September 17, 2015



South Indian River Water Control District District Engineer's Annual Report









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District Engineer's Annual Report

September 2015

Introduction

Stormwater management is an ever evolving function for South Indian River Water Control District (SIRWCD or District). When SIRWCD was originally formed pursuant to Chapter 298, Florida Statutes in 1923, flood control was the main purpose of the District. As a result, the initial works of the District consisted primarily of drainage canals, mainly used for agricultural purposes. Today, the District's main purpose remains flood control, but it is also aware of the regional and area concerns of the community in terms of stormwater quantity and quality. With the development of water quality regulations, the potential impacts from development are being monitored by agencies and/or individuals that have a focused interest on maintaining a healthy ecosystem within the Loxahatchee River Basin and, specifically, the Northwest Fork of the Loxahatchee River. Approximately 12,500 acres of SIRWCD discharge into the Loxahatchee River Basin, and therefore, the District is actively engaged in the many external dealings that are influencing the District from a water supply, flood control, water quality, and ecosystem management perspective. The Board of Supervisors and staff are focused on making sure that the goals and expectations of these external activities do not conflict with the District's best interests with regard to the functioning of SIRWCD's system and the ability to deliver an appropriate level of service.

From an operation and maintenance standpoint, the District continues to work with the landowners at improving conditions affecting stormwater management. District staff continues to assist the Board of Supervisors with operation and maintenance activities involving site specific drainage improvements that impact landowners, canal and culvert maintenance, and replacement or renewal of facilities that affect the works of the District. In the District operates addition. and maintains roadways and a park and continues its role to serve the landowners



Figure 1. Palm Beach Country Estates

with operation and maintenance of its infrastructure and implementing capital improvement projects and landowner initiated improvements to the District.



Annually, the District examines the need to implement capital improvement projects that could enhance the works of the District. Capital improvements may occur on existing infrastructure such as roads, canals, and drainage structures. Roadway improvements are usually initiated where the traffic volumes for a specific roadway necessitate the improvements or the improvements are undertaken as a result of landowner initiatives. Landowner initiated roadway petitions for the application of Palm Beach County Standard Asphalt or Open Graded Emulsified Mix (OGEM) are received and analyzed by Staff on a regular basis.

Each year, it is appropriately restated and recognized in the engineering report that the SIRWCD Board of Supervisors, through its policies and procedures, is responsible for formulating direction regarding District operations and intergovernmental issues. This is accomplished through a respected structure in which the District is managed through its Board of Supervisors and supporting staff. The Board of Supervisors establishes policy and provides direction to staff concerning budget, priorities, relationship with other public entities, and landowner issues. Staff is responsible for implementing Board policy. Accordingly, staff responds pursuant to the Board's direction. Engineering tasks continue to be formulated to respond to the Board of Supervisors by implementing their policies and directives, as well as supporting the General Manager in resolving various landowner issues. The relationship between the Board of Supervisors and District staff has been extremely effective in both the delivery of services to the residents and landowners within the District, and prospective management in response to requirements that are imposed upon the District by other governmental entities.

With regard to the current status of the District, to the best of my knowledge and belief, the District is in compliance with all regulatory requirements that affect works of the District and their operation, and the works of the District continue to be operated and maintained in a manner that achieves the available level of service. A separate report prepared by the District's Operations Manager discussing operation and maintenance of District facilities is included as an appendix to this document.

It has been an honor to work with the Board of Supervisors and staff, and we will continue to respond to the Board of Supervisors by implementing their policies and directives, as well as working with the General Manager in resolving various landowner issues.



Capital Improvements

Proposed Eighteenth Plan of Improvements

Based on a landowner initiative, a referendum was prepared by SIRWCD and verified by the Palm Beach County Supervisor of Elections to implement the application of asphalt on the petitioners' roadway surfaces as a roadway improvement project. On May 14, 2015, the Board of Supervisors authorized staff to develop the Eighteenth (18th) Plan of Improvements. A public hearing was held August 20, 2015 where the plan was approved and the Board authorized the Engineer's Report for the 18th Plan of Improvements. This plan includes the Unit of Development RI-18, which consists of the application of Palm Beach County Standard asphalt on approximately 3.8 miles within Palm Beach Country Estates. These roads are listed as follows and are shown in *Figure 2*.

Unit of Development RI-18 (3.8 miles)

- 64th Way N Between 146th Road N and 149th Place N
- 67th Trail N Between 146th Road N and 149th Place N
- 68th Drive N between 146th Road N and 149th Place N
- 74th Avenue N Between 155th Place N and 159th Court N
- 75th Way N between 150th Court N and 154th Court N
- 77th Trail N between 150th Court N and 154th Court N
- 78th Drive N between 155th Place N and 159th Court N
- 81st Terrace N between 150th Court and 154th Court N
- 149th Place between 69th Drive N and 64th Way N
- 163rd Court N between 75th Avenue N and 79th Terrace N
- 163rd Ct N between 75th Avenue N to East End

A public hearing for the Engineer's Report is planned for October 15, 2015. After approval of the Engineer's Report, construction documents for Unit of Development RI-18 will be prepared. Construction is anticipated in 2016.





Figure 2. 18th Plan of Improvements



Proposed Plan of Improvements

The District has received petitions from landowners to apply asphalt on certain roadways within the District. Landowners on the following roadways are petitioning to distribute a referendum for applying OGEM in Jupiter Farms (approximately 0.4 miles) and applying asphalt in both Palm Beach Country Estates and Jupiter Farms (approximately 2.7 miles) as shown on *Figure 3*:

<u>OGEM</u>

• 93rd Lane N. between 155th Road N. and 159th Court N.

<u>Asphalt</u>

- 75th Avenue N. between 150th Court N. and 155th Place N.
- 76th Trail N. between 163rd Court N. and 165th Street N.
- 78th Drive N. between 165th Street N. and 167th Court N.
- 85th Way N. between 155th Place N. and 159th Court N.
- 93rd Lane N. between 155th Road N. and Sandy Run N.
- 159th Court N. between 79th Terrace N. and 84th Avenue N.
- 175th Road N. between Jupiter Farms Road and West End
- 179th Court N. between Mellen Lane N. and Alexander Run

The District continues to accept petitions for this next plan of improvements. The next step will be to issue a referendum to the affected landowners.





Figure 3. Proposed Plan of Improvements

AECOM

Resource Regulations

National Pollutant Discharge Elimination System (NPDES)

The current Palm Beach County Municipal NPDES Permit was issued by the Florida Department of Environmental Protection (FDEP) on March 2, 2011. SIRWCD is a co-permittee along with 34 municipalities, the Department of Transportation, Palm Beach County, and four special districts. In order to complete the permit-related activities that are performed collectively by the co-permittees, an NPDES Steering Committee was formed. The Steering Committee meets on a regular basis to evaluate the program, to



provide training and resources to the co-permittees, and to assist with the preparation of the annual reports. Staff continues to attend the Committee Meetings as a Steering Committee Board member. This past year the meetings included a discussion of Waters of the United States rule, public education, Year 4 water quality monitoring and pollutant loading results, the Annual Reports and Joint Report. Training was also provided through the Florida Stormwater Association Stormwater Operator Training, Stormwater, Erosion & Sedimentation Control Inspector Training program, and a training video session was conducted to satisfy permit requirements. In addition, public outreach videos have been acquired to help educate the public on stormwater activities.

