

Broward County C-11 West Basin Pollution Reduction Action Plan



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EXECUTIVE SUMMARY

Pursuant to Florida law, Broward County was authorized to take the lead in the creation of a Broward Everglades Working Group to develop basin-wide pollution prevention plans for each of its Everglades Stormwater Program (ESP) basins to help meet the overall water quality goals of Everglades restoration by the end of 2006. There are three ESP basins in Broward County: the North Springs Improvement District (NISD) basin, the North New River Canal (NNRC) basin, and the C-11 West basin.

A series of stakeholder meetings were held to provide information on water quality within the C-11 West Basin, agree upon goals and a strategy, review options, seek partnership commitments, and develop individually-tailored action plans to help achieve those goals. This **C-11 West Basin Pollution Reduction Action Plan** provides a compilation of the stakeholder-specific action plans agreed upon by water managers to help reduce the amount of phosphorus entering the Everglades from the C-11 West Basin. It is the intent of this plan to eventually be expanded to include the North New River Canal and North Springs Improvement District basins as well.

The C-11 West Basin, a 72-square mile area in the urban central and southwest part of Broward County, is the only drainage basin in the County that regularly discharges into the Everglades. C-11 West Basin stormwater runoff and seepage from Water Conservation Areas collected into the C-11 West canal is pumped from the canal into Water Conservation Area 3A through the S-9 and S-9A pump structures. This stormwater runoff, along with its associated pollutant load, has a detrimental impact on the Everglades natural system, which is extremely sensitive to inputs of phosphorus. Successful restoration of the Everglades will depend, in part, upon being able to achieve a reduction in pollutant loads, with phosphorus reductions being of particular concern.

As required by the 1994 Everglades Forever Act (EFA), the Florida Department of Environmental Protection (FDEP) proposed a rule in 2003 for the phosphorus criterion within the Everglades Protection Area (EPA) that would be protective of the Everglades ecosystem. On June 3, 2005, FDEP adopted the rule setting a 10 parts per billion (ppb) phosphorus criterion, and allowing for spatial variations in measured phosphorus concentrations. The EFA was amended in 2003 to include reference to the Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (LTP) as the appropriate strategy for achieving the long-term water quality goals for the EPA. The amended 2003 EFA recognizes the need for an adaptive management approach and therefore allows a process for modifications to the LTP. In addition to amending the EFA, the Legislature amended the Agricultural Lands and Practices Act and provided for Broward County to enact ordinances, regulations, and other measures to comply with the EFA.

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This 2003 legislation enabled the SFWMD and Broward County to become partners in the restoration of the Everglades, and for Broward County to take a more proactive role in the development of a plan to reduce pollution entering the Everglades from the County. As recommended by the County, through the SFWMD Water Resources Advisory Commission, the LTP included a recommendation to develop a comprehensive pollution prevention plan with specific water quality goals and milestones. This pollution prevention plan was to be developed by a county-wide working group led by Broward County.

In early 2004, the Broward County Environmental Protection Department (BCEPD) and the SFWMD began discussions on creation of the Broward Everglades Working Group. Following a series of inter-agency meetings in which stakeholders were identified and goals established, an invitation to participate in the Everglades Working Group and the development of a Pollution Reduction Plan for all of the ESP Basins in Broward County was developed. Entities within or with interests in the ESP basins within Broward County were invited. These included the Cities of Pembroke Pines, Cooper City, Sunrise, Weston Plantation, Parkland and Coral Springs, the Towns of Davie and Southwest Ranches, the South Broward Drainage District the Central Broward Water Control District, the Indian Trace Development District, the Bonaventure Development District, the North Springs Improvement District, the Plantation Acres Improvement District, and the Old Plantation Water Control District, the Florida Department of Agriculture and Consumer Services, the Broward Farm Bureau, the Florida Nurseries, Growers and Landscapers Association, the equine community, Mickosukee Tribe of Indians of Florida, and Broward Audubon.

The group convened four times between May and October of 2004 (see Appendix A). During the initial meetings, an interim goal of having no water quality samples exceed 20 ppb phosphorus by the end of 2005 was established, along with a goal to consistently achieve 10 ppb Phosphorus, or lower, at the primary pump station entering the Everglades by the end of 2006. Stakeholder meetings were held to provide information on water quality within the C-11 West Basin, agree upon goals and a strategy, review options, seek partnership commitments, and develop individually-tailored action plans to help achieve those goals. Two additional BEWG meetings were held in 2005 to review progress and share information (see Appendix A).

This plan is the product of the collaboration between stakeholders in the C-11 West Basin, including local and state governmental agencies and other interested parties. The plan provides a collection of stakeholder actions that are currently underway and others that are proposed for implementation to reduce phosphorus inputs from the basin to the Everglades. The next steps to be undertaken will be to expand monitoring efforts to better assess the effectiveness of these actions and to duplicate this collaborative approach amongst stakeholders within the other ESP basins in Broward County.

I. INTRODUCTION

The Everglades is an ecosystem that is in peril, largely as a result of activities that have altered the natural flow of water and introduced phosphorus that threatens both changes in biota and a fundamental change in the ecosystem itself. Phosphorus presents a specific water quality concern in the Everglades because it upsets the nutrient balance in this naturally oligotrophic system. Under natural conditions, the low nutrient conditions favor sawgrass, the dominant species associated with the Everglades and immortalized in Marjory Stoneman Douglas' classic book "Everglades: River of Grass." However, as nutrient/phosphorus-laden waters have been discharged to the Everglades, phosphorus-loving cattails have invaded areas that were previously inhabited by sawgrass. Once established, cattails are able to outpace the growth of sawgrass and other plants under the higher nutrient conditions. Thus, the reduction of phosphorus entering the system is seen as a critical step to restoring the Everglades.

While much of the focus of reducing phosphorus inputs to the Everglades has largely been on agricultural practices, the rapidly growing urban areas are also a contributor to phosphorus pollution within the Everglades. Until 2003, seepage and stormwater runoff from the C-11 West Basin were back-pumped into the Everglades through the S-9 pump station in order to prevent flooding in low-lying areas in southwest Broward. The S-9A pump station, completed in 2003, and the recently completed Obermeyer divide structure (S-381) on the C-11 West Basin now separate seepage from stormwater. The S-9A pump station operates daily to back-pump mainly seepage from the WCA 3A back into the Everglades. Under extreme storm events, the S-381 divide structure opens and the S-9 pump station is operated to provide rapid drawdown of flood waters.

Broward County, the municipalities, water districts, and other stakeholders in the C-11 West Basin recognize that they have both opportunities and an obligation to contribute to successful restoration of the Everglades by being proactive. With two-thirds of the County lying within Water Conservation Areas, critical to the health of the Everglades, the South Florida environment, and its water supplies, these partners have embarked on a strategy to improve water quality by focusing on source controls of pollution as a priority in their phosphorus reduction efforts.

II. HISTORICAL BACKGROUND

a. Everglades Forever Act

In 1994, the Everglades Forever Act (EFA, F.S. 373.4592) was passed in order to expedite the South Florida Water Management District's activities in Everglades restoration. The EFA established a strict water quality criterion for phosphorus in the Everglades based on extensive scientific studies which deduced that 10 parts per billion (ppb) was the maximum tolerable phosphorus concentration for the Everglades ecosystem. The subsequent Everglades water quality policy which has been written into the law provides that water entering the Everglades must be clean enough to protect the ecosystem from phosphorus pollution.

The EFA mandated implementation of the Everglades Construction Project which includes the construction of Stormwater Treatment Areas (STAs) to improve water quality in the Everglades. These consist of thousands of acres of marshes that are designed to filter out phosphorus through biological processes.

b. 2003 Amendments to EFA

In 2003, the Florida Legislature passed amendments to the EFA which established moderating provisions for the State's compliance with the proposed water quality criteria. The amended 2003 EFA included reference to the March 17, 2003 Long-Term Plan for Achieving Water Quality Goals in the Everglades Protection Area (LTP) as the appropriate strategy for achieving the long-term water quality goals for the Everglades Protection Area (EPA). In general, the recommended strategy is to rely upon source controls, integration with congressionally authorized components of the Comprehensive Everglades Restoration Plan (CERP), and optimization of the existing Stormwater Treatment Areas (STAs). The amended 2003 EFA recognizes the need for an adaptive management approach and therefore allows a process for modifications to the LTP.

During a 2003 Special Session A, Governor Jeb Bush then signed Senate Bill 54A, clarifying amendments made to the EFA during the Regular Session of 2003. This law allowed for revisions to the EFA to become law if the revisions were incorporated in the LTP. It also required Florida to implement pre-2006 phosphorus reduction technologies as soon as possible. Senate Bill 1660, the Agricultural Lands and Practices Act or "Right to Farm Act," was also passed in 2003 and provided language by which Broward County could participate directly in efforts to implement the EFA through the enacting of ordinances, regulation, and other measures.

Following the Legislative session, Broward County Environmental Protection Department staff worked to modify the LTP through the SFWMD Water

Resources Advisory Commission (WRAC) to incorporate Broward County's recommendations to reduce pollution in the three Broward County basins draining to the Everglades. The County's recommendations included the emphasis of source controls as a priority pollution reduction strategy for Broward County and the creation of an Everglades Stormwater Program basin working group to aid in the development of a basin-wide comprehensive pollution prevention plan with specific water quality goals and milestones. Subsequently, these recommendations were approved by the WRAC and the SFWMD Governing Board and included in the October 27, 2003 version of the LTP.

This document represents the product of those recommendations.

c. Long Term Plan

The Long-Term Plan is the comprehensive set of water quality improvement measures designed to ensure that all waters entering the EPA achieve compliance with water quality standards. These measures include enhancements to the existing Stormwater Treatment Areas (STAs), expanded best management practices (BMPs), and integration with the Comprehensive Everglades Restoration Plan (CERP) projects.

The LTP was developed in response to the 1994 Everglades Forever Act requirement that the SFWMD submit to the Florida Department of Environmental Protection (FDEP) a plan by December 31, 2003, for achieving compliance with the phosphorus, and other state water quality standards in the Everglades Protection Area (EPA), and to include the estimated costs, funding mechanisms and implementation schedules associated with the plan. In response to this requirement, the October 27, 2003 Long Term Plan for Achieving Water Quality Goals was developed by the SFWMD and submitted to FDEP in December 2003. The long-term compliance permit had not been issued by FDEP as of April 30, 2006.

III. THE C-11 WEST BASIN

a. Description of the C-11 West Basin

The C-11 West Basin (**Figure 1**) is located in urban southwest Broward County, west of Fort Lauderdale. Approximately 72 square miles in size, it covers most or parts of the cities of Weston, Sunrise, Cooper City and Pembroke Pines, the Town of Davie, Town of Southwest Ranches, and unincorporated areas of south-central Broward County. While urban, developed areas comprise over 60% of the area, the C-11 West Basin also includes some agriculture and nursery operations, wetlands, rangelands, and some forested areas (SFWMD, 2004).

There are eight basins within the Everglades Stormwater Program (ESP) that are of concern as pollutant sources to the Everglades. Three of these ESP basins are in Broward County (see Figure 1): the North Springs Improvement District (NSID) basin, the North New River Canal (NNRC) basin, and the C-11 West basin. The C-11 West Basin is the only drainage basin in Broward County that regularly discharges into the Everglades. Although SFWMD's efforts are underway within all of the ESP basins to reduce pollutants, particular emphasis has been placed on the C-11 West Basin because it is the major urban contributing basin to Total Phosphorus loading in the Everglades (3.0 metric tons in Water Year (WY)¹ 2005), and the focus of litigation between the Miccosukee Tribe of Indians of Florida and the SFWMD relating to the discharge of polluted water into the Everglades through the S-9 pump station.

¹ WY 2005 refers to the period between May 2004 and April 2005

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Figure 1: Everglades Stormwater Program Basins in Broward County

Source: SFWMD

Stormwater runoff and ground water seepage from the Everglades Protection Area is pumped from the C-11 West Canal, via the S-9 and S-9A pump structures, into Water Conservation Area (WCA) 3A. This canal and the associated pump structures are maintained and operated by the SFWMD. Three drainage districts operate and maintain the secondary canals draining into the C-11 West Canal: South Broward Drainage District (SBDD), Central Broward Water Control District (CBWCD), and Indian Trace Development District (ITDD).

b. Water Quality Monitoring for Phosphorus in the C-11 Basin

Water quality monitoring is performed regularly at a number of stations by both the SFWMD and Broward County in the C-11 West Basin. The SFWMD stations at the S9 and S9A structures are monitored with autosamplers by the SFWMD. Broward County monitors two points of discharge in the C-11 Canal. The stations are located at US 27 (Site 29) and Flamingo Road (Site 28) and are sampled quarterly by grab samples. In addition, the SBDD, CBWCD, and ITDD also perform water quality monitoring pursuant to agreements with the SFWMD. The SFWMD's upstream phosphorus sampling locations in the C-11 West Basin and at the S-9 and S-9A stations are shown in **Figure 2**.

The S-9 pump station, the larger of the two pump structures, has been the site of extensive water quality monitoring since December 1977. A composite autosampler has been used since December 1996 to sample flow-weighted mean total phosphorus (TP) concentrations. The composite flow-weighted mean TP concentration for WY 2001 through 2005 averaged 19 ppb with a range of 17 ppb to 23 ppb. In WY 2005, the TP load from the C-11 West Basin was 3.0 metric tons. The water quality data also shows the composite flow-weighted mean TP concentration for S-9A at 12 ppb in WY 2004 (SFWMD, 2006).

Water quality monitoring east of the S-9 pump station has revealed trends relating to the concentrations of TP found in the basin. Results from upstream monitoring have shown TP concentrations generally ranging from 7 ppb to 50 ppb (SFWMD, 2004). TP concentrations between 7 ppb and 25 ppb are generally associated with areas where permitted surface water management systems exist. TP concentration between 25 ppb and 50 ppb are associated with older residential areas which lack permitted surface water management systems (SFWMD, 2004). It has also been observed that TP concentrations increase during periods of construction due to sediment erosion. Concentrations higher than 50 ppb are primarily associated with areas that have predominantly agricultural and/or nursery land uses (SFWMD, 2004).

