS BASIN TOTAL				30.00	39.50	\$27,500,000	\$75,788,875	\$2,370,000
SFWMD GRAND TOTAL				65.48	183.60	\$245,624,307	\$1,012,346,003	\$40,481,500

* Funding even 50/50 split except Port St. Lucie and Clewiston

** Project is also receiving funding from St. Johns River Water Management District

*** This project is part of the 4.0 mgd Marco Island Reuse System FY2007 funds of \$490,000 – this line is FY2006 funds \$270,000

a Distribution/use type project: water made available accounted for in treatment plant capacity

- b Phased project, water accounted for previously

Note: Resubmissions funded at 75 percent of remaining table value or 40 percent of FY2007 construction cost, whichever is smaller.