Waters of the United States (WOTUS) Proposed Rule

On April 21, 2014, the EPA and the Army Corps of Engineers proposed draft rules revising the definitions of Water of the United States or "WOTUS". The stated intent of the changes is to clarify what is and what is not a WOTUS. After many agency comments on the proposed rule, the rule was revised and the EPA and the Army Corps of Engineers published final rules revising the definitions of WOTUS that became effective on August 28, 2015. However if implemented as adopted, the new regulations will result in significant impacts on the NPDES program and municipal separate storm sewer system (MS4) permit holders because most ditches, stormwater conveyances, and certain flood control devices



will be considered to be "WOTUS" and subject to permit conditions and numeric nutrient criteria.

On August 27, 2015, a federal judge in North Dakota granted a petition filed by 13 western states to enjoin implementation of the rules – making implementation and application of the rules throughout the rest of the country even less certain. In addition, other states including Florida have filed lawsuits challenging the rule. Staff will continue to monitor the proposed rule and provide updates to the District.

Public Facilities Report/Water Control Plan

Chapter 189 of the Florida Statutes, the Uniform Special District Accountability Act, requires the preparation and submission of a Public Facilities Report to governmental jurisdictions in which the



District resides such as Palm Beach County, the Town of Jupiter, and South Florida Water Management District. Special Districts are required to submit an update to this report every five years and, at a minimum, the report must contain information as to the status of the District's public facilities and changes or revisions to those facilities that have occurred in the past year.

Since 1991, when the District filed its first Public Facilities Report, data collection has been an ongoing process to provide for better and more accurate mapping of the works of the District. The Public Facilities Report is continually modified as each Plan of Improvement is added to the District's facilities. The current modification includes the Eighteenth Plan of Improvements and proposed capital improvements for next year. South Florida Water Management District is currently reviewing the amendment. In accordance with Chapter 298.225 Florida Statutes, the Water Control Plan is amended consistent with the preparation of the proposed Plan of Improvement during the last year.

Government Agencies

A summary of regulatory agencies and cooperative associations affecting SIRWCD is listed in the Annual Report each year. The following list is offered to inform the landowners of the number of regulatory agencies and cooperative associations with which the District conducts business and their potential impact on the District's capital improvements, operations, and maintenance.

- United States Environmental Protection Agency (EPA)
- United States Army Corps of Engineers (ACOE)
- United States Fish and Wildlife Service
- Florida Department of Environmental Protection (FDEP)
- Florida Department of Economic Opportunity (DEO)
- Florida Department of Transportation (FDOT)
- Florida Fish and Wildlife Conservation Commission
- South Florida Water Management District (SFWMD)
- Palm Beach County
- Loxahatchee River Environmental Control
 District
- Town of Jupiter
- Northern Palm Beach County Improvement District (NPBCID)
- City of West Palm Beach
- Indian Trail Improvement District
- Jupiter Inlet District
- City of Palm Beach Gardens
- Martin County
- United States Geological Survey (USGS)
- Loxahatchee River Ecosystem Management Area Committee

- Loxahatchee River Management Coordinating Council
- Solid Waste Authority of Palm Beach County (SWA)
- Numerous Citizen Interest Groups and Committees



Loxahatchee River Management Coordinating Council

SIRWCD continues to participate as an active member of the Loxahatchee River Management Coordinating Council. This Council was established by Chapter 83-358, F.S. The Council is comprised of federal, state, and regional agencies and local representatives. It advises the FDEP and SFWMD on matters that affect administration of the Loxahatchee River, to identify and resolve inter-governmental coordination problems and to enhance communications.

SIRWCD participates as a member of the Coordinating Council due to the fact that the Northwest Fork of the Loxahatchee River is the primary stormwater outfall for the entire portion of SIRWCD lying west of the SFWMD C-18 Canal, and the area east of the SFWMD C-18 discharges into the middle of the Loxahatchee River. SIRWCD and the Coordinating Council also have several mutual issues and interests.

Loxahatchee River Preservation Initiative

The Loxahatchee River Preservation Initiative (LRPI) is the outgrowth of a watershed management effort that the FDEP spearheaded in 1996. This multi-agency and stakeholder based advisory group was organized primarily for the purpose of soliciting, ranking and submitting to the Florida Legislature a list of projects focused on the preservation and restoration of the water quality and habitats of the Loxahatchee River and its watershed. Agencies and stakeholders are given an avenue to apply for funding on several key projects that are critical to preserving the long-term health of the Loxahatchee and have not been implemented due to lack of resources and other regional priorities taking precedence.

SIRWCD participates as a member of the LRPI due to its location within the Loxahatchee River watershed. Last year, SIRWCD applied for grant funding for a project on 128th Trail North located north of Indiantown Road. The project received ranking to receive funding but the Florida Legislature did not provide any funding for any of the ranked projects. SIRWCD will continue to apply for grants in the future.



Figure 4. Loxahatchee River



South Florida Water Management District (SFWMD) Everglades Restoration Strategies

SFWMD's "Everglades Restoration Strategies" program has been developed in order to address water quality-based effluent limits for Stormwater Treatment Areas to meet NPDES permitting requirements by EPA. Under these strategies, the SFMWD is implementing a technical plan to complete several projects that will create more than 6,500 acres of new stormwater treatment areas (STAs) and 116,000 acre-feet of additional water storage through construction of flow equalization basins (FEBs). FEBs provide a more steady flow of water to the STAs, helping to maintain desired water levels needed to achieve optimal water quality treatment performance.

As part of the program's Technical Plan, both STA expansions and Flow Equalization Basins (FEB) upstream of STA's are proposed. The plan includes designation of the L-8 Reservoir as a 45,000 ac-ft FEB that will have a multipurpose function to capture, store and deliver water to STA-1 East, STA-1 West, and the Loxahatchee River and for other restoration purposes. When the STA-1 West expansion is completed and in-basin storage for the Loxahatchee River comes online, the L-8 FEB will transition to primarily delivering consistent flows needed to optimize performance of STA-1 East and STA-1West as part of the plan. The L-8 Flow Equalization Basin is expected to complete construction in December 2016.

To date, the SFWMD has not made available the modeling assumptions or results in support of the Plan. AECOM will be participating in a Technical Advisory Committee as the Plan moves forward. *Figure 5* illustrates the proposed key projects and components of this plan.