Water quality monitoring at the Broward County's two monitoring sites for Calendar Years 1998-2003 indicated that TP concentration ranged from 84 ppb to 5 ppb at site 28 and 86 ppb to 5 ppb at site 29. Average annual TP concentration at both sites have consistently decreased, with the exception of a slight increase from 2000-2001 at Site 28.

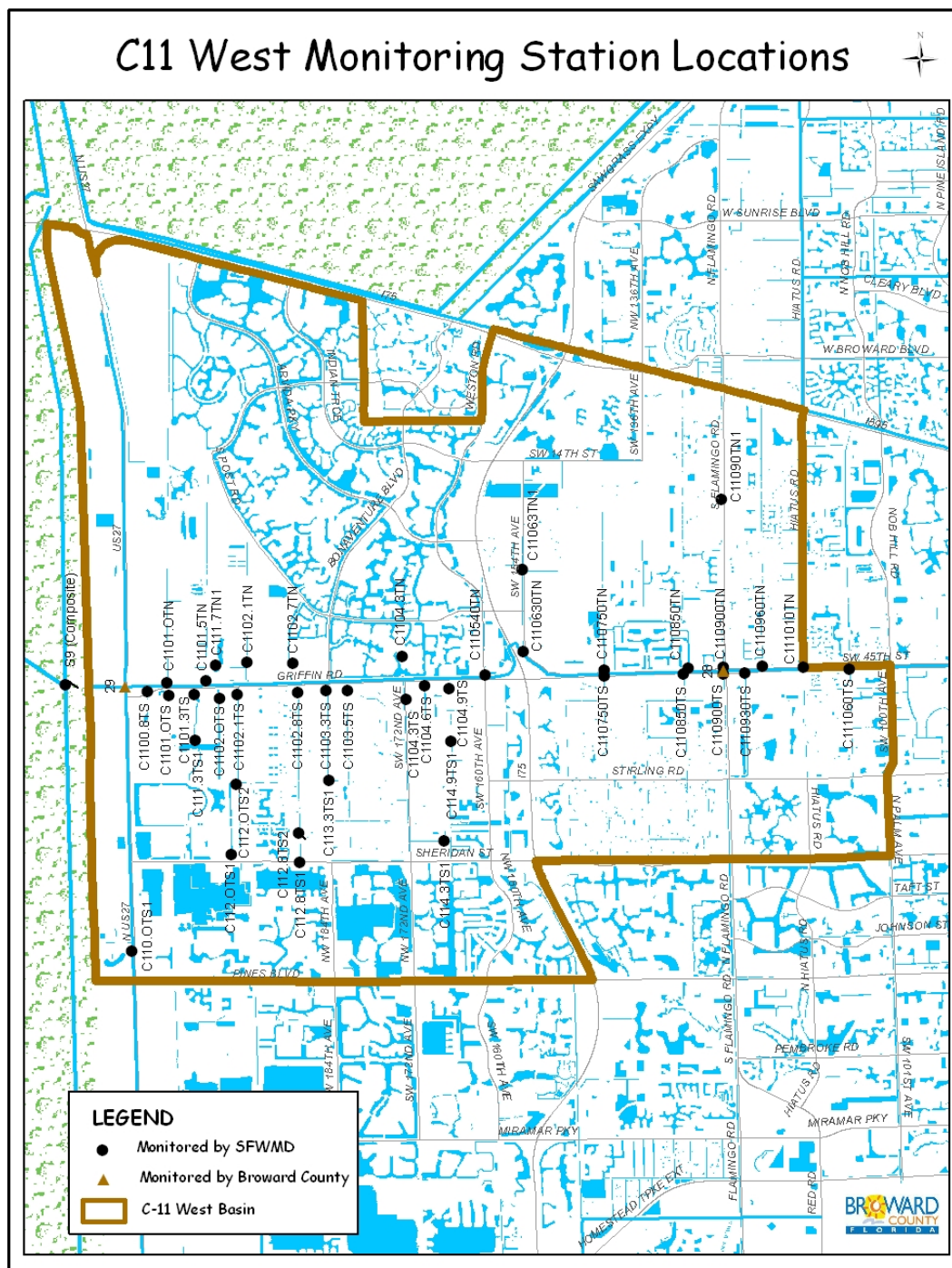


Figure 2: SFWMD Phosphorus Monitoring Stations in the C-11 West Basin

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Figure 3 shows a summary of average total phosphorus concentrations for forty monitoring sites and the S-9 pump station for Water Years 2000-2003.

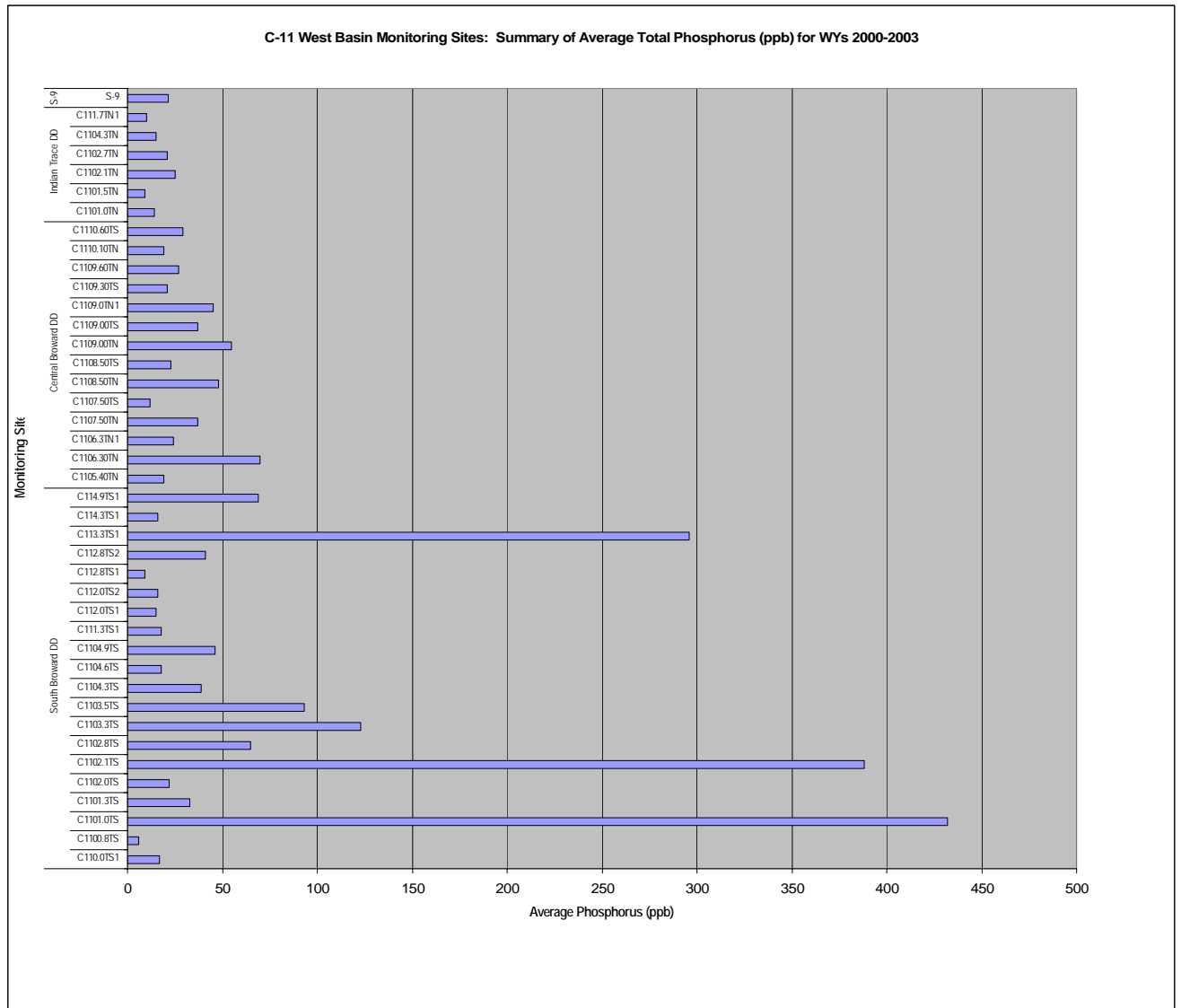


Figure 3: Summary of Average TP Concentrations for Water Years 2000-2003 at 40 SFWMD Monitoring Sites in the C-11 West Basin

Figure 4 shows the aggregated results from monitoring of phosphorus levels taken at various secondary canal locations between 2000-2004 following rainfall events and when the S-9 pump station was operating. Data shown for the S-9 pump station represents samples collected between 1997 and 2004. Graphics show the percentage of total samples collected within a given range of Total Phosphorus concentrations.

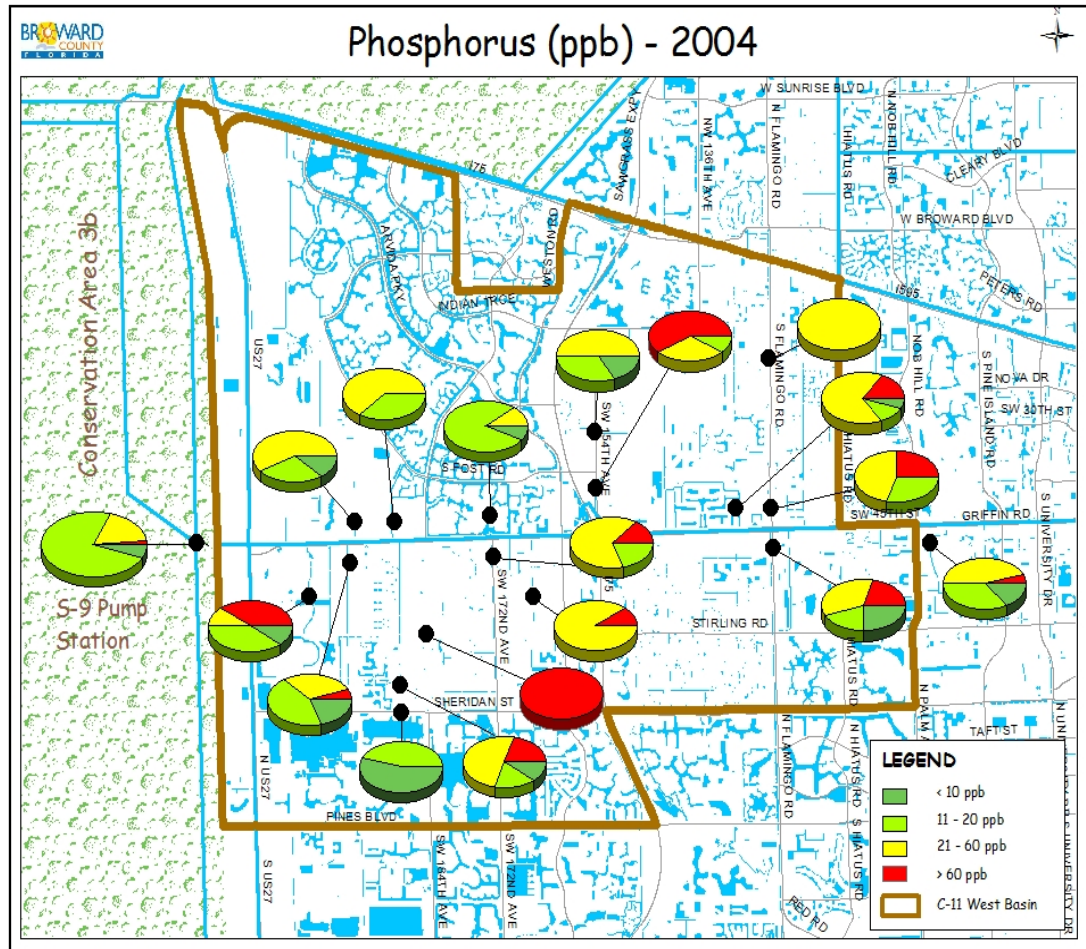


Figure 4: Phosphorus levels from selected monitoring stations in the C-11 West Basin

Data from eighteen stations, including the S-9 pump station and one in the C-11 East basin were selected for presentation to the Broward Everglades Working Group (see discussion below). These stations were chosen because they are representative of water quality expected to be found adjacent or near to various land uses (e.g., older residential, newer residential, nurseries, etc), are part of a continuous monitoring program by the SFWMD, and will allow us to measure progress with reference to a baseline. Based on the analysis of data, it was concluded that water quality at the S-9 pump station meets the County's freshwater phosphorus standard of 20 ppb greater than 80% of the time.

III. GOAL AND OBJECTIVES

The C-11 West Basin Pollution Reduction Action Plan has been prepared to assist in meeting the overall goal and objectives of the Broward Everglades Working Group. It codifies the ongoing and proposed actions to be implemented by Broward Everglades Working Group stakeholders to achieve the primary goal of reducing phosphorus pollution entering the Everglades in order to meet water quality goals as required by Florida law. This has involved coordinating the actions of numerous State, County, and municipal governments; drainage and water control districts; and, special interest groups, and focusing on the identification and implementation of pollution prevention strategies that will result in achieving the State's proposed water quality standard of 10 ppb phosphorus for waters within the Water Conservation Area.

Specific objectives established at the onset of this collaboration were developed in the form of interim and long-term goals for water quality samples collected as part of the existing water quality monitoring network in the C-11 West Basin. A goal of having no water quality samples exceed the Broward County standard of 20 ppb at the S-9 pump station was established as an interim goal for the end of 2005, with a long-term goal to consistently achieve 10 ppb, or lower at the S-9 pump station by the end of 2006. Although Broward Everglades Working Group members are proceeding with these goals as the basis for their pollution reduction activities, it is also recognized that these goals are extremely ambitious, particularly in advance of certain CERP projects coming on line.

IV. ACTION STRATEGIES TO MEET WATER QUALITY GOALS

a. South Florida Water Management District

The SFWMD has the lead role for the State of Florida in implementing projects to restore the Everglades, including efforts to meet state water quality goals. As such, there are a number of programs and projects which the SFWMD is engaged in with other State and Federal partners, and also in conjunction with local partners within the C-11 West Basin.