Figure 5. Final State Proposal of Key Projects and Components



Loxahatchee River Watershed Restoration Project

In December 2014, SFWMD and the Army Corp of Engineers (ACOE) kicked off the Loxahatchee River Watershed Restoration Project (formerly known as North Palm Beach County – Part 1), which is part of the Comprehensive Everglades Restoration Plan (CERP). The project aims to restore and sustain the overall quantity, quality, timing, and distribution of freshwaters to the federally designated "National Wild and Scenic" Northwest Fork of the Loxahatchee River for current and future generations. This project also seeks to restore, sustain, and reconnect the area's wetlands and watersheds that form the historic headwaters for the river and its tributaries. *Figure 6* indicates the basins that the project area includes.



Figure 6. CERP Project Area

Planning efforts for the project were put on hold in 2011 and have now been restarted. Currently, the project is being re-scoped under USACE's New Planning Paradigm and existing plan formulation data and analysis will be used in the development of a final plan, known as a Project Implementation Report and Environmental Impact Statement, to prepare for congressional authorization.

Florida Association of Special Districts

Serving the Special Needs of Your Community



SIRWCD's Board of Supervisors and staff are active participants in the Florida Association of Special Districts (FASD). FASD is the recognized, collective voice of special purpose government across the State of Florida. This diverse network of both Independent and



Dependent Special Districts have come together to provide resources uniquely developed to meet the needs of Florida's Special Districts. The purpose of the FASD is to keep the public informed of the benefits of Special Districts, update members with information useful to themselves and their community, review all government activities as they affect the interest of Special Districts, and to forward requests and comments to the Florida Legislature. FASD provides primary education and training to satisfy the educational requirements of Ch. 189, Florida Statutes. The purpose of the education program is to ensure that elected boards and district managers comply with Florida Statutes governing special districts. The Department of Economic Opportunity, Division of Community Development, assists with educational programs for board members and the annual conference by partnering with the Association.

The FASD holds regular meetings throughout the year where information from other water control districts, improvement districts, community development districts, and special taxing districts can be shared with regard to policies, procedures, operation, and maintenance issues. In addition, members of the Association are "watchdogs" for codes, ordinances, rules, and/or legislation that can either help or hinder the activities of Special Districts. To this end, a significant effort is put forward during the annual legislative session. FASD members continue to benefit from each other's experiences.

The FASD will continue to follow this order and represent the interests of its members and provide information on pertinent legal requirements, sunshine laws, economic challenges, environmental, emergency management, and homeland security issues.



Operation and Maintenance

Canal 18 Bank Expansion and Stabilization

Due to the need for additional area for access to Canal 2, Canal 18 was expanded from 176th to Canal 2. Canal 18 is located along the west side of Jupiter Farms Road from the Jupiter Farms Shopping Center to Canal 2. Approximately 990 feet of the west bank of Canal 18 was widened to provide at least 10 feet for access for maintenance activities on Canal 2. Rock rip rap was also installed for erosion control of the newly constructed bank. *Figure* 7 shows the finished project. The project was completed May 21, 2015 at a cost of \$95,777.



Figure 8. Canal 7 Culvert at Alexander Run



Figure 7. Canal 18 looking North

Culvert Installation in Canal **7** at Alexander Run

The District has been investigating options for the potential of reducing its operation and maintenance costs. One way those costs could be reduced would be to add additional access points to the perimeter canal. Several culverts were

planned and in March 2015, a culvert was installed in Canal 7 at Alexander Run. The project included the installation of approximately 60 feet of 48-inch diameter pipe, fill material, rip rap, sod, and a steel gate. The construction cost was \$39,000. The completed project can be seen in *Figure 8.*

Culvert Installation in Canal 8 at Canal 11

In addition to the Canal 7 at Alexander Run culvert, a culvert was installed in Canal 8 at Canal 11 in March 2015 to provide access for operation and maintenance to the perimeter canal. The project included the installation of approximately 60 feet of 48-inch diameter pipe, fill material, rip rap, sod, and a steel gate. The construction cost was \$24,650.

Culvert Installation in Canal 12 at west end of Randolph Siding Road

In March 2015, a culvert was also installed in Canal 12 at the west end of Randolph Siding Road to provide access for operation and maintenance to the perimeter canal. The project included the installation of approximately 60 feet of 78-inch diameter pipe, fill material, rip rap, sod, and a steel gate. The construction cost was \$41,930.



Canal Clearing and Maintenance



Figure 9. Canal Cleaning

The District's canal network consists of over 60 miles of canals which are continuously in need of being maintained, restored, and enhanced. The canal clearing and maintenance program's objective is to keep the canal sections easily accessible and, to the best extent possible, free from trees and other vegetation that may potentially enter the canal during a major storm event and thereby create a restriction that would aggravate flooding.

The canal clearing and maintenance program provides services that include clearing, grading and shaping of the canals as well as restoring, replacing or enhancing structural improvements. The

program is an ongoing effort and the District has continued to work to maintain and achieve the desired goals. *Figure* 9 illustrates how canal cleaning may be completed.

The Board has authorized an on-going swale maintenance program which allows the District Engineer and General Manager to identify areas within SIRWCD that could be improved for conveyance and storage. District staff will continue to work toward the desired goals of the District in the swale maintenance program.

Margaret Berman Memorial Park



In 2011, SIRWCD was given operation and maintenance responsibilities for the proposed Margaret Berman Memorial Park. The District had performed initial activities for the park, which included a storm water management system, asphalt exercise path, asphalt parking area, fire hydrant relocation, landscaping, and irrigation, all of which were completed on July 26, 2012.

This year, the District completed the original plan for the community park with the installation of three

pavilions, a half basketball court, and a racquetball court. Construction was completed on August 31, 2015 at a total cost of \$273,355.00. The District continues to operate and maintain this facility.



Reese's Bridge

South Florida Water Management District (SFWMD) approached SIRWCD about taking over operation and maintenance of the bridge (Reese's Bridge) that crosses the C-18 Canal. This bridge provides access for SIRWCD to transport maintenance equipment to operate and maintain SIRWCD facilities within Palm Beach Country Estates.

Improvements and restoration are needed to extend the life span and safety of the bridge and a SFWMD permit transfer will be required.





In accordance with the provisions of the Florida Statutes, the District maintains a Policies and Procedures Manual that is available to the public. The Manual presents and discusses items including: District organization, agenda formulation and execution, processing of permits that affect works of the District, the budget process, etc. Periodic revisions with deletions, additions, and amendments to maintain consistency with Florida Statutes and other codes and rules enable the District to function properly.

Roadways

There are approximately 189 miles of roads within SIRWCD. These roads give access to each subdivided parcel of land. Currently there are 89.9 miles of improved roads (paved and OGEM) and 98.1 miles of unpaved roads in SIRWCD. The improved roads include roads that are operated and maintained by Palm Beach County, the Town of Jupiter, and private, which consist of approximately 42 miles of roadway.

Aquatic Weed Control Program

SIRWCD implements an Aquatic Weed Control Program in order to maintain the primary canals throughout the District. This Program is an ongoing process aimed at reducing and managing the amount of weeds in the canal network to allow unobstructed drainage following rain events. The Aquatic Weed Control Program is necessary to prevent canals from becoming overgrown and to provide a clean channel through the canal system to the outfall.