The Everglades Stormwater Program was developed for specific water control structures that discharge into the EPA as part of the District's effort to achieve the requirements and goals of the EFA (SFWMD, 2004). Overall, the District's pollution control efforts for the C-11 West Basin consist of various structural and non-structural controls and changes in water management. Under the LTP, the implementation of source controls is seen as one of the primary means of reducing Total Phosphorus discharges to WCA 3A from the C -11 West Basin. The other primary means is through the implementation of the CERP Projects, namely the Western C-11 Impoundment and Diversion Canal, now an Acceler8 project, which consists of a 1,600-acre impoundment within the basin and approximately 8 miles of canal that will divert flood waters to other CERP storage areas. This impoundment will be located north of the C-11 West Canal and east of U.S. Highway 27, and is scheduled for completion in January 2009.

The Western C-11 Impoundment is complemented by the recently-completed C-11 West Basin Critical Project, which includes structural and operational changes to the water management system that will isolate WCA 3A seepage from runoff in the C-11 West Basin. With the recent completion of the S-381 divide structure and the S-9A pump station, water managers have the ability to separate seepage flows from storm water runoff, a practice that helps to reduce pollution in discharges from the C-11 West Basin to Water Conservation Area 3A. Furthermore, by decreasing operation of the larger S-9 pump station, the scour and drawdown of the C-11 canal will be decreased, thereby reducing the re-suspension of sediments and their associated phosphorus load.

To help meet the objectives of the EFA, the SFWMD has entered into cooperative and cost share agreements to implement local water quality monitoring and improvement programs with all three drainage districts in the C-11 West Basin (SFWMD, 2006).

Efforts to improve water quality in the C-11 West Basin also include a regulatory component to source controls. The SFWMD's Environmental Resource Permits within this basin have been required, when necessary, to provide additional pretreatment facilities/features to offset adverse water quality impact from construction activities.

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For several years, the SFWMD has actively supported education and outreach efforts to motivate residents and stakeholders within the C-11 West Basin to implement changes to enhance water quality and reduce the Total Phosphorus content in stormwater runoff. These range from assistance in the formation of environmental clubs at elementary schools, to posting interpretive signs along canals, to working with specific community groups.

In early 2000, the SFWMD and the Broward County Extension Education Division convened the C-11 West Canal Basin Working Group. Composed of 36 members representing landscaping interests, fertilizer industries, government agencies, colleges, universities, special interest groups, and environmental organizations, the Working Group developed turfgrass and landscaping BMPs to help residents reduce pollution. This effort resulted in the development of a Turf & Landscape Best Management Practices Manual which was developed as an on-line resource and posted on each of the working group member websites. Many of these BMPs were later included in the statewide BMP program for Green Industries and incorporated in a model ordinance that was drafted by the State.

Recently, the SFWMD has updated their website with specific information related to BMPs and how people can participate in Everglades restoration (see www.sfwmd.gov/everglades4ever). The SFWMD has also produced five thirty-second Public Service Announcements (PSAs) featuring children talking about various BMPs which are currently airing on both Comcast cable TV and community stations within the C-11 West Basin. These "From the Gutter to the Glades" PSAs have been well received throughout the community.

The SFWMD is also planning to expand its support for the Know the Flow program in 2006 to include an increased number of presentations within the ESP basins.

b. Broward County

Over time, changes in Broward County's hydrology, ecology, and environmental regulations have had significant impacts on the quality of the County's waters. Since 1972, Broward County has monitored the water quality in the primary canals within the County. Initially, the main objective was to monitor the treated sewage discharge from wastewater treatment plants released into surface waters. Once that practice was discontinued in the 1980's, the County continued to monitor these waters to determine baseline levels of constituents.

Broward County has established its own water quality standards for marine, surface water, and groundwater, through Chapter 27-195 of the Broward County Code of Ordinances. These include a County-wide freshwater phosphorus standard of 20 ppb (50 ppb for marine waters), that would be applied to waters in the C-11 West Basin.

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In support of its commitment to Everglades restoration and improving the quality and quantity of water resources, Broward County plays a number of roles in leading various pollution prevention/reduction efforts throughout the County, including those in the C-11 West Basin. As a regulatory agency, the Water Engineering and Licensing Section of the Water Resources Division (WRD) within the County's Environmental Protection Department, issues permits for point and nonpoint source discharges and monitors for compliance with County code and license requirements for unincorporated areas within the Basin.

The WRD coordinates and participates in the National Pollution Discharge Elimination System (NPDES) and the State of Florida Municipal Separate Storm Sewer System (MS4) Permit program with 26 Broward municipalities, the Florida Department of Transportation District 4, the Florida Turnpike Enterprise, and unincorporated Broward County. As implemented within the County, the NPDES monitoring program focuses on the receiving water bodies, rather than distinct outfalls, to help identify the amount of pollutants being discharged. Although phosphorus is not monitored specifically, the monitoring equipment collects and stores data continuously to allow for in-stream response data during and after stormwater events. Ultimately, this data will provide information to better understand the effect of storm events on water quality and hopefully lead to a reduction in the amount of pollutants being discharged.

Additionally, through its Policy & Planning Section, the WRD offers a number of outreach programs under its Water Matters initiative. The Water Matters program is focused on increasing public awareness of the connection between our daily activities and the quality of our water resources, and encouraging participation in activities that support water conservation. Programs are offered both to the general public and targeted audiences.

One of these programs is the "Know the Flow" course, developed in partnership with the SFWMD and CBWCD, is designed for property managers and landscape maintenance personnel to teach them about how water is managed and how they can better manage their property and stormwater system to protect water quality.

Another initiative, NatureScape Broward, educates and assists residents, businesses, and municipalities in proper landscaping practices that will help reduce irrigation demands and reduce pesticide and fertilizer use. As fertilizer use is reduced, the amount of phosphorus which can potentially find its way into our canals is also reduced, resulting in improved water quality.

To further its commitment to improving water quality, the County has launched the NatureScape Irrigation Service (NIS) to work with utilities to help them and their customers conserve water through improved irrigation efficiencies and landscape considerations. In addition, the NIS provides information related to

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landscaping BMPs, including the use of low and no phosphorus fertilizers. Efficient irrigation operations serve to reduce overspray and landscape runoff, which are recognized as major sources of surface water pollution in Broward County.

In addition, the County holds an annual “Water Matters Day” public outreach event to help the County’s residents understand their role in water management and to engage them in personal stewardship activities including ways that they can prevent pollution. To date, each of these events has been held at a County park in the C-11 West Basin.

c. South Broward Drainage District

The South Broward Drainage District (SBDD) has jurisdiction over 46,600 acres (approximately 73 square miles) in Southwest Broward which includes 150 linear miles of fresh-water canals and 7,500 acres of lakes for stormwater storage that drain either into the C-11 basin or the C-9 basin.

Within the portion of the C-11 West Basin that the SBDD has jurisdiction over **(Figure 5)**, there are 3 sub-basins (S-8, S-9, and S-10) which discharge into the C-11 Canal.

A \$3.3 million capital improvement project, funded in part by the SFWMD (\$1.0 million) and the State (\$0.8 million) is underway to build control structures at the outfalls of sub-basins S-9 and S-10, which will allow water to be kept longer in the canals, and in turn will help to provide treatment, thereby improving water quality when discharge is required. The project will interconnect sub-basin S-9 with sub-basin S-10. Additional funding for the project design work has been provided through funding from the Broward County-wide Integrated Water Resource Plan (IWRP) grants process. The installation of interconnections between the sub-basins along with three control structures will provide 1.5 inches of stormwater runoff detention prior to discharging into the C-11 West Canal structure. This will eliminate the western outfalls. As of July 2005, steady progress was being made to implement the changes including culvert construction and closing of outfalls to the C-11 canal.

The SBDD is also in the process of closing three outfalls located in the S-8 sub-basin. The SFWMD provided \$30,000 towards this project under its agreement with the SBDD and the County provided funds under the IWRP. This project will

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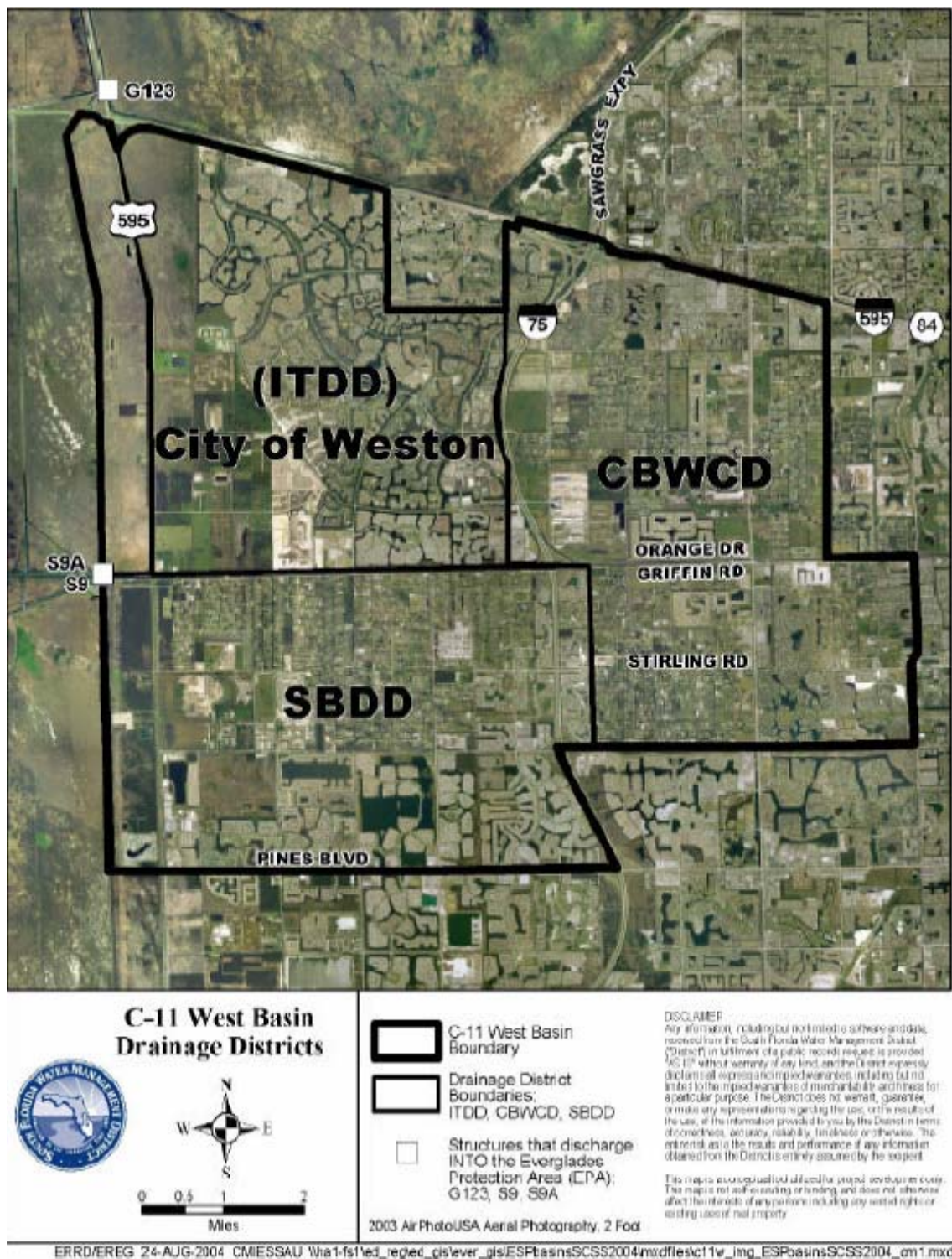


Figure 5: Drainage Districts in the C-11 West Basin
Source: SFWMD, 2004

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result in this sub-basin being able to provide 1.5 inch detention over the current permitted conditions.

To provide further support for support the Broward Everglades Working Group's activities and objectives, SBDD is engaged in on-the-ground efforts to identify potential pollution problems. The SBDD personnel perform regular inspections and maintenance of canals. If problems are identified, the property owner is advised to take corrective action. Failure to do so may result in a referral to either the appropriate municipality or the Broward County Environmental Protection Department.

Recognizing that for effective water quality treatment to be provided by stormwater management systems, the SBDD requires the renewal of surface water permits every 5 years to ensure that these systems are working properly. Property owners renewing a permit for their property must have it inspected and certified. The SBDD uses this as an opportunity to provide outreach to the permittees regarding stormwater BMPs.

In order to track phosphorus levels, the SBDD conducts water quality sampling at 15 different locations within these sub-basins. This sampling has shown that water quality in newer developments is generally good. Given these findings, the SBDD is refocusing their efforts towards the rural portions of the district that continue to be associated with phosphorus hot spots-primarily properties characterized by older residential, nursery activities, and equestrian/livestock maintenance. At these sites, the SBDD is recommending the implementation of various BMPs and is providing support for a Mobile Irrigation Lab to work with nurseries. In a cooperative effort with FDACS, the University of Florida, and several nurseries, the SBDD is expanding its water quality sampling to include 3-4 additional sites which will allow them to clearly monitor whether specific BMPs are working.

Water management criterion established by SBDD for residential lots includes a 20% surface water management area at or below natural grade. Nurseries are also required to comply with a 20% surface water management areas criterion, as well as a requirement to retain the first flush of runoff (although this only applies to new nurseries).

With regards to Public Outreach, the SBDD is developing a website with links to all BMP documents and manuals produced for this area. The SBDD has also been distributing a flyer/brochure on BMPs for the equestrian community, which has been received favorably.

The practice of dewatering, which is associated with construction activities, represents a potential source of phosphorus inputs to surface water. Recognizing this, the SBDD has offered three dewatering courses in conjunction with Broward County since the fall of 2004. These have been designed for

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consulting engineers, contractors, and government employees. The SBDD will continue to offer these courses.

The SBDD has actively supported Water Matters Day as well and will continue to do so as part of their action plan for reducing pollution within the C-11 West Basin.

d. Central Broward Water Control District

The Central Broward Water Control District (CBWCD; **Figure 5**) spans an area of approximately 45 square miles, and includes nearly 100 miles of canals within six cities and towns, and unincorporated areas of Broward County. However, only about 22 square miles of the CBWCD are located within the C-11 West Basin. The secondary canal system within the CBWCD is almost exclusively gravity-driven, with only one stormwater pumping structure that serves the West Hollywood area.

In October, 2003, the CBWCD Board of Commissioners passed a motion to work cooperatively with the SFWMD to fund and implement water quality improvement projects in the C-11 West Basin. Cooperative efforts between the CBWCD and the SFWMD include a Capital Improvement Plan and a water quality study of CBWCD's western basin and options to implement structural improvements within the secondary canal system.

The CBWCD's C-11 West Basin Comprehensive Facilities Report Update of December 2003 provided the foundation for recommendations for the implementation of \$1.1 million in capital improvement projects which are now underway for flood and water quality control. By taking advantage of excess basin storage capacity, the CBWCD will be able to reduce flood levels, improve water quality, increase aquifer recharge, and reduce the volume of runoff discharged into the C-11 West Canal. These improvements are expected to be completed by December 2006.

Complementing these efforts is the CBWCD's Western C-11 Water Quality Improvement Project, the design of which was funded in part by the SFWMD. This project proposes infrastructural improvements, including sumps, for three CBWCD canals just upstream of their discharge points on the C-11 West Canal. Such improvements increase retention time for runoff, allowing pollutants to settle out of the water column or be absorbed through biological processes. This project is currently under design and the first stage of surveying and geotechnical work is complete. The anticipated construction completion date is December 2007 at a cost of an additional \$1 million. In February 2005, the SFWMD and CBWCD signed an agreement to cost share the total \$2.1 million in water quality improvement projects. The Florida Legislature provided the CBWCD with a \$1 million legislative appropriation in 2004 to help pay for the construction of these improvements.

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Through development permits with a private car dealership, CBWCD and SFWMD have required the creation of a flow-through 1.4 acre wetland for surface water storage and water quality treatment for water discharging to the northern portion of a secondary canal and basin that have been experiencing higher phosphorus levels.

A 5-year permit renewal program ensures the systems in the CBWCD are performing in accordance with their original design criterion.

With respect to design criterion, all lakes in the CBWCD are required to have a littoral shelf with approximately 20 feet of aquatic plants. These aquatic plants help stabilize the shoreline, thereby preventing erosion of soils which contain phosphorus, and also remove phosphorus from the environment through biological processes.

Since January, 2002, the CBWCD has initiated a new flood plain encroachment requirement which requires developments to have enhanced storage capabilities, such as additional lakes and dry detention areas, with approximately 15-20% of a property devoted to storage.

The CBWCD has changed their requirements for single family homes, which were previously excluded from the permitting process. They are now required to retain a 25-year storm event on site. In addition, single family properties not served by a surface water management system are required to maintain 30% of the parcel undeveloped at its natural elevation and install a berm to retain a 25-year, 3-day storm event.

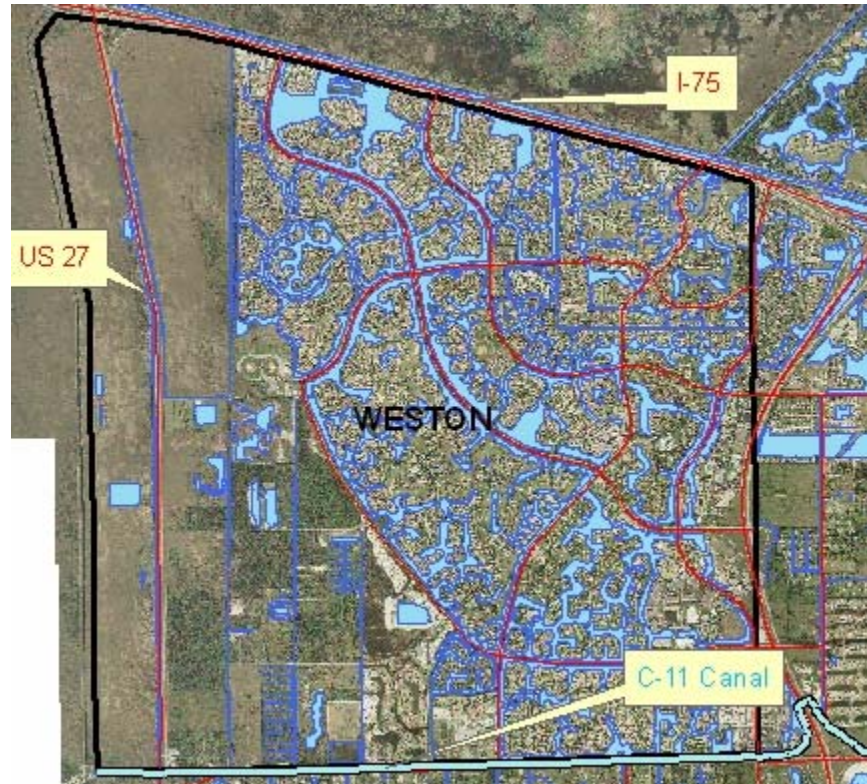
Recently, regulatory changes have been implemented to the CBWCD's Design Criteria Manual including modification of the canal culvert design criteria to encourage larger sizes and reduce cumulative head losses, and a variance process to allow for underground storage systems when open storage systems are not feasible. In addition, numerous infrastructural improvements have been implemented over the past year.

To increase public awareness, the CBWCD maintains a website with information regarding water quality and a link to the C-11 West Basin Turf and Landscape BMP site (<http://www.sfwmd.gov/org/exo/broward/c11bmp/index.html>.) The CBWCD has their own outreach coordinator and has been active in making water quality presentations to local elementary schools, local homeowners associations, and at public meetings in the Towns of Davie and Southwest Ranches. Similar to the SFWMD's mascot, Freddy the Alligator, the CBWCD has their own mascot, Teddy the Turtle, who helps get the message out that there are many things that each of us can do to help improve the overall quality of our water resources and help protect the Everglades.

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The CBWCD also participates in the Town of Davie Annual Waterway Cleanup and has been an active supporter and participant of Broward County's Water Matters Day event. Interpretive signs have been posted at six of the CBWCD's secondary canals. Over the years, the CBWCD has been, and remains, an active participant of working groups that develop BMPs.

e. Indian Trace Development District/City of Weston



Current Activities

The City of Weston controls the Indian Trace Development District (ITDD) and Bonaventure Development District (BDD). Most of ITDD (**Figure 5**) is served by a pump system. The possibility of increasing stormwater detention to 1.5 inches is being explored and a preliminary investigation is expected to be completed by the end of 2005.

The City of Weston employs a contractor to sweep 114 miles of curb on the main roads several times per year. The City has inventoried its 716 catch basins within the City's right-of-ways and contracts to have them cleaned at least once every 18 months or as needed. The City also controls aquatic vegetation in canals and lakes, including the mitigation areas in the western portion of the City.

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Weston has three landscaping contractors and each may subcontract pest control or fertilizing. Contracts require limiting the application of fertilizer to only that which can be used by plants, which must be determined by soil testing. In addition, the phosphorus content on fertilizers used is limited to between 2% to 5%; pest control is based on a certain threshold before pesticides are applied; irrigation is limited to 1 to 1.5 inches per cycle; grass clippings on hard surface must be blown back onto grass; and, leaves must be removed.

ITDD requires that erosion and sedimentation control measures must be in place and working properly in order to pass construction inspections, a pollution control strategy that reduces particulate phosphorus loads and also supports Weston's NPDES permit requirements.

Weston includes general pollution prevention information in its quarterly newsletter. The newsletter is mailed to every household. In addition, Weston has a webpage, public access channel and radio, and a public information staff that provides outreach. The City also has a database of homeowner associations and management companies.

Weston is implementing a number of programs that address pollution prevention in the C-11 West Basin and Everglades. Ongoing activities include:

- All City landscape contractors are required to complete the Florida Green Industries course and are supplied with BMP publications to be used and practiced. Weston's landscape maintenance managers provide oversight for these practices and carry a copy in their trucks for reference;
- Mulch is added twice a year to common areas to reduce water use and runoff;
- Phosphorus applications have been reduced by the City of Weston by 50%. Contractors are required to use fertilizer that contains 2% or less phosphorous;
- Landscape contractors are required to keep logs of all pesticide and fertilizer applications per the City's bid requirements for these services;
- An active "Right Plant, Right Place" program has been implemented to reduce maintenance and conserve water in the landscape ;
- Irrigation practices have been modified to reduce water usage and runoff. This resulted in a 60% reduction in water in the last year, primarily through reduction in run times and improving daily cycles and by using xeriscape and native plant materials;

C-11 West Basin Pollution Reduction Action Plan

- An active water quality monitoring program has been put in place - the City monitors water quality at 7 major outfalls along the C-11 canal per agreements with the SFWMD;
- Over 2,200 acres of mitigation areas in western Weston, along with most lake banks adjacent to major roadways are maintained; and
- Weston participates as a co-permittee in the County's NPDES Program with the State of Florida.

Action Plan

The City's proposed pollution reduction measures include:

1. Including language in all landscape contracts that Weston requires subcontractors to provide copies of a Florida Green Industries certification as proof of knowledge of current best landscape management practices. Homeowners Associations and Property Managers will be encouraged to do the same;
2. Requiring all City landscape and irrigation service contracts to obtain Florida Green Industries and Know-the-Flow certifications (as of November 2004). The City distributed a letter to its contractors, employees and Homeowner Associations encouraging them to seek training in BMPs and recommending that they attend the County's Know-the-Flow program. The City has had over 80% of its Public Works Department complete the Know-the-Flow program and projected that all staff would have completed the program by the end of 2005;
3. Hosting a Know-the-Flow program and a full Florida Green Industries course program for Property Managers and Homeowner Associations who seek to obtain certifications in both programs;
4. Inviting the County's NIS to perform irrigation analyses and recommend other water conservation techniques;
5. Working with the local community news media to include articles on the protection of water resources and the importance of BMPs;
6. Sending out information to all residents on programs such as Water Matters Day, BMPs, and water resources through the City newsletter, their website, cable TV channel, and their AM radio station;
7. Providing support for Broward Water Matters Day; and
8. Labeling all catch basins "Drains to the Everglades" by the end of 2006.

C-11 West Basin Pollution Reduction Action Plan

Schedule

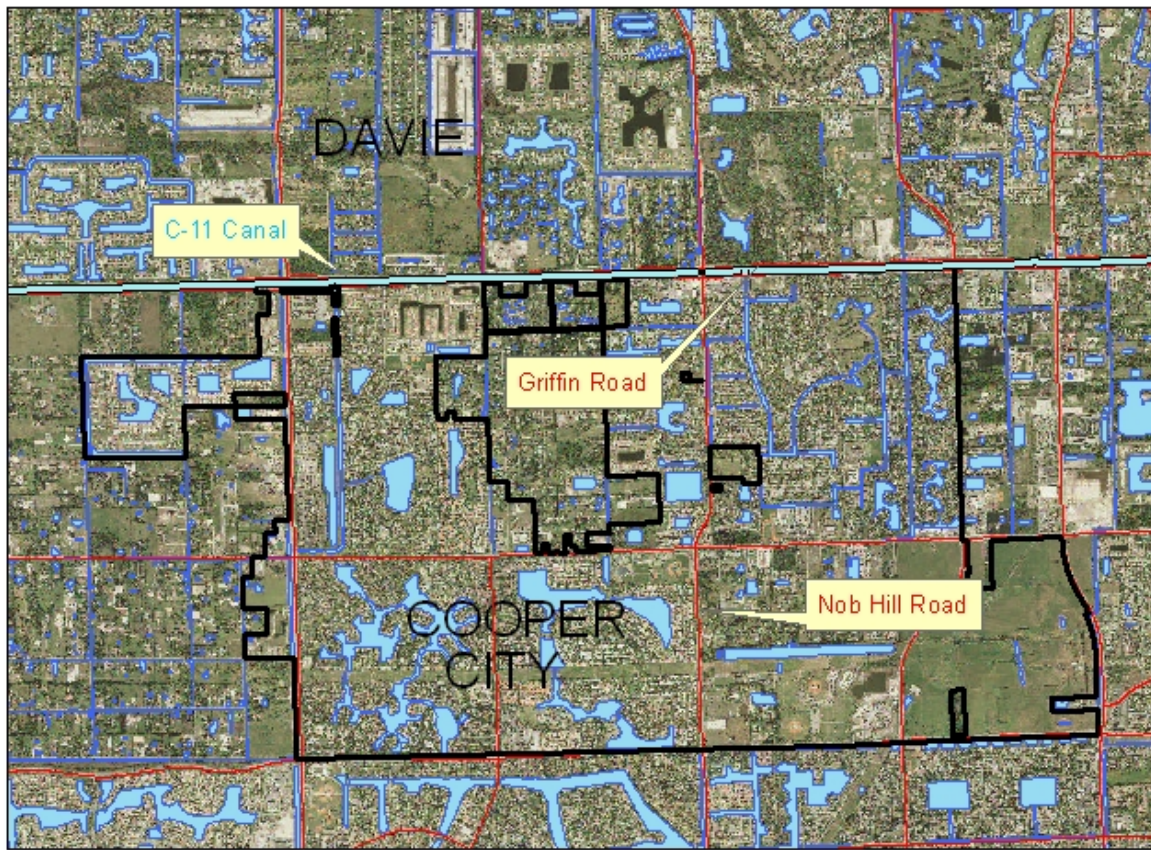
All of the activities above that require a funding source are budgeted items that have been prepared and planned for this fiscal year. Costs include \$450,000 per year for mulching of common areas and \$475,000 per year for aquatic vegetation control. In addition, approximately \$2400 per year is spent on providing information to residents, as well as \$4600 to have the entire storm drain system marked and numbered.

f. Cooper City

Resolution No. 2004-09-07

Excerpt:

“The City reaffirms its commitment to restoration of the Everglades, recognizing the importance of improving water quality, and supporting the opportunity to participate in the Broward Everglades Working Group.”



C-11 West Basin Pollution Reduction Action Plan

On September 13, 2004, Cooper City adopted a resolution reaffirming its support for the Broward Everglades Working Group. The City is providing this support primarily through its Public Works and Utilities Departments. The Public Works Department is responsible for public workshops, public outreach, roads, and fertilizer usage. The Utilities Department is responsible for water quality testing and inspections.

A copy of Cooper City's resolution is included in Appendix B.

Current Activities

One of Cooper City's primary goals is to get information into residents' hands to increase public awareness. New residents receive an introductory packet which includes a Water Quality report and information on workshops and outreach programs provided by the City. The 2004 Water Quality Report (June 2005) provides information on a variety of BMPs.

Cooper City is also supporting the implementation of the NatureScape Irrigation Service to increase its efforts at promoting BMPs to improve the quality and quantity of water resources.