The program controls emergent vegetation growth through the use of herbicides approved in permits obtained from the State of Florida as well as mechanical removal of dead or accumulated vegetation that may present a potential for impeding the flow of storm water through the primary canal system.



Figure 10. Canal 2



In the future, greater emphasis may be needed for this program as a result of NPDES water quality programs, the FDEP and EPA proposed storm water criteria, the Ecosystem Management Area Plan, and other intergovernmental coordinating activities.

Water Quality Monitoring

Due to the many ecological and regulatory pressures being exerted over the Loxahatchee River Basin area, it was recommended that the District sample and monitor water quality within and adjacent to its boundaries. SIRWCD had historically taken samples through a co-operative agreement with the United States Geological Survey (USGS), but due to reduced funding by the federal government, the program was abandoned. The Loxahatchee River District (LRD) has been obtaining water quality samples in recent years. The existing sampling locations done by LRD are depicted on *Figure 11*. Due to the new water quality legislation being proposed, the Board of Supervisors had instructed staff to implement a water quality monitoring program that augments and expands the current LRD program.

In July 2011, SIRWCD entered into a contract with a water sampling and testing firm. The samples are tested to analyze the surface water and groundwater for various metal, organic and inorganic contaminants as well as water quality criteria. *Figure 12* illustrates the sampling locations for this program. The Lateral Control Structures constructed as part of the 9th Plan of Improvements have provided the District with a significant amount of water level monitoring data that is very valuable to the District to better manage the system for flood protection and environmental benefits.



Figure 11. Loxahatchee River District Sampling Points





Figure 12: SIRWCD Water Quality Sampling Locations

Rainfall

The SIRWCD work center monitors and records the total rainfall the District receives throughout the year. For the twelve month period from September 2014 through August 2015, the District received 57.38 inches of rainfall. The District's historical monthly rainfall data dating back to 1987 as well as the calculated monthly average rainfall is illustrated in *Table 1*. The average annual rainfall for SIRWCD is 65.11 inches. The 2014-2015 year rainfall was lower than the historical rainfall average within the District. Historical rainfall data obtained by the Loxahatchee River District (LRD), the Town of Jupiter Water Department (TOJ), and the SFWMD is shown below in *Tables 2, 3*, and *4*, respectively.

The 2014-2015 monthly rainfall data from SIRWCD, LRD, and TOJ have been averaged to determine the rainfall for an area referred to as North County. The average total year rainfall in North County from September 2014 to August 2015 was 56.53 inches. The North County Averages can be found in *Table 5*.

The SFWMD data represents the historical averages of numerous rainfall measuring stations throughout Palm Beach County. *Table 6* and *Figure 13* compare the rainfall data from 2014-2015 SIRWCD, the 30 year SFWMD average, and the 2014-2015 North County average. The cumulative rainfall for 2014-2015 SIRWCD, the 30 year SFWMD average, and the North County average are shown in *Table 7* and *Figure 14*.



Table 1:	SIRWCD Rainfall Data
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Historical Rainfall Data (inches)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
1987-1988	8.08	6.03	12.92	1.25	4.00	2.60	3.20	2.50	9.30	13.25	14.20	10.75	88.08
1988-1989	1.00	1.35	1.70	1.75	0.40	0.25	4.10	5.50	1.90	6.95	7.90	6.75	39.55
1989-1990	3.80	3.75	1.40	2.15	1.10	1.80	6.20	2.20	4.85	5.85	4.85	9.40	47.35
1990-1991	11.35	3.05	2.65	2.55	7.75	4.20	4.25	7.35	5.50	15.90	9.80	5.72	80.07
1991-1992	9.95	4.35	4.85	0.55	0.75	6.25	4.70	3.00	2.45	16.85	2.80	11.95	68.45
1992-1993	9.00	0.75	9.85	0.75	12.60	4.15	10.75	2.10	7.18	7.30	4.75	3.73	72.91
1993-1994	8.15	12.00	2.57	0.47	2.09	4.12	1.67	2.50	2.65	7.23	4.91	9.77	58.13
1994-1995	7.55	7.15	7.87	7.51	2.32	1.83	2.68	3.57	1.43	10.08	10.73	14.80	77.52
1995-1996	4.78	25.90	0.71	1.22	1.39	1.00	11.94	2.01	10.62	7.39	9.74	8.31	85.01
1996-1997	7.41	6.60	4.37	0.98	4.11	6.41	2.51	7.24	5.45	14.60	6.18	12.39	78.25
1997-1998	10.26	1.78	3.53	5.45	6.54	7.84	4.78	5.71	1.91	1.88	8.74	7.13	65.55
1998-1999	10.81	4.03	10.86	1.26	9.76	0.68	0.37	0.87	2.59	16.38	7.21	15.22	80.04
1999-2000	9.79	17.41	0.76	5.39	1.23	1.55	3.27	4.16	0.89	3.21	7.33	2.49	57.48
2000-2001	6.45	12.06	1.03	3.15	1.10	0.03	5.56	0.65	5.92	9.78	8.28	11.81	65.82
2001-2002	14.26	6.65	3.17	2.73	1.25	6.41	1.29	5.31	2.03	10.56	9.71	5.63	69.00
2002-2003	3.67	2.40	3.13	2.95	0.17	1.61	7.62	6.22	10.70	5.81	2.62	9.41	56.31
2003-2004	4.65	6.45	5.81	3.38	2.09	2.07	0.81	2.11	3.11	3.95	8.66	7.70	50.79
2004-2005	25.72	1.44	1.39	1.04	1.50	1.44	9.44	2.05	6.80	12.69	4.07	7.00	74.58
2005-2006	13.21	11.80	3.08	0.74	0.43	2.97	0.67	2.67	2.39	8.59	6.06	12.04	64.65
2006-2007	4.56	2.22	1.58	3.58	0.28	1.40	0.74	3.37	5.09	10.72	12.93	9.44	55.91
2007-2008	12.38	7.55	1.92	4.43	0.95	4.07	4.15	2.32	4.78	8.14	5.40	9.07	65.16
2008-2009	4.98	4.62	1.47	2.08	0.05	0.74	4.89	1.39	11.15	6.30	8.87	6.68	53.22
2009-2010	3.82	1.92	2.92	7.32	1.86	2.15	9.46	4.98	6.50	7.06	5.71	9.99	63.69
2010-2011	9.20	1.20	1.59	0.44	3.21	0.39	2.33	1.02	3.91	7.10	7.63	7.70	45.72
2011-2012	9.72	11.30	1.59	2.00	0.75	6.62	4.50	1.18	6.93	5.97	4.30	15.66	70.52
2012-2013	3.87	4.59	0.51	3.66	1.22	2.40	1.18	3.60	8.72	9.65	10.74	9.35	59.49
2013-2014	9.40	0.81	6.98	1.49	11.65	2.84	4.43	1.62	6.14	11.80	9.37	5.90	72.43
2014-2015	7.23	4.25	1.58	1.27	1.41	10.97	3.06	4.36	2.67	4.63	7.26	8.69	57.38
AVG	8.39	6.19	3.64	2.56	2.93	3.17	4.31	3.27	5.13	8.92	7.53	9.09	65.11