Cooper City is very conscientious about implementing BMPs. The City implements landscape BMPs including the use of low phosphorus fertilizer (15-1-15). It conducts regular tree and plant care workshops, often using experts from the University of Florida/Institute of Food and Agricultural Sciences/Broward County Extension Education Division. Workshops have included proper use of fertilizers, user-friendly pesticides, and xeriscaping. The City actively distributes information to residents, including relevant County brochures on landscape BMPs and NatureScape. NatureScape information is also incorporated in the City's bi-annual newsletter.

While there are not many new construction sites in Cooper City, the City has two employees certified in stormwater and erosion control management. Each new construction site is visited 2-3 times daily.

Action Plan

The City has identified the following actions to implement to help reduce pollution:

1. With four canals that enter into the C-11 Canal, the Engineering Department has proposed to supplement the current water quality testing done by the SFWMD. It is planning to identify additional sites to test to speed up the process of trying to locate "hot spots" and to determine how well the canals are functioning.

C-11 West Basin Pollution Reduction Action Plan

2. Making more information about NatureScape available to the public and updating its website to include this information.
3. Certifying more sites within the city as NatureScapes.
4. Providing information on the efforts of the Broward Everglades Working Group and how residents can help.

Schedule and funding

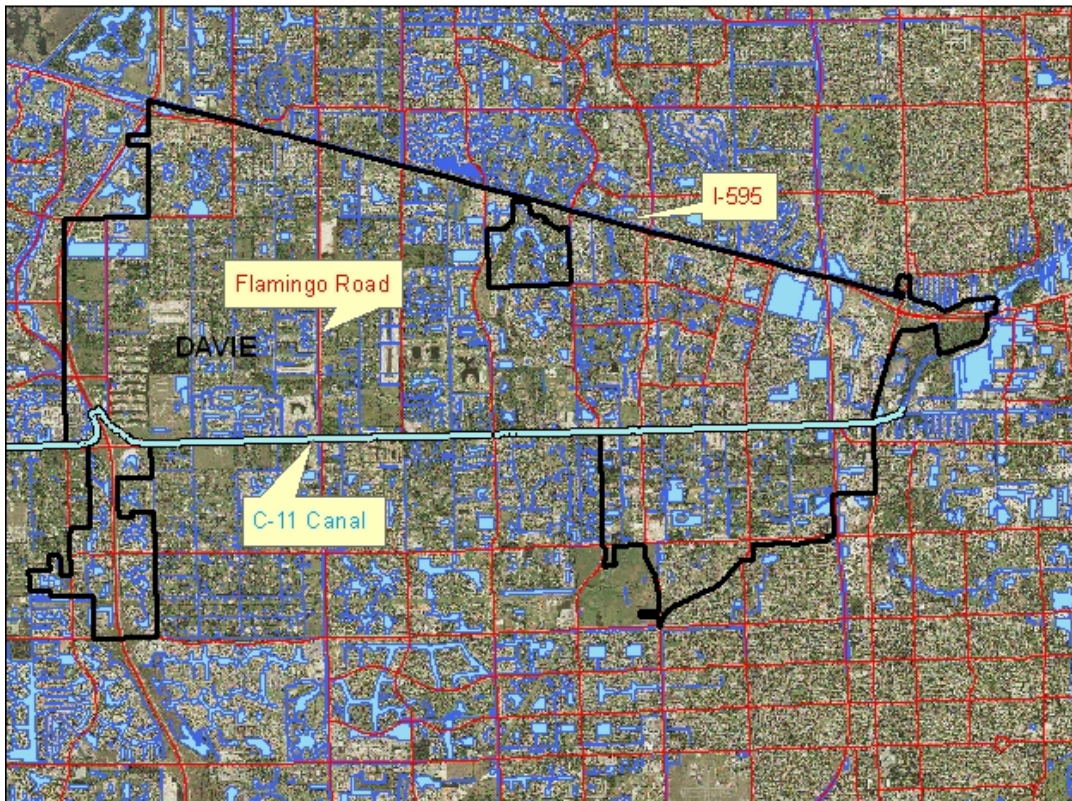
These actions are ongoing and are funded through the operating budget for the City's Public Works Department.

g. Town of Davie

Resolution R-2005-166

Excerpt:

"A resolution...acknowledging the Town's participation in the Broward Everglades Protection initiative and authorizing the implementation of the Town's Everglades protection action plan as developed through participation in this collaborative effort..."



C-11 West Basin Pollution Reduction Action Plan

A copy of Davie's resolution is included in Appendix B.

Current Activities

The Town of Davie has been active in implementing both structural and non-structural measures to address water quality. In conjunction with the Central Broward Water Control District, Davie has undertaken an ambitious capital improvement project implementing numerous stormwater drainage projects to prevent direct discharge into secondary canals that feed the C-11 and C-12 primary canals. Davie has implemented these improvements in twelve locations that have provided storage for the first flush of stormwater and lowered the solids and phosphorus loading in the C-11 basin through the installation of strategically located catch basins, exfiltration trenches, improved swale sections and overflow structures.

The Town is implementing several landscape BMPs to reduce phosphorus on municipal properties, including:

- Low phosphorus fertilizers
- "Ring of responsibility"
- Reducing irrigation quantities
- Promoting littoral shelf plantings
- Use of native plants
- Florida Yards and Neighborhoods principles
- Conducting outreach classes with Town of Davie Public Works staff and contractual vendors in applying fertilizers and pesticides in public areas
- Providing BMP information to the Davie Open Space Advisory Board that is tasked with the long term maintenance and sustainability of the equestrian and recreational trail system. Meetings are held every two months.

Action Plan

Davie has identified a number of strategies that the Town and its citizens could implement to reduce point and non-point source phosphorus pollution. These include:

1. Continuing to retrofit existing canal outfalls within the West Basin with control structures and overflow baffles. This program, in partnership with the CBWCD, will provide first flush flow retention within stormwater systems to lessen pollutants entering into existing canals. In conjunction with this program, quarterly workshops will be held with homeowner associations and property management companies. This program will be undertaken in 2005-2007 and will be funded through the town budget.

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2. Working with retail and wholesale fertilizer dealers to promote the sale of environmentally responsible fertilizer material. This program proposes two meetings a year with managers of both fertilizer dealers and retailer sellers to inform them through brochures and other literature of BMPs relating to environmentally responsible fertilizer material. The program has been budgeted for FY 2006 and will be funded through the Town budget.
3. Establishing a stormwater maintenance division to maintain existing drainage systems, identify stormwater related concerns, and facilitate repairs to the drainage system. The program is budgeted through the Town budget.
4. Publishing a “Best Maintenance Practices” brochure that addresses what residents can do to help lower phosphates from entering into the canal system and ground water. Davie will be implementing these BMP’s on all Town-owned properties and projects. These activities are scheduled for 2006 and will be funded through the Town budget.
5. Providing staff and resources for educational outreach programs for Davie Waterway Cleanup Day and Broward County Water Matters Day. These programs will be undertaken in 2006 and funded through the Town budget.
6. Providing the Broward County NatureScape Irrigation Service with sites to conduct research/demonstrations of products and practices to improve the efficiency of irrigation systems and reduce the potential for overspray and related-runoff. This program will be initiated in 2006 and funded through the Town budget.
7. Creating a landscape BMP brochure to be a companion to the Town’s Save Our Swales publication. This brochure will be produced in 2006 and has been budgeted for FY 2006.
8. Revising the Town of Davie Land Development code – Landscape section to include NatureScape principles and standards. This revision will be completed within FY 2006 and has been budgeted accordingly.
9. Revising and amending policies contained within the Town’s Comprehensive Plan and Evaluation and Appraisal Report (EAR) to further support Everglades protection and restoration efforts. The EAR has been approved by the Town Council and is awaiting review by the Florida Department of Community Affairs. Upon final approval, the Town will begin amending comprehensive plan policies consistent with the EAR. The required amendments are expected to be approved by FY 2007. The project has been funded for FY 2006.

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10. Working closely with the CBWCD and area developers to approve a 115-acre wetland to mitigate for floodplain storage and wetland impacts. The Van Kirk wetland at SW 136th Avenue, north of the C-11 Canal, will provide storage and water quality benefits once completed.

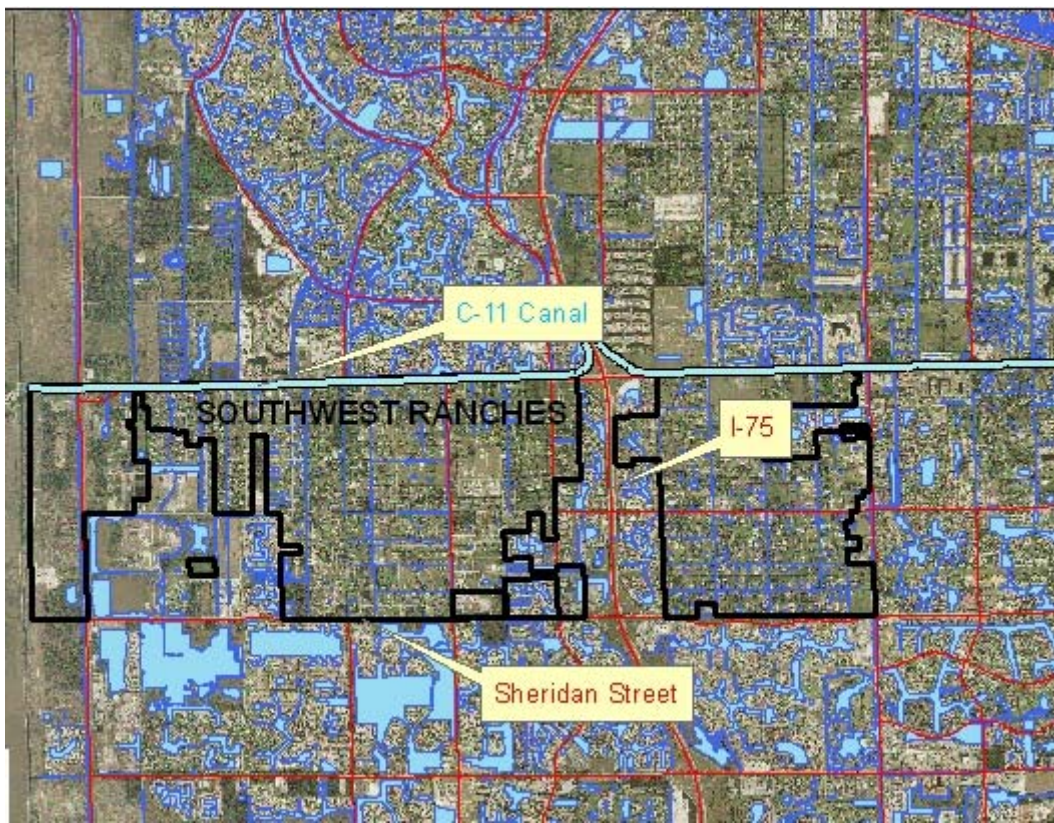
h. Town of Southwest Ranches

Resolution No. 2004-101

Excerpt:

“The Town Council of the Town of Southwest Ranches, Florida, hereby reaffirms its commitment to the restoration of the Everglades and it recognizes the importance of improving the quality of water discharged to the Everglades”

A copy of the Town of Southwest Ranches resolution is included in Appendix B.



Current Activities

The Town of Southwest Ranches is a largely equine community in southwest Broward County. The Town has been active in developing Equine BMPs and

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providing outreach to residents in implementing these BMPs in partnership with the SBDD. The Town has also established other partnerships with SBDD, and business owners towards addressing BMPs for the nursery industry.

Southwest Ranches has supported Broward Water Matters Day and participates as a co-permittee with the County in the NPDES program. Through this partnership, it is ensured that various pollution reduction BMPs will be implemented. These include street sweeping, public education, maintenance of stormwater structures, inspection of waste facilities, and construction site inspections.

Through its Drainage Committee, the Town has allocated funds for catch basin and swale improvements, developed a fill ordinance, recommended expansion of their swale maintenance program, established property setbacks, and worked to restore the tertiary drainage system.

Consistent with landscaping BMPs, the planting of Florida native plants is encouraged in community areas within Southwest Ranches. Native plants have adapted to South Florida's climatic conditions and require less irrigation and maintenance to remain healthy. By planting native plants, the need for fertilizers and pesticides is reduced, thereby reducing phosphorus inputs to the waterways.

Action Plan

Actions that the Town of Southwest Ranches intends to undertake include:

1. Working with the SBDD to assist property owners in meeting compliance with the equine BMPs.
2. Continuing support for Broward Water Matters Day. The Town will promote Water Matters Day through mailings to its residents.
3. Developing an outreach program throughout the community with organizations such as the Brownies and homeowner associations.
4. Including an educational emphasis on water quality in the Town's newsletter, and specifically writing an article about the C-11 West Basin Nursery BMP Grant program.
5. Assisting SBDD in enforcement actions for dumping in canals and fill violations.
6. Working with the SFWMD and the United States Army Corps of Engineers to develop a wetland restoration park project. Construction will begin in the spring of 2006. The town is also preparing designs for other parks. These

parks will be environmentally-friendly with native plantings, wetlands, and water-saving devices.

7. Possible adoption of an ordinance supporting landscaping BMPs.

Schedule

These activities are either ongoing or proposed for 2006..

i. City of Pembroke Pines

Resolution No. 3003

Excerpt:

“The City of Pembroke Pines will commit to a participatory role in the Broward Everglades Working Group by assisting the working group to set and achieve the objectives of the Working Group.

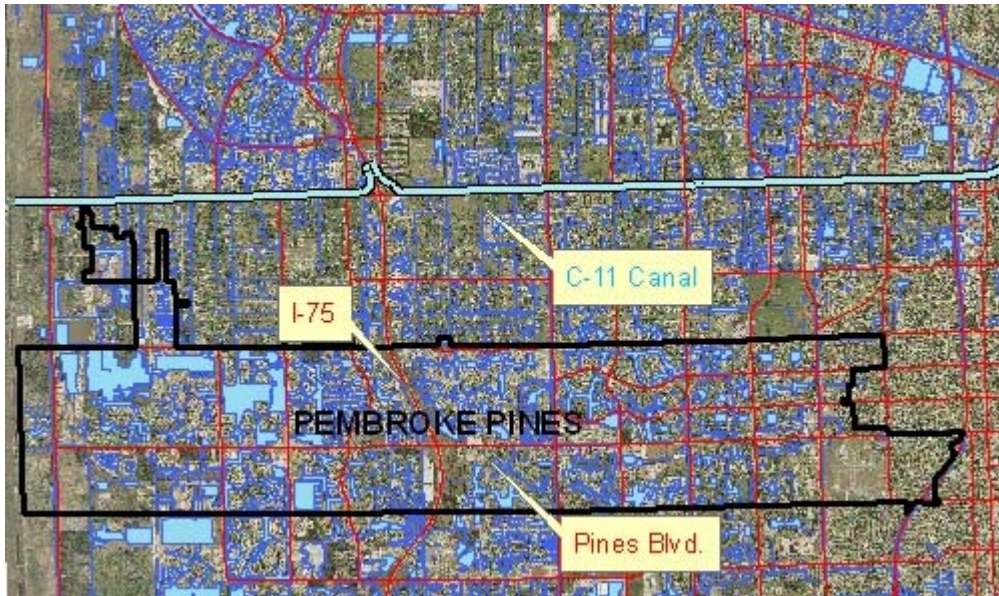
The City of Pembroke Pines will give careful consideration to actions the City can take to realize the goals of the Everglades Forever Act.”

A copy of Pembroke Pines resolution is included in Attachment B.

Current Activities

The City of Pembroke Pines is the second largest City in Broward County. The environmental policies of Pembroke Pines are codified in the City’s Comprehensive Plan and Code of Ordinances. The City has been proactive in its approach to environmental management. Some of its achievements, which have direct impacts on water quality, include:

- A 500-acre wetland bank that increases the effectiveness of the City’s centralized wetlands in filtering water prior to its entry into the Everglades;
- On-site wetlands in planned unit developments;
- A requirement for silt trap barriers surrounding construction sites to contain soils on site;
- A requirement for engineered swale systems abutting pavement; and
- The development of a highly-effective drainage system, which has been successful in reducing pollutant loads, and ensuring some of the best water quality in the western portion of the City.



The City has been an active participation in multiple workgroups addressing water quality. Support for the efforts of the Broward Everglades Working Group is demonstrated by the resolution supporting the group that was unanimously approved in August, 2004.

In addition, the City supports Broward County's NatureScape Irrigation Service.

Action Plan

The City of Pembroke has identified a number of additional actions that the City intends to pursue to refine its environmental policy and pollution control efforts, including:

1. Participating in a Water Matters demonstration project that will transform Flamingo Park into a model NatureScape, thereby conserving and protecting water resources and serving as an educational resource;
2. Reviewing the current City code relating to fertilization;
3. Review of the City's website, adding targeted information designed to educate and encourage use of environmentally-friendly products and BMPs. The City's environmental policy will be put on the website and a link will be provided to the County's website;
4. Review of current code related to the certification of landscape professionals who provide service to the community; and

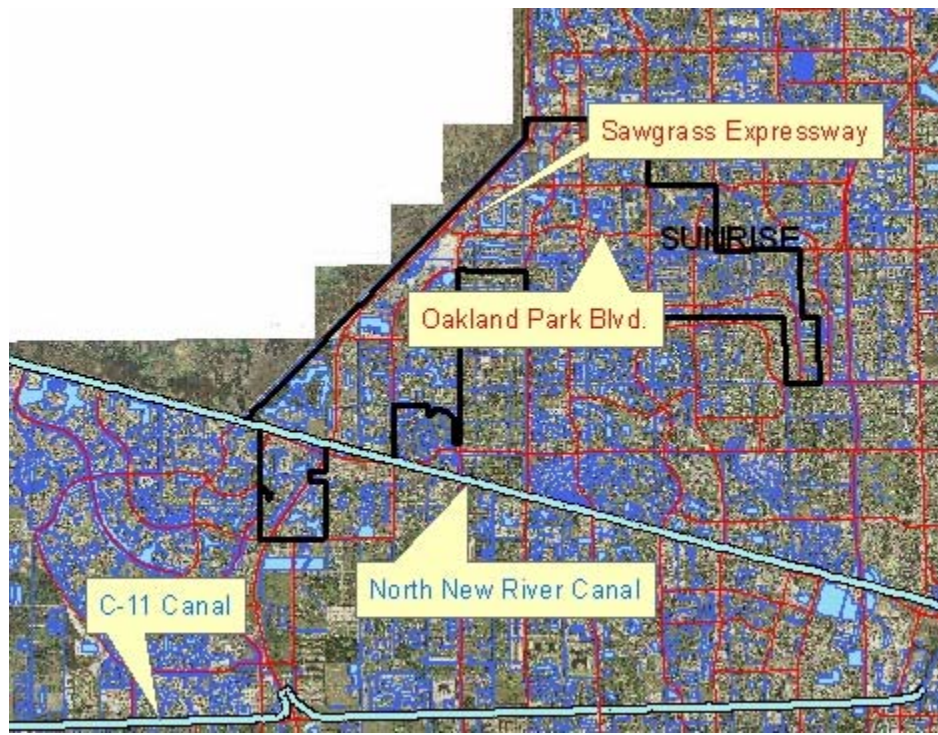
C-11 West Basin Pollution Reduction Action Plan

5. Exploring the incorporation of educational elements into the City's Charter School System designed to strengthen environmental awareness. The high school curriculum includes lessons dedicated to the environment and conservation of natural resources, including Everglades restoration. The City is also considering proposing a partnership with the elementary and middle schools to develop an environmental curriculum. The charter school also has plans to form partnerships with other high schools in the County to share resources to expand the environmental program.
6. Planning to use an environmental wetland park on Sheridan Street for field trips that would incorporate environmental education, and field activities.

Schedule

As part of the Flamingo Park Water Matters demonstration project, general landscape maintenance and irrigation improvements are underway. The implementation of agreed upon landscape BMPs will allow the site to be certified as a NatureScape. All other additional actions are pending.

j. City of Sunrise



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Current Activities

The City of Sunrise has entered into a cost sharing agreement with the SFWMD to implement a Water Quality Improvement Program to help meet state water quality standards required by the Everglades Forever Act. Pursuant to this Agreement, the SFWMD monitors two sites associated with discharges from the City into the North New River Canal.

A flood informational flyer is mailed out twice a year to all City residents in their utility bill. This informational flyer discusses the City's drainage system, the importance of keeping it clean and provides a telephone number to report violations.

Action Plan

Additional pollution reduction actions to be pursued by Sunrise include:

1. Working with the SFWMD to develop a new informational flyer to be included in utility billings for specific target areas that will include BMPs that individual homeowners can perform;
2. Following completion of Action #1, the City will meet with Homeowners Associations within the affected drainage basins to discuss BMPs that can be implemented locally, including education about low phosphorus fertilizers, proper disposal of yard clippings and illegal dumping;
3. Meeting with the maintenance supervisors in the Sawgrass International Corporate Park and the Sawgrass Mills Mall to discuss acceptable turf management;
4. Meeting internally to discuss current operational procedures, including maintenance and the cleaning of catch basins to determine if more frequent maintenance is appropriate in specific target areas;
5. Supporting the County's NatureScape Irrigation Service; and
6. Evaluating the effectiveness of the Action Plan annually and making changes as necessary, which may include additional BMPs.

k. Florida Department of Agriculture and Consumer Services (FDACS)

At the state level, the Florida Department of Agriculture and Consumer Services (FDACS) has also been very active in working with the agricultural industry to reduce pollution in the C-11 West Basin.

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Within FDACS, the Office of Agricultural Water Policy is responsible for the development of agricultural BMPs statewide. To this end, it has cooperated with various stakeholders by providing resources and support for the development of BMPs for both nurseries and equestrian communities in Broward County.

Broward Nursery BMP Development and the FDACS BMP Program

The nursery industry is a significant user of phosphorus within the C-11 West Basin. BMPs for nursery operations must be implemented to prevent phosphorus from entering waterways.

The development of nursery BMPs for the C-11 West Basin in Broward County began in January 2003 with community meetings within the basin. This initiative involved nursery growers from Broward County, representatives from the University of Florida-Institute of Food & Agricultural Sciences, the Natural Resources Conservation Service, the Broward Farm Bureau, the Florida Nursery, Growers and Landscape Association (FNGLA), FDACS, FDEP, BCPD, and the SFWMD. Subsequently, this group was joined by nursery growers from Palm Beach County and Miami-Dade County to support Broward County's effort and expedite the development of nursery BMPs for southeast Florida.

The group has encouraged nursery growers to implement BMPs in advance of the completion of the FDACS BMP Program's Nursery BMP Manual. In support of advanced BMP implementation, local nursery operators have participated in drafting BMPs for their industry. These BMPs are seen as part of a larger effort to be incorporated within a plan for the SFWMD region, and eventually the entire state's nursery industry. BMPs such as construction of impermeable surfaces surrounding soil storage and potting areas, corrective repairs to irrigation systems, and the creation of water retention areas have been recommended.

The FDACS BMP Program is a non-regulatory, incentive-based approach to the implementation of on-site water quality BMPs for lands in agricultural use. A producer chooses to enlist in the program to access the incentives provided and gain eligibility for cost-share funds for BMP implementation. Growers must submit a Notice of Intent (NOI) to FDACS, followed by a site-specific, detailed BMP implementation plan that must be followed to remain in the program. The program relies on grower accountability, required documentation, and FDACS inspections as needed to ascertain that producers understand their program responsibilities and are adhering to the property's BMP plan.

A public rule development workshop was held in June, 2005 in Davie in conjunction with the monthly FNGLA meeting. At this workshop, the FDACS BMP Program was reviewed and nursery growers voiced their support.

In 2005, FDACS funded the start up and operations of a BMP/Mobile Irrigation Lab (MIL) established specifically to work with nursery operators in the C-11

C-11 West Basin Pollution Reduction Action Plan

West Basin to evaluate irrigation systems, provide technical support for conservation planning, and to facilitate the understanding and applications of growers to the C-11 West Basin Nursery BMP Grant Program described below. The MIL team evaluates irrigation systems and operations within the nurseries and provides recommendations to increase efficiencies and reduce the potential for phosphorus pollution. In 2006, SFWMD will also be providing funding in partnership with FDACS to support MIL evaluations.

C-11 West Basin Nursery BMP Grant Program

The FDACS and the SFWMD established a 3-year, \$1.04-million grant program to offer financial incentives to nursery owners within the C-11 West Basin to implement BMPs for water quality improvements. In Fiscal Year 2005, SFWMD and FDACS each allocated \$200,000 for the C-11 West Basin Grant Program in partnership with the Palm Beach Soil and Water Conservation District which is contributing technical and administrative support. It is expected that the SFWMD and FDACS will allocate \$320,000 each over Fiscal Years 2006 and 2007 for continued implementation of the BMP grant program.

It is the intent of the grant program that water quality improvement projects be implemented as soon as possible and that preference be given to those projects with the greatest long-term water quality benefits for phosphorus reductions in discharges.

As a pre-requisite for eligibility of cost-sharing, nurseries are required to implement a minimum of at least two qualifying practices from the following list:

- No water-soluble phosphorus in fertilizers
- Substrate nutrient testing for phosphorus
- Soil amendments to reduce phosphorus leaching
- No irrigation run-off from property
- Use of cyclic irrigation
- Irrigation uniformity testing and conformance

Once applicants have committed to implement these practices, they are then eligible for cost-share funds for other practices that are considered to be most effective in reducing off-site movement of phosphorus. These include:

- Grassed Filter (Buffer) Strips
- Grassed Waterways
- Water Control Structures (with Headers)
- Sediment Basins-Water Treatment Areas (on site)
- Waterway/Ditch/Canal Bank (Grade) Stabilization
- Reservoir or Retention Areas (on-site)
- Improved Internal Infrastructure Controls

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- Aquatic Weed Barriers (on site)

Several other additional practices are also eligible, but are considered to be less effective.

As of March 31, 2006, there had been 44 contacts resulting in 34 requests for assistance. Thirty-three BMP assessments and twenty-one Mobile Irrigation Lab evaluations had been completed, and three nurseries were waiting for evaluations. Seventeen cost share agreements had been signed for a total of \$238,736 and three cost share agreements for \$95,010 were waiting for approval at the March selection committee meeting. In total, over 180 acres of nursery properties have been assessed. Hurricanes Rita and Wilma inflicted serious damage on some nurseries, which may take several years to recover.

This voluntary program is expected to serve as a statewide model for nursery BMP implementation through partnerships.

Equestrian BMPS

The development of urban equestrian BMPs for the C-11 West Basin began with community meetings in 2003 and included the participation of the South Florida Trail Riders Association, the Florida Farm Bureau Federation, Broward Farm Bureau, FDACS, FDEP, BCEPD, and the SFWMD.

The equestrian BMPs are targeted at both small and large horse operations. While the FDACS is in the process of developing a state equestrian BMP manual and administrative rule, the Broward effort has resulted in the development of a colorful informational flyer entitled "Good Horse Sense-Protecting Water Resources," highlighting equestrian BMPs for small horse farms and backyard corrals in urban environments. These urban BMPs emphasize proper pasture management, manure storage and removal, and other practices to reduce stormwater pollution.

I. Other Stakeholders

In addition to the stakeholders listed above, a number of other groups have participated in the Working Group and have committed to supporting its efforts. With their additional support, it is hoped that these groups will be able to enlist additional segments of the community to participate in pollution prevention/reduction activities. These include:

- The Broward County Audubon Society committed to provide outreach to its members and offered support in providing additional residential outreach. They also passed a resolution in support of the Broward Everglades Working Group (see Appendix B).

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- The Certified Pest Control and Operators Association supported the group through contributions to the BMP discussion.
- The Florida Nursery, Growers and Landscape Association (FNGLA) made a commitment to provide outreach to growers and support the nursery BMP program and related efforts.
- LESCO fertilizer company supported the group through contributions to the BMP discussion.
- TrueGreen-Chem Lawn supported the group through contributions to the BMP discussion.
- The South Florida Aquatic Plant Management Society supported the group through contributions to the BMP discussion and passed a resolution in support of the Broward Everglades Working Group (see Appendix B).
- The Miccosukee Tribe of Indians of Florida supported the group through contributions to the BMP discussion.
- The City of Coral Springs, which has a canal that is capable of discharging stormwater into the Everglades (although it has not done so for several years), participated in the group discussions.