Historical Rainfall Data (inches)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
1974-1975	5.01	6.07	1.81	1.66	0.46	2.80	1.63	1.92	8.20	10.19	6.78	1.46	47.99
1975-1976	5.67	3.83	1.10	2.15	0.90	6.30	0.36	1.89	10.57	4.70	1.59	5.20	44.26
1976-1977	8.91	4.12	3.69	2.71	4.48	1.54	1.77	2.00	8.60	3.06	2.33	5.97	49.18
1977-1978	13.39	1.13	1.14	6.21	4.80	2.60	3.40	0.25	4.15	11.95	13.15	10.71	72.88
1978-1979	9.45	3.40	7.30	13.62	5.10	0.47	1.16	3.81	5.45	4.32	3.36	5.61	63.05
1979-1980	18.96	5.22	4.16	1.49	3.84	2.58	1.79	2.88	5.40	4.83	7.94	4.22	63.31
1980-1981	6.42	6.16	4.72	3.04	0.63	3.65	1.00	0.92	3.35	4.67	3.59	16.71	54.86
1981-1982	8.61	2.73	3.87	0.58	1.88	9.38	18.16	7.71	11.38	12.65	3.85	8.79	89.59
1982-1983	8.02	2.83	21.95	2.11	6.19	7.13	5.26	4.05	3.14	9.02	4.04	8.19	81.93
1983-1984	16.40	6.98	4.86	7.59	1.12	2.77	5.22	3.05	7.92	5.01	6.57	3.61	71.10
1984-1985	11.55	2.19	9.52	1.35	1.13	0.29	1.88	3.73	2.53	4.98	5.06	4.37	48.58
1985-1986	11.74	6.51	1.21	4.31	5.51	1.81	14.00	0.25	1.17	11.40	7.30	5.93	71.14
1986-1987	5.39	6.75	6.13	6.97	2.62	3.11	6.88	0.30	6.93	7.64	4.09	3.88	60.69
1987-1988	7.09	3.94	12.25	0.19	4.18	4.91	3.39	1.84	8.24	7.09	7.95	7.41	68.48
1988-1989	2.02	2.79	6.32	1.32	1.22	0.37	3.84	4.73	2.82	3.33	6.75	5.70	41.21
1989-1990	2.36	3.16	1.41	2.18	1.68	1.38	6.36	1.49	3.84	2.51	4.29	3.16	33.82
1990-1991	8.25	3.02	0.97	1.83	7.45	2.75	2.99	2.92	6.71	7.68	5.57	3.80	53.94
1991-1992	5.88	4.28	2.72	0.47	1.74	3.30	3.74	3.67	1.46	15.44	2.16	9.27	54.13
1992-1993	10.54	1.63	9.17	1.02	12.75	4.57	9.73	2.22	3.32	8.50	2.99	2.22	68.66
1993-1994	8.59	11.29	5.66	0.81	3.38	4.20	1.97	3.74	3.41	8.31	4.87	10.06	66.29
1994-1995	7.48	5.60	10.27	7.30	2.54	1.49	2.81	3.40	0.80	9.56	8.98	13.02	73.25
1995-1996	5.44	23.64	1.42	1.89	1.33	1.30	11.00	1.51	8.57	6.63	5.96	6.77	75.46
1996-1997	4.81	5.04	4.77	7.77	3.53	2.44	2.50	9.19	6.08	19.35	8.42	18.52	92.42
1997-1998	9.37	2.24	2.92	4.76	6.84	6.51	4.93	3.18	2.46	3.93	8.41	7.78	63.33
1998-1999	12.00	4.60	8.61	2.04	9.33	0.63	0.30	0.92	4.11	13.62	6.24	10.70	73.10
1999-2000	12.25	18.04	0.41	2.19	1.11	1.02	2.18	5.40	2.05	1.63	4.81	3.93	55.02
2000-2001	10.17	12.88	2.05	4.08	1.19	0.40	6.99	0.92	5.41	9.12	10.96	12.02	76.19
2001-2002	18.95	5.81	2.48	2.94	0.76	6.71	1.47	3.62	1.36	10.11	9.58	7.58	71.37
2002-2003	6.02	3.20	3.22	3.60	0.19	1.60	8.64	4.90	10.74	4.91	1.77	7.56	56.35
2003-2004	5.91	2.50	6.06	3.19	1.77	2.25	0.64	1.62	3.20	3.18	6.38	8.35	45.05
2004-2005	22.28	1.30	1.05	1.02	1.38	2.50	5.18	2.09	5.23	10.57	1.85	8.12	62.57
2005-2006	4.54	11.25	4.38	1.43	0.44	3.15	0.49	3.13	1.64	8.43	5.81	11.25	55.94
2006-2007	5.04	2.14	1.92	3.80	0.45	1.77	1.06	2.88	4.07	12.36	8.19	4.06	47.74
2007-2008	12.27	6.83	3.13	3.41	1.08	3.94	4.41	2.48	4.56	7.70	5.99	11.15	66.95
2008-2009	6.36	6.34	1.82	6.34	0.41	1.20	4.86	1.87	10.17	8.07	8.65	6.90	62.99
2009-2010	3.51	0.79	4.72	6.89	1.57	3.02	9.08	5.34	2.79	10.37	5.42	11.70	65.20
2010-2011	8.36	1.49	2.21	1.11	3.62	0.66	3.27	2.89	3.48	5.00	4.74	9.70	46.53
2011-2012	8.07	8.73	2.22	0.98	3.62	5.89	2.67	1.66	7.97	6.81	3.85	16,44	68.91
2012-2013	7.60	5.61	1.88	8.45	1.77	2.27	1.23	5.42	8.00	11.65	5.49	7.60	66.97
2013-2014	12.18	0.81	6.88	2.69	7.83	2.13	5.15	2.19	4.46	9.41	8.90	8.50	71.13
2014-2015	8.29	4.93	2.02	0.92	0.00	6.47	2.22	5.25	2.72	5.39	8.61	9.25	56.07
AVG	8.91	5.41	4.50	3.38	2.97	3.01	4.28	3.01	5.08	7.93	5.93	7.98	62.38