V. MEASURING PROGRESS

As noted, the interim goal of the Broward Everglades Working Group was to ensure that water quality samples from the C-11 West Basin, measured at the S-9 pump station, do not exceed the Broward County standard of 20 ppb phosphorus by the end of 2005. While there are occasional exceedances, for the most part, this goal is already being achieved. By the end of 2006, the goal is to be at 10 ppb phosphorus or lower at the S9/S9A stations.

Many of the actions to improve the quality of water leaving the C-11 West Basin have already been implemented. However, additional actions will need to be implemented throughout 2005 and 2006 to provide further control on sources of phosphorus in order to reach the goals agreed upon by the Working Group. Partners in the Broward Everglades Working Group are committed to achieving these goals through coordinated activities consisting of education and outreach, technical assistance, and funding. Should this approach prove ineffective, regulatory or legislative actions may need to be considered. The results of these efforts will be measured through an active monitoring program. To improve reporting, local and state agencies have agreed to investigate opportunities to augment the existing monitoring program by identifying additional stations to be located in areas specifically targeted for BMP implementation. Additional measurements of the effects of pollution and source reduction on water quality will be undertaken. Some funding from the SFWMD may be made available to assist in this effort.

Periodic meetings of the Broward Everglades Working Group will need to be held to track the progress on implementing these actions and to keep stakeholders focused on the goals. Individual strategies will be reviewed and revised as necessary. Broward County and the SFWMD are committed to assisting local municipalities, water control districts, and other stakeholders in the implementation of actions which will further improve the water quality of stormwater runoff entering the Everglades. The County will serve as a coordinating agency, in partnership with the SFWMD, in providing review and updates on these efforts, tracking of water quality changes, and reporting to stakeholders.

VI. APPLICABILITY TO OTHER BASINS

Development of the C-11 West Basin Pollution Reduction Action Plan has been achieved through the commitment of stakeholders who share a common vision. Through collaborative efforts such as the Broward Everglades Working Group, we can demonstrate that the cumulative impact of individual actions can be used to address larger multi-jurisdictional issues. Ideally, this approach can then be used to address other water quality issues within Broward County's other drainage basins. Therefore, it is the intent of this plan to eventually be expanded to include the North New River Canal and North Springs Improvement District basins as well.

REFERENCES

SFWMD, 2004, "Everglades Stormwater Basin Source Control Schedules and Strategies Annual Report 2004", Environmental Resource Regulation Department

SFWMD, 2006, "2006 South Florida Environmental Report, Volume 1, Chapter 3: Phosphorus Controls for the Basins Tributary to the Everglades Protection Area"

APPENDIX A. THE BROWARD EVERGLADES WORKING GROUP

The Broward Everglades Working Group was initiated in January and February, 2004 as a collaborative effort between Broward County's Environmental Protection Department and the South Florida Water Management District. The agencies agreed that the mission statement of the Working Group should be "to reduce pollution entering the Everglades in order to meet water quality goals as required by state law." Planning team members from the two agencies then developed preliminary goals, and followed up with a discussion of overall Working Group objectives, identification of stakeholders to be part of the larger Broward Everglades Working Group, and established a tentative timeline for preparing information in advance of the first full Working Group meeting.

In March, 2004, as a pre-cursor to the first full Broward Everglades Working Group meeting, a technical meeting on water quality and regulation was held between the South Broward Drainage District, the Central Broward Water Control District, the Old Plantation Water Control District, the North Springs Improvement District, the County, and the State to review water quality authorities and jurisdictional boundaries, discuss established and implemented BMPs, and examine a mechanism for enforcement of violations, in order to support compliance with the EFA water quality standards.

Following this meeting, an open invitation was then extended to over 30 agencies, municipalities, drainage districts, industries, and special interest groups to participate in the Broward Everglades Working Group. The primary goal of the Broward Everglades Working Group was to coordinate the actions of State, County, and municipal governments, and drainage districts and special interest groups in support of Everglades restoration (specifically to achieve the proposed water quality standard of 10 ppb phosphorus for waters within the Water Conservation Area) through the identification and implementation of pollution prevention strategies.

a. First Meeting of the Broward Everglades Working Group

The first meeting of the full Broward Everglades Working Group was held on May 21, 2004 from 8:30 a.m. to 12:00 p.m. at Tree Tops Park in Davie. This meeting was considered to be Step 1 of a seven step planning process proposed for the development of the Action Plan.

Objective

The objective of this meeting was to coordinate the actions of municipal governments, drainage districts and special interest groups in support of Everglades restoration through the identification of various potential pollution prevention strategies.

C-11 West Basin Pollution Reduction Action Plan

Presentations

Following introductory remarks by Broward County EPD and the SFWMD and stakeholder introductions, presentations were made on:

- Water Quality in the C-11 West Basin
- SFWMD Initiatives and Strategies to Reduce Phosphorus
- Water Quality Regulatory Authorities/Responsibilities
- BMPs and Other Options for a Pollution Prevention Plan
- A Community Example-Village of Wellington

Discussion

Much of the discussion on water quality focused on identification of the problem, including current water quality, ongoing efforts to reduce phosphorus inputs by the SFWMD, and interim phosphorus reduction goals for various sampling stations within the C -11 West Basin. It was proposed that the following phosphorus goals be sought:

- An interim goal of having no samples exceed the Broward County standard of 20 ppb at the S-9 pump station by the end of 2005
- Consistently achieve 10 ppb at the S-9 pump station by the end of 2006

A review of the regulatory authorities at the state, County, and local levels and their responsibilities for water quality were discussed. Stakeholders were presented with a series of pollution prevention options for their consideration, including potential ordinances, new regulatory requirements, structural changes, and expansion of outreach programs.

The final discussion item addressed how the Village of Wellington's Stormwater Quality Management Program was addressing BMPs for this largely equestrian community in Palm Beach County.

Outcome

The outcome of this initial Working Group meeting was that stakeholders were better informed of the issues related to phosphorus pollution in the C-11 West Basin and potential options to help them achieve reductions.

Participants/stakeholders were requested to have their municipality or group pass a resolution in support of the objectives of the Broward Everglades Working Group and to consider the suitability of the various pollution reduction options for implementation by their respective agencies.

b. Meeting with Agricultural Stakeholders

In a related effort, on June 23, 2004, as a result of concerns about the possible regulation of local nurseries and obligatory implementation of BMPs, a special meeting with agricultural stakeholders was held at the South Broward Drainage District to specifically discuss what impacts the nursery industry might expect as an outcome of the Working Group efforts. Much of the discussion focused on how to target smaller nurseries to implement pollution controls. Following a productive discussion, a commitment to a working partnership was forged among stakeholders to promote voluntary participation in the State's nursery best management program, increase outreach, and expand water quality monitoring. A strategy for a voluntary nursery BMP program was developed. It was also agreed that if water quality issues continue and a nursery operation is identified as the source of a problem, then reasonable Broward County enforcement actions could be considered if the nursery is not part of the BMP program or not adequately implementing their BMP plan. The FDACS BMP program provides for a reiterative process of BMP development if water quality standards are not being achieved.

c. Second Meeting of the Broward Everglades Working Group

The second meeting of the Broward Everglades Working Group was held on June 25, 2004 at Tree Tops Park as Step 2 of the planning process.

Objectives:

There were several key objectives for the second Broward Everglades Working Group meeting:

- Present and agree upon a process for proceeding with a C-11 West Basin pollution prevention action plan;
- Enter into a detailed analysis of various pollution prevention options for consideration;
- Identify the level of participation of each stakeholder group; and
- Provide a summary of reference materials to guide in resolution/policy/ordinance development and the specifics of various pollution prevention strategies.

Presentations

At the Second Broward Everglades Working Group meeting, presentations were made on a proposed process for developing "Individual ESP Basin Action Plans" and a further review of the various pollution prevention options that were discussed in the first meeting.

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The proposed process for developing the “Individual ESP Basin Action Plans” included the following future steps:

- 1) Step 3: Develop and Approve an Action Plan
 - a. Participate in sub-group discussions
 - b. Decide on an approach
 - i. Work with County/SFWMD staff
 - ii. Work with consultant
 - iii. Work independently
 - c. Gain internal consensus
- 2) Step 4: Reconvene Working Group
 - a. Present individual “Action Plans”
 - b. Establish milestones (targets and dates)
 - c. Incorporate monitoring plan
 - d. Compile information for generation of final “ESP Basin Action Plan”
- 3) Step 5: Prepare ESP Basin Action Plan
 - a. Introduction
 - b. Compile individual plans
 - c. Implementation schedule
 - d. Monitoring plan
 - e. Distribute plan
- 4) Step 6: Implementation
 - a. Draft necessary ordinances and/or resolutions
 - b. Promote program through outreach
 - c. Develop partnerships
 - d. Monitor progress
- 5) Step 7: Reconvene and Provide Regular Updates
 - a. Subsequent meetings
 - b. Presentation of progress reports
 - c. General discussion
 - d. Refine approach if necessary
 - e. Repeat

Following a review of this process, various legislative, regulatory, structural, and behavioral options were put forward for consideration. These included the following:

Legislative-To be considered by local governments

1. Ordinance limiting the phosphorus content of fertilizers sold;
2. Policy/resolution requiring the implementation of NatureScape, and turf and landscape BMPs (city properties or area-wide);
3. Ordinance requiring adherence to a conservative irrigation schedule;
4. Ordinance requiring specific management of grass clippings;
5. Ordinance requiring implementation of BMPs by nurseries;
6. Ordinance requiring the maintenance of swales;

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7. Ordinance requiring the inspection and cleaning of septic systems at time of property transfer; and
8. Ordinance requiring the collection of pet waste.

Regulatory – To be considered by Municipalities, 298 Districts, Special Act Districts, Broward County, SFWMD

1. Strengthen water quality treatment requirements for new developments
 - a. Increased bio-retention
 - b. Green parking (could require change to city ordinance)
2. Strengthen stormwater management plan under NPDES/MS4 permit
 - a. Catch basin/pipe inspection/cleaning/repair/replacement
 - b. Litter control program
 - c. Street sweeping
3. Expand 5-year renewal of surface water management licenses to permits issued after 1985 (or earlier)
4. Rigorous inspection of construction sites greater than 1 acre for sediment and erosion control
5. Require municipal and district staff responsible for landscape maintenance to attend “Know the Flow” workshop
6. Provide registry of landscape companies whose employees are required to attend “Know the Flow” workshop
 - a. Policy
 - b. Resolution
 - c. Occupational license requirement
 - d. Certification of landscape companies that comply

Structural – To be considered by Municipalities, 298 Districts, Special Act Districts, Broward County

1. Rehabilitate roadway swales where part of approved drainage plan
 - a. Vegetation removal
 - b. Re-grade and re-sod
2. Install and maintain inlet filter devices in older catch basins
3. Install/retrofit control structures to retain additional runoff
4. Develop multiyear canal maintenance/dredging program

Behavioral – To be considered by Municipalities, 298 Districts, Special Act Districts, Broward County, SFWMD

1. Develop partnerships that stimulate voluntary implementation of BMPs
2. Help fund a Mobile Irrigation Lab
3. Have all municipal properties certified through the NatureScape Broward program
4. Public Outreach
 - a. Broward Water Matters Day
 - b. Newsletters
 - c. Website
 - d. Community access channel

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- e. Public Service Announcements (TV and radio)
- f. Support/organize clean-up events
- g. Labeling of drainage inlets
- h. Speaker's bureau

Discussion

The group supported the proposal on how to proceed with developing the "Individual Action Plans." With respect to BMPs, stakeholders generally felt that voluntary implementation of BMPs through partnerships would be the most successful means to create broad participation and support for pollution reduction efforts, which could then be enhanced through community outreach and education. Some concern was expressed about a willingness to participate in a voluntary program where costs were involved and the suggestion of implementing some form of regulation in the absence of compliance and/or participation was mentioned.

Following comments on the need for regular maintenance as part of efforts to improve operations and provide better pollution controls, the stakeholders discussed the pros and cons of each of the pollution prevention options. Much of this discussion focused on a proposed ordinance that would limit the amount of phosphorus sold in fertilizers and made available to the general public. It was agreed that this is a complex issue and that it might be more appropriate to create a simplified message that would promote fertilizers that are lower in phosphorus and more environmentally friendly. This discussion was followed by additional comments regarding landscape BMPs in general

After an open discussion on the process and options, a summary of the June 23 meeting with the agricultural interests was presented, along with the actions that the group had agreed upon. This included sending an outreach letter to local nurseries and growers to encourage them to participate in the State's BMP program indicating technical support to be offered by FDACS, and how to proceed in implementing BMPs, and the potential for a cost share program in support of BMP implementation.

Swale maintenance was discussed in some length and then information was presented on the County's NatureScape and Know the Flow training programs as a basis for understanding water management in Broward County.

Finally, stakeholders were asked to identify their level of participation and the availability of reference materials to assist in developing plans was discussed.

Outcome

As an outcome of this meeting, stakeholders agreed to complete Step 3 of the planning process-to develop and approve an action plan prior to the next meeting which was scheduled for August.

Following the presentations, representatives from six municipalities, two special districts, the State, and six associations/organizations expressed their board's commitment to support the objectives of the Broward Everglades Working Group through development and implementation of local pollution prevention action plans.

d. Third Broward Everglades Working Group Meeting

The Third Broward Everglades Working Group meeting was held on August 20, 2004 from 8:30 a.m. to 12:00 p.m. at the Central Broward Water Control District in Hollywood. It was noted that seven stakeholders had passed resolutions to date in support of the Working Group. Other stakeholders voiced their support as well.

Objectives

The objective of the third Broward Everglades Working Group meeting was to provide an informal review and discussion of the current pollution prevention/reduction activities being employed by various stakeholders as well as any additional options being considered for implementation.

Presentations

The meeting started with a presentation and review of the issue and the Working Group's activities to date. Presentations were then made by several participants including the Central Broward Water Control District (CBWCD), South Broward Drainage District (SBDD), and the Town of Davie to discuss the activities that each of these entities were undertaking to reduce pollution.

Following a commitment by the District Manager to the Working Group and in reducing phosphorus within the CBWCD basin, the CBWCD's outreach coordinator presented an overview of the District's outreach efforts, followed by a presentation by CBWCD's engineer which summarized the District's structural BMPs and capital improvement plans.