Table 2: Loxahatchee River District (LRD) Rainfall



Historical Rainfall Data (inches)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
1976-1977	4.65	4.62	3.20	0.80	3.33	1.70	0.70	2.09	3.00	5.20	5.80	8.25	43.34
1977-1978	14.06	2.90	2.97	7.70	4.80	2.60	3.40	0.25	4.15	11.95	13.15	10.71	78.64
1978-1979	9.45	3.40	7.30	16.39	5.05	0.22	1.34	3.98	6.14	4.31	2.63	5.49	65.70
1979-1980	16.86	5.98	4.54	1.58	5.00	2.67	1.91	2.50	6.12	3.61	9.69	5.22	65.68
1980-1981	6.65	6.33	4.83	2.00	0.62	3.11	1.12	0.46	4.60	6.16	3.27	15.65	54.80
1981-1982	7.20	2.56	1.75	0.36	1.70	6.54	14.70	8.24	14.14	13.25	2.82	6.97	80.23
1982-1983	7.94	2.16	22.49	2.59	6.26	8.10	5.11	4.29	3.38	9.40	3.25	8.30	83.27
1983-1984	15.21	8.29	3.94	7.20	0.79	3.49	6.50	2.97	9.04	2.30	6.13	3.65	69.51
1984-1985	10.23	2.40	13.80	0.17	1.13	0.29	1.88	6.66	1.95	4.66	4.65	4.49	52.31
1985-1986	15.65	5.15	0.73	4.02	5.38	2.23	14.00	0.28	1.19	13.60	5.44	5.25	72.92
1986-1987	4.24	6.75	6.13	6.49	1.86	5.17	7.58	0.34	3.57	7.18	3.68	3.28	56.27
1987-1988	9.07	8.12	13.58	0.31	3.86	5.94	3.51	1.48	7.10	7.98	8.79	8.60	78.34
1988-1989	2.41	2.53	2.40	1.11	1.04	0.53	4.46	3.90	2.60	3.07	5.69	4.87	34.61
1989-1990	2.47	3.21	1.24	2.54	1.35	1.40	5.95	1.94	5.07	2.32	4.07	4.60	36.16
1990-1991	8.81	2.90	1.43	1.83	10.86	3.15	3.32	2.59	6.65	8.28	6.29	3.06	59.17
1991-1992	6.38	5.42	3.02	1.31	1.74	4.16	3.81	3.58	1.50	15.44	2.61	10.40	59.37
1992-1993	9.35	1.66	9.90	0.95	18.13	3.64	5.22	1.97	2.62	8.45	2.79	3.11	67.79
1993-1994	9.89	11.59	6.06	0.94	4.15	4.47	2.26	4.99	4.85	10.02	6.67	10.09	75.98
1994-1995	10.11	7.20	11.83	8.13	3.00	1.76	3.25	4.50	0.56	9.62	10.56	13.22	83.74
1995-1996	5.94	22.32	1.39	2.36	1.04	1.64	13.61	2.04	9.45	9.13	6.56	7.27	82.75
1996-1997	6.05	7.81	5.48	1.71	3.95	2.31	4.25	7.16	4.97	14.56	7.96	14.48	80.69
1997-1998	9.02	2.80	2.99	5.14	6.43	7.73	5.39	3.03	3.35	4.00	6.48	6.53	62.89
1998-1999	13.46	5.60	9.95	1.91	10.83	0.83	0.26	1.01	3.64	14.35	7.93	9.77	79.54
1999-2000	14.92	18.09	0.73	2.59	1.06	1.22	3.28	6.27	1.50	1.10	4.61	1.75	57.12
2000-2001	9.50	12.44	1.54	2.79	1.24	0.32	5.81	0.99	4.24	9.70	9.72	11.99	70.28
2001-2002	18.47	6.27	3.11	2.64	0.70	7.68	1.24	5.05	0.76	13.32	9.36	6.96	75.56
2002-2003	5.75	3.46	3.59	3.66	0.23	1.76	9.22	5.50	10.09	4.07	1.90	9.83	59.06
2003-2004	5.70	2.05	6.14	3.67	1.77	2.46	0.85	1.60	2.78	2.83	3.89	8.00	41.74
2004-2005	27.63	1.28	1.09	1.11	1.50	1.53	7.93	2.27	4.46	11.96	2.43	8.63	71.82
2005-2006	6.89	10.51	5.08	1.70	0.56	2.75	0.46	3.55	1.63	8.00	4.07	10.69	55.89
2006-2007	5.43	2.21	1.35	7.62	0.50	2.40	0.77	3.17	3.80	15.62	9.45	3.79	56.11
2007-2008	10.21	8.21	1.56	2.42	1.10	4.21	4.59	3.07	3.78	9.03	6.08	13.60	67.86
2008-2009	6.25	5.55	1.51	1.90	0.23	1.65	6.12	1.87	10.40	9.81	8.34	5.60	59.23
2009-2010	2.22	1.22	2.25	6.90	1.61	2.25	7.90	4.26	2.56	7.59	3.30	10.72	52.78
2010-2011	8.48	0.63	1.42	0.43	1.89	0.53	2.56	1.19	3.65	4.48	7.64	11.03	43.93
2011-2012	9.04	8.20	2.41	1.09	1.44	5.13	4.18	1.86	9.35	7.11	6.45	21.36	77.62
2012-2013	7.60	7.43	2.77	10.15	1.48	2.56	1.44	4.54	5.33	13.35	5.25	7.89	69.79
2013-2014	12.64	1.05	5.58	2.85	9.07	2.33	6.97	2.53	6.02	10.59	11.31	9.66	80.60
2014-2015	8.64	6.28	3.34	1.86	1.42	7.84	1.61	4.34	2.28	4.08	7.32	6.08	55.09
AVG	9.35	5.81	4.73	3.36	3.28	3.08	4.58	3.14	4.67	8.24	6.10	8.23	64.57

Table 3: Town of Jupiter Water Department (TOJ) Rainfall



	Historical Rainfall Data (inches)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL	
30 Year Avg. (1981-2010)	8.49	5.56	4.15	2.92	2.96	2.88	4.12	3.23	4.66	8.20	6.54	8.06	61.77	
1995-1996	6.26	15.06	1.10	1.52	1.54	0.53	7.09	2.49	8.01	8.46	4.63	4.75	61.44	
1996-1997	7.17	6.78	2.26	1.77	3.87	4.73	3.37	5.47	3.74	12.67	5.64	10.10	67.57	
1997-1998	7.52	1.44	3.93	5.02	5.23	6.93	4.33	2.32	1.71	2.51	7.29	4.85	53.08	
1998-1999	13.93	2.91	9.85	2.99	7.26	1.50	0.50	2.72	2.58	15.41	3.22	8.20	71.07	
1999-2000	8.94	12.66	3.16	1.69	1.28	0.78	3.58	4.72	1.08	3.59	6.74	4.36	52.58	
2000-2001	5.02	7.39	2.60	1.83	0.78	0.26	5.57	0.40	4.44	6.57	9.41	7.95	52.22	
2001-2002	15.14	5.77	2.02	2.16	0.51	5.11	1.20	2.60	1.80	12.59	7.97	5.05	61.92	
2002-2003	4.04	2.35	2.75	2.88	0.48	1.17	4.42	3.85	8.45	6.35	3.85	8.92	49.51	
2003-2004	5.51	1.27	4.77	2.69	2.54	2.69	0.78	2.38	2.22	3.14	5.03	7.70	40.72	
2004-2005	17.71	2.94	0.75	0.85	1.23	1.09	5.87	1.72	5.72	12.45	4.84	2.80	57.97	
2005-2006	7.30	7.22	4.49	1.44	0.67	2.80	1.31	2.38	4.09	4.48	6.03	7.32	49.53	
2006-2007	6.68	1.48	2.27	5.47	0.74	1.31	0.51	2.64	3.35	12.41	8.73	6.05	51.64	
2007-2008	8.11	8.77	0.68	1.76	1.87	4.56	5.48	2.92	3.12	7.03	6.52	11.04	61.86	
2008-2009	6.77	5.37	0.76	1.24	0.17	0.34	3.46	1.48	10.12	8.44	6.57	5.76	50.48	
2009-2010	6.90	1.31	2.93	5.84	1.66	3.34	7.72	5.62	3.91	4.85	4.82	9.25	58.15	
2010-2011	7.89	0.93	1.17	1.02	2.24	0.58	2.36	1.24	2.46	4.79	5.41	9.84	39.93	
2011-2012	7.06	9.35	1.28	1.05	0.30	2.99	2.42	4.90	8.48	7.49	5.45	16.30	67.07	
2012-2013	6.68	6.47	0.69	1.64	1.07	2.71	1.17	4.45	11.06	9.91	9.50	4.38	59.73	
2013-2014	8.15	0.81	3.82	1.39	7.02	1.73	2.54	1.72	3.60	7.79	8.55	7.34	54.46	
2014-2015	9.10	4.39	1.66	1.20	0.74	4.37	1.20	4.27	1.57	4.41	5.50	7.21	45.62	

Table 4: SFWMD Palm Beach County-Wide Rainfall Averages

Table 5: 2014-2015 North County Rainfall Average

Historical Rainfall Data (inches)													
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
SIRWCD Avg.	7.23	4.25	1.58	1.27	1.41	10.97	3.06	4.36	2.67	4.63	7.26	8.69	57.38
LRD Avg.	8.29	4.93	2.02	0.92	0.00	6.47	2.22	5.25	2.72	5.39	8.61	9.25	56.07
TOJ Avg.	8.64	6.28	3.34	1.86	1.42	7.84	1.61	4.34	2.28	4.08	7.32	6.08	55.09
N. County Avg.	8.05	5.15	2.31	1.35	0.94	8.43	2.30	4.65	2.56	4.70	7.73	8.01	56.18

N. County Avg. is based on the average monthly rainfall data from SIRWCD, the Loxahatchee River Environmental Control District (LRECD), and the Town of Jupiter Water Department (TOJ) through August 31, 2015.



	Historical Rainfall Data (inches)												
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	TOTAL
SIRWCD 2014-													
2015	7.23	4.25	1.58	1.27	1.41	10.97	3.06	4.36	2.67	4.63	7.26	8.69	57.38
30 Year Avg.													
(1981-2010)	8.49	5.56	4.15	2.92	2.96	2.88	4.12	3.23	4.66	8.20	6.54	8.06	61.77
N. County													
Avg.	8.05	5.15	2.31	1.35	0.94	8.43	2.30	4.65	2.56	4.70	7.73	8.01	56.18

Table 6: SIRWCD 2014-2015 Rainfall Analysis

N. County Avg. is based on the average monthly rainfall data from SIRWCD, the Loxahatchee River Environmental Control District (LRECD), and the Town of Jupiter Water Department (TOJ) through August 31, 2015. Refer to *Figure 13* for a graphical representation of this data.



Figure 13: SIRWCD 2014-2015 Rainfall Analysis



	Historical Rainfall Data (inches)												
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	
SIRWCD 2014-													
2015	7.23	11.48	13.06	14.33	15.74	26.71	29.77	34.13	36.80	41.43	48.69	57.38	
30 Year Avg.													
(1981-2010)	8.49	14.05	18.20	21.12	24.08	26.96	31.08	34.31	38.97	47.17	53.71	61.77	
N. County													
Avg.	8.05	13.21	15.52	16.87	17.81	26.24	28.54	33.19	35.74	40.44	48.17	56.18	

Table 7:	2014-2015	Annual	Cumulative	Rainfall	Comparison
					,

The annual cumulative totals include the average monthly figures plus the prior monthly averages of the report year. Refer to *Figure 14* for a graphical representation of this data.



Figure 14: 2014-2015 Cumulative Rainfall Comparison

General Operation and Maintenance

The District's Manager of Operations Annual Report is included in this document as It offers a summary of Appendix A. significant events and issues that have been identified by the Operations Manager. The Operations Manager and staff of the District are the agents for day to day activities. They are primarily focused on maintaining the primary and secondary elements of the surface water management system and the graded roadways throughout the District. Further, the Operations Manager facilitates interagency coordination with other public entities that operate and maintain assets within the District such as Palm Beach County Road and Bridge Division, Palm Beach County



Figure 15: Canal Maintenance

Parks and Recreation, Palm Beach County Fire Control, Palm Beach County School Board, Florida Department of Transportation, South Florida Water Management District, Town of Jupiter, the Loxahatchee River District, and others.

Each year, a portion of this report is utilized to state that the District's surface water management system is designed, operated, and maintained for a mostly rural residential community with some commercial, industrial, and urban residential areas. Accordingly, certain low-lying areas within the District will experience ponding and storage of water during the wet season and following significant storms. Swales will have standing water, and many areas will be saturated for extended periods of time during the wet season. The continued development of low-lying areas in the District will result in a commensurate consumption of storage within the District's watershed. Where ponds are excavated on individual lots to supply the fill for house pads and related improvements, the consumption of available storage is not as severe because the pond serves as a compensating factor. These factors are regularly discussed by the Board of Supervisors and District staff at the monthly meetings, with individual landowners, in forums and meetings within the District, and within the District's newsletter and other publications distributed throughout the District. The District's Board of Supervisors and staff work to assure that the surface water management system functions to the extent of its permitted capacity while recognizing the regulatory requirements imposed on the District by other agencies. All of the District work must be implemented within the adopted budget and utilization of existing manpower, equipment and any other resources available to accomplish the tasks.



General Comments

SIRWCD has an obligation to its landowners and to the surrounding area due to its strategic location within naturally sensitive conservation areas. Clearly, SIRWCD is no longer an entity that can just look within its boundaries with regard to its authorized activities. To the contrary, a major portion of SIRWCD's activities require participation in activities that look at infrastructure needs and ecosystem management for the overall area and region. The District and its landowners will have to share in the continued responsibility of being good stewards in maintaining compatibility with these natural systems.

The goals and objectives of SIRWCD are consistent with those for the Loxahatchee River Water Restoration Project, the Loxahatchee Basin Ecosystem Management Area, and the Comprehensive Everglades Restoration Plan. The District will continue to work with South Florida Water Management District and other agencies in developing and implementing compatible plans for the District and the Loxahatchee River Basin to serve its landowners and its surrounding community.

SIRWCD will continue to serve its landowners by providing support during emergency situations, maintaining and operating the surface water management system at optimal levels, and providing services that coincide with the system capabilities, board policies, and the community.

AECOM has appreciated the opportunity to continue serving as the South Indian River Water Control District Engineer, and we look forward to working with the Board of Supervisors, landowners, and staff in the coming year.



Appendix A



Manager's Report for 2014-2015

South Indian River Water Control District was established in 1923 and encompasses over 12,500 acres including Jupiter Farms, Palm Beach Country Estates, Jupiter Park of Commerce, and Egret Landing. SIRWCD's infrastructure includes 189 miles of roads, 378 miles of roadside swales, and 60 miles of canals.

The District's storm water discharge system essentially functions as a dual basin system; Palm Beach Country Estates which is east of the C-18, and Jupiter Farms which is west of the C-18. With 15 miles of canals, surface waters from Palm Beach Country Estates drain west to east and are controlled by 14 foot elevation weirs prior to entering the Florida Turnpike Borrow Canal system. Waters are then routed northward towards the SW Fork of the Loxahatchee River. Jupiter Park of Commerce and Egret Landing share the same outfall as Palm Beach Country Estates. The Jupiter Farms basin, with 45 miles of primary canals and 5 flood control structures, flows west to east into the C-14 header canal then northward to the NW Fork of the Loxahatchee River.

Currently, there are twelve employees who execute the day to day operations. The District's scope of work for maintenance includes road grading, mowing, and re-contouring of drainage swales, outfalls, and canals for storm water runoff and retention. Areas of maintenance that are subcontracted include aquatic weed control, water quality testing, and services to Margaret Berman Memorial Park.

The District's road maintenance program consists of two John Deere Motor Graders, two ten foot box blades and two International dump trucks. There are over 100 miles of dirt roads that are graded on a weekly basis. Periodically, material is brought in to improve surface conditions due to weather or man-made issues. This year, approximately 6 miles of existing OGEM roads were overlaid and 6 miles fog-sealed. OGEM roads are reviewed each year to determine the maintenance needed and normally scheduled in the late fall or early winter to minimize weather related issues. The District's mowing operation consists of three ten foot batwing mowers, two 23' sidearm boom mowers, and one 20' foot sidearm boom mower. Completion of the mowing schedule takes an average of six to eight weeks, with the busiest months being July through October. The District does have a "Do Not Mow" list for residents who prefer to mow their own easements.

The District's drainage and water control program consists of two John Deere combination backhoes, one Kobelco trackhoe with an optional mowing attachment, and one John Deere 544 loader. Daily maintenance includes inspections of drainage swales, outfalls, canals, and the need for aquatic weed spraying. District personnel also inspect driveway culverts but maintenance of the culverts is the responsibility of the landowner. Like the District, landowners should periodically inspect their culvert for sediment buildup and erosion. When a driveway culvert needs to be replaced, the District will assist the landowner by removing the old culvert, and establishing the proper swale elevation. The landowner is responsible for the purchase and installation of the new culvert.

In conjunction with the inspection of the swales and canals, operators are also trained to identify any illicit discharge within the drainage system. All violations are reported to the proper authorities and if known, those responsible are citied. These inspections are part of our annual reporting for the National Pollutant Discharge Elimination System of Palm Beach County.

Landscape and construction debris that is dumped on District easements is considered illegal dumping and violators will pay twice the amount it would cost the District to have it removed. Debris also has the potential to create drainage issues and possible flooding during heavy rain events. If you suspect that anyone is committing acts of illicit discharge or illegal dumping, contact our office immediately.

This year, the District completed numerous projects that will enhance the efficiency of our maintenance program. Culvert crossings were installed along Canal 7 at Alexander Run, Canal 12 at Randolph Siding, and at the intersection of Canal 8 and Canal 11. These crossings will help minimize travel time, fuel usage, and wear and tear on the equipment. They are also an asset to Palm Beach

County Wild Land Taskforce who patrols our canal right of ways for unauthorized and illegal motorized vehicles. Currently, we are doing restoration work along these canals and the new access points have been a benefit to this project. Another canal project that was completed this year was the restoration of Canal 18 along Jupiter Farms Road between 175th and 176th. At one time, a portion of this canal easement was inaccessible creating maintenance issues. The vegetation was removed and the bank restored to achieve total access. The same work was also performed along Canal 6 between 133rd and 136th.

Maintenance is an essential part of any scope of work. It minimizes problems and enhances productivity. However, before that can be achieved, operators must first be trained to work responsibly and safely. This year we accomplished this by conducting quarterly meetings with the employees to discuss safety issues and how to collectively implement best management practices while performing our jobs. Also, throughout the year, several District employees attended various workshops related to safety as well as others received certificates for training as qualified stormwater inspectors. As a result of our efforts, SIRWCD received two awards for employee and driver safety through the Safety Council of Palm Beach County. This was the 19th consecutive year that the District has received awards in these categories. Also, the District was awarded with a reimbursement check for \$1422.41 from its insurer, Preferred Governmental Insurance Trust for training and safety initiatives.

The District also interacts with agencies and municipalities who provide service and information to those who live and work within our boundaries. They include Palm Beach County, South Florida Water Management District, Solid Waste Authority, Palm Beach County Sheriff's Office, and Palm Beach County Fire Rescue. The District also participates as committee members with The Florida Association of Special Districts, The Loxahatchee River Coordinating Council, The Loxahatchee River Preservation Initiative, The Safety Council of Palm Beach County, and North County Land Managers Association.

The District is also involved with community events. This year, our annual Landowners Day BBQ was a tremendous success with many people attending for

the first time. This event gives you, the landowner, a chance to meet the Board of Supervisors, Staff, and Operators of the District. It's also an opportunity to interact with other local agencies and organizations who serve within the community. At the Jupiter Farms Christmas Parade, Supervisors and Staff participated together for a day of fun as we ushered in the Holiday season with our version of Rudolph the Red Nosed Reindeer. We even won a couple of awards!

The maintenance and improvement of the works of South Indian River Water Control District and our interrelations with landowners, outside agencies, and governments is the structure of our District and this structure is always a work in progress. Looking ahead to next year, we will continue to evaluate our maintenance program and make adjustments to improve the quality of service for the residents of the District. Future projects include outfall drainage systems, canal culvert crossings and road re-surfacing.

If you would like to learn more about South Indian River Water Control District, feel free to visit our web site at <u>www.sirwcd.org</u> or stop by our office at 15600 Jupiter Farms Road. We are open Monday through Friday 8:00am-4:30pm. You can also call us at 561-747-0550 or send an email to <u>sirwcd@sirwcd.org</u> with any questions or concerns you may have.

SIRWCD 15600 Jupiter Farms Road Jupiter, Florida 33478 T 561.747.0550 www.sirwcd.org

About SIRWCD

South Indian River Water Control District (SIRWCD) was formed pursuant to Chapter 298, Florida Statutes in July of 1923. The initial works of SIRWCD were comprised of primary drainage canals, mainly used for agricultural purposes. In the mid 1960's, most of the property within the District was registered with the Florida Land Installment Sales Board for sale as a home site subdivision. Today, SIRWCD consists of approximately 12,500 acres and serves approximately 7,323 parcels with facilities such as canals, roads, swales, control structures, and parks.

More information on SIRWCD and its services can be found at www.sirwcd.org.