The SBDD Manager provided an overview of their stormwater system and how it is being managed. A discussion of their \$3.3 million capital improvement plan to retain a greater amount of water within their canal system was presented along with the District's water quality sampling program. The SBDD's engineer then

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discussed specific areas within the District where there were continuing water quality concerns and how they intended to address the problems in these areas.

The Town of Davie discussed their \$1.2 million project for structural BMP improvements and the proposed town-wide stormwater maintenance program. The Town's Urban Forester then presented some ideas that the Town could consider to address pollution reduction.

Additional presentations were made by the City of Pembroke Pines, the Florida Department of Agriculture and Consumer Services, and the Florida Nursery, Growers and Landscape Association on their pollution reduction activities.

Discussion

Discussion items included the possibility of implementing monitoring of tertiary drainage systems. The suggestion was made to develop a monitoring plan and establish a monitoring subcommittee. Additional discussions regarding the nursery and equine communities contribution to the phosphorus problem, quick release versus slow release fertilizers, and stormwater retention and settling of sediments. Concern was expressed about the re-suspension of phosphorus in water management systems and the potential for continued pollution.

Outcome

The outcome of this third meeting was to provide stakeholders with an overview of actions that were being implemented by various entities to address pollution and some possible suggestions for additional actions.

e. Fourth Broward Everglades Working Group Meeting

The Fourth Broward Everglades Working Group was held on October 8, 2004 from 8:30 a.m. to 12:00 p.m. at the Weston Community Center.

Objective

The objective of the fourth Broward Everglades Working Group was to provide informal presentations and discussion of the pollution prevention/reduction activities currently being employed by the municipalities located in the Everglades Stormwater Program Basins, as well as additional options for consideration for implementation.

Presentations

Broward County's Vice Mayor Kristin Jacobs discussed the importance of moving forward towards sustainability and emphasized the need for community-wide participation in pollution reduction activities. She described the NatureScape

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Broward Program as one strategy for local action in a community-wide pollution reduction program and called on the stakeholders to harness their energies to turn the County's environmental thought processes around. The County's Water Resources Division staff gave a review of progress to date and discussed the next steps, which would include implementing and promoting individual action plans. Municipalities were urged to begin implementing their action plans and to submit them to the County by the end of the year. It was indicated that the County would also work with the SFWMD and individual stakeholders to look at additional opportunities for improving water quality monitoring programs.

Following this, informal presentations were made by the City of Pembroke Pines, City of Cooper City, City of Sunrise, City of Weston, Town of Davie, and Town of Southwest Ranches.

The Mayor of Pembroke Pines indicated that it has adopted a resolution supporting the working group and highlighted numerous municipal initiatives that promote water quality and conservation.

Cooper City representatives presented information indicating that the City has also adopted a resolution of support and is actively implementing landscape BMPs.

The City of Weston indicated that it has adopted several ordinances in support of water quality and conservation and actively practices NatureScape principles.

Town of Davie representatives presented information on their progress on implementing structural changes to their stormwater drainage system through projects which prevent direct discharge to the C-11 Canal. Davie representatives also presented information on their landscape BMPs and proposed projects to provide further education and outreach.

The City of Sunrise representative presented information on their North New River canal monitoring program and suggested how they could further support the Broward Everglades Working Group efforts.

A Councilman from the Town of Southwest Ranches presented information on how the town was supporting the Working Group, including its active involvement in development of equestrian BMPs.

Discussion

Following these presentations, an open discussion was held. Topics discussed included the impacts of golf courses on water quality, the lawsuit filed by the Miccosukee Tribe of Indians of Florida relating to operation of the S-9 pump station, and the progress being made to develop equine and nursery BMPs. It

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was noted that a new state-funded Mobile Irrigation Lab was being set up to work directly with nurseries in Broward County.

Outcome

The outcome of the Fourth Broward Everglades Working Group meeting was that all participants were encouraged that they were an important part of a larger effort and that their actions could positively contribute to addressing restoration of the Everglades.

Next steps were then discussed. It was agreed that:

- An Action Plan would be generated to include individual stakeholder commitments;
- Milestones would be established; and
- A monitoring plan would be incorporated to check progress.

f. Fifth Meeting of the Broward Everglades Working Group

The fifth meeting of the Broward Everglades Working Group was held on September 23, 2005 at the Central Broward Water Control District headquarters.

Objective

The objective of this meeting was to review the goals and objectives of the Broward Everglades Working Group in support of water quality improvements in the C-11 West Basin, present a draft report on various pollution reduction actions to be implemented by stakeholder groups in the C-11 West Basin, and provide an update on the activities of the SFWMD and nursery industry in support of the goals of the Working Group.

Presentations

Given the length of time between this meeting and the previous meeting, the first two presentations by Broward County EPD were meant to provide background information. The first presentation was a legislative refresher on the history of the Broward Everglades Working Group. Following this, there was a review of the group's goals and objectives.

The third presentation provided an overview of the draft C-11 West Basin Pollution Reduction Action Plan that had been developed and identified the items stakeholders still needed to provide in order to produce a final draft document.

The SFWMD then presented an update on their pollution reduction activities, including their new outreach efforts.

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The fifth presentation by David Legg from Natural Resources Consulting Services provided an update on the Nursery BMP Grant Program. Mr. Legg discussed how the program works, the services that are provided, and progress to date.

The final presentation by Dr. Jurado of Broward County EPD covered BMP effectiveness and water quality monitoring.

Discussion

Following these presentations, an open discussion was held. Topics discussed included suggestions about how to improve water quality collectively and how various stakeholders may want to consider additional measures for implementation. Updates on landscape BMPs were also presented by the TruGreen Florida Turf Grass Association. Stakeholders were encouraged to coordinate new water quality projects with others in order to present a joint effort for purposes of seeking funding from the Legislature.

Outcome

The outcome of the Fifth Broward Everglades Working Group meeting was that participants were updated on the progress being made by the various stakeholders to address pollution in the C-11 West Basin. Stakeholders were asked to prepare updates for presentation at the next meeting to be held in November.

g. Sixth Meeting of the Broward Everglades Working Group

The sixth meeting of the Broward Everglades Working Group was held on December 16, 2005 at the Central Broward Water Control District headquarters.

Objective

The objective of this meeting was to review the ongoing and proposed actions of the Broward Everglades Working Group members in support of water quality improvements in the C-11 West Basin, and to discuss further direction.

Presentations

Following introductory remarks, there was a presentation on the second draft of the C-11 West Basin Pollution Reduction Action Plan, which had been prepared to reflect updated information and comments received on the earlier draft document. Following this, individual stakeholders provided updates on their activities.

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Skip Keibler of the City of Pembroke Pines provided copies of a bound document addressing the ways in which the City was supporting pollution reduction efforts. Of particular interest were plans to incorporate additional outreach activities within the City's charter schools.

The next presentation by Augustin Maristany and Constance Ruppender from the Central Broward Water Control District provided a brief overview of the recent activities of the district with respect to capital improvement projects and public outreach efforts. The presentation was enhanced by a number of historic photographs of early Broward County drainage projects. Mr. Maristany discussed the status of a number of sump projects being constructed in conjunction with canal work and efforts in encouraging and working with developers to create wetlands which could provide additional water quality treatment. Ms. Ruppender presented information regarding outreach efforts in the schools and through various media.

Bruce Bernard of the Town of Davie presented nine action items currently being focused on. Emphasis was on the Town's efforts to retrofit canal outfalls with an overflow valve. A few of the stormwater management projects were being undertaken in partnership with the CBWCD. Davie has its own stormwater maintenance crew. Mr. Bernard provided an update on the activities of the landscaping division, as well as outreach. He indicated that the town is looking into developing wetlands, including the Van Kirk site which will not only serve as a water quality treatment wetland providing water quality treatment, but will house a nature center as well. The Town has passed a bond issue to create additional wetlands in parks within its jurisdiction and is looking to revise the landscaping section of their development code.

Councilman Maines from the Town of Southwest Ranches reviewed the various actions being undertaken throughout the community including public education, and maintenance and construction of stormwater systems. Through the town newsletter, various information on water quality is being provided to the residents. Design work is underway for various parks throughout the town, which will include native plants, wetlands, and water-saving devices.

The final presentation by Brad Kaine from Weston detailed the various efforts that the City has undertaken to ensure that City landscapers are properly educating and implementing landscaping BMPs. Mr. Kaine provided an update on the City's culvert inspection, maintenance, and prevention program and stormdrain maintenance program. He then discussed other outreach efforts, including an ambitious program to mark and number all of the City's catch basins.

Discussion

Following these presentations, an open discussion was held. Topics discussed included the possible implications of hurricanes with respect to promoting changes in landscape ordinances. The information shared would be included in the final draft of the C-11 West Basin Pollution Reduction Action Plan which would then be routed through internal EPD review. The possibility of producing a separate “Executive Summary” document was discussed. Information on any new monitoring efforts was also requested.

Outcome

The outcome of the Sixth Broward Everglades Working Group meeting was that participants were provided updates on the progress being made by the various stakeholders to address pollution in the C-11 West Basin. It was suggested that meetings should be every three or four months and that when the group reconvened it should look at the final plan and review the results of monitoring. It was suggested that the group reconvene in late March 2006.

h. Summary

The Broward Everglades Working Group was established in response to the County’s recommendations to play a proactive role in developing a basin-wide pollution prevention plan to address phosphorus source controls in the C-11 West Basin and the other ESP basins in Broward County. Through a series of meetings, the stakeholders, including professional water managers, municipalities, industry, special interests, and others shared their concerns and experiences in addressing phosphorus pollution. Each has worked to develop individual strategies, tailored to their specific problems and jurisdictions. These action strategies are discussed in Section IV of this Action Plan.

APPENDIX B: RESOLUTIONS OF SUPPORT

Attached are the resolutions that were passed by Broward Everglades Working Group partners in support of the Working Group.

1

**CENTRAL BROWARD WATER CONTROL DISTRICT
RESOLUTION NO. 04-04**

**RESOLUTION OF THE CENTRAL BROWARD WATER CONTROL DISTRICT
REAFFIRMING ITS COMMITMENT TO RESTORATION OF THE EVERGLADES,
RECOGNIZING THE IMPORTANCE OF IMPROVING WATER QUALITY, AND
SUPPORTING PARTICIPATION IN THE BROWARD EVERGLADES WORKING
GROUP, PROVIDING FOR SEVERABILITY,
PROVIDING FOR AN EFFECTIVE DATE**

WHEREAS, the Central Broward Water Control District is an independent special district created by Florida statute and is a political subdivision of the State of Florida; and,

WHEREAS, the Central Broward Water Control District (hereinafter "District") has been providing flood control, drainage, water regulation and other important environmental services to the citizens of Broward County, Florida, since 1917; and

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage, one of the world's most significant, yet imperiled, ecosystems; and,

WHEREAS, the District is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is a key to restoring the Everglades; and

WHEREAS, phosphorus pollution discharged to the Everglades is one of the primary causes of Everglades degradation; and

WHEREAS, in 1994, the Florida Legislature passed the Everglades Forever Act which set into action a plan for meeting the proposed water quality standard of 10 parts per billion phosphorus for waters discharged to the Everglades by the year 2006; and

WHEREAS, in 2003, the State of Florida revised the 1994 Everglades Forever Act to establish a process (the "Long-Term Plan") and a funding source to improve water quality entering the Everglades by 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge to the Everglades including the C-11 West Basin, the North New River Basin and the North Springs Improvement District; and

WHEREAS, The South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, water management districts and the public; and

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing municipalities, water management

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authorities, industry, and special interest groups, Broward County and the South Florida Water Management District; and

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further efforts to restore the Everglades; and

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a Comprehensive Basin-wide Pollution Prevention Plan that may include voluntary best management practices, public outreach and training and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration and the ability to improve water quality to comply with State law by 2006 can be realized only through the participation of local leaders and stakeholders as envisioned in the Long-Term Plan; and

WHEREAS, the District has a history of support of efforts to restore the Everglades; and

WHEREAS, the District supports involvement and participation of local governments and stakeholders to restore the Everglades; and

WHEREAS, the District supports the opportunity to participate in the Broward Everglades Working Group to achieve the goal of meeting state water quality standards by 2006,

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF COMMISSIONERS OF THE CENTRAL BROWARD WATER CONTROL DISTRICT AS FOLLOWS:

1. The District affirms its recognition and support of Everglades restoration and of the goals of the Broward Everglades Working Group.
2. The District will commit to participate in the Broward Everglades Working Group by assisting the group in setting and achieving objectives of the Working Group in accordance with the objectives set forth in the Everglades Forever Act of 1994 and 2003.
3. The District will give careful consideration to actions it can take to realize the goals of the Everglades Forever Act of 1994 and 2003.
4. If any one or more of the provisions of this Resolution shall be held contrary to any express provision of law or contrary to the policy of express law, though not expressly prohibited, or against public policy, or shall for any reason whatsoever be held invalid, then such provisions shall be null and void and shall be separate from the remaining provisions and shall in no way affect the validity of all other provisions of this Resolution.
5. This Resolution shall become effective immediately upon passage.

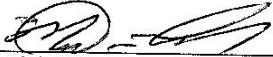
C-11 West Basin Pollution Reduction Action Plan

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ADOPTED by the Central Broward Water Control District Board of Commissioners this
23rd day of June, 2004

Attest:

CENTRAL BROWARD WATER
CONTROL DISTRICT


Michael Crowley, Secretary

By:

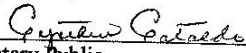

Cris Fardelmann, Chair

STATE OF FLORIDA
COUNTY OF BROWARD

I HEREBY CERTIFY that on this day, before me, an officer duly qualified to take acknowledgments, personally appeared Cris Fardelmann and Michael Crowley, as Chair and Secretary, respectively, of the Central Broward Water Control District, to me known as the persons who executed the foregoing Resolution as "District" and they acknowledged before me that they executed the same.

WITNESS my hand and official seal in the County and State last aforesaid this
23rd day of June, 2004.

My Commission Expires:


Notary Public



Cynthia Cataldo
MY COMMISSION # DD260706 EXPIRES
January 24, 2008
BONDED THROUGH TROY FAIR INSURANCE, INC.

C-11 West Basin Pollution Reduction Action Plan

04/10/2006 08:26 FAX 854+434+5098

002/004

RESOLUTION NO. 2884-02-07

A RESOLUTION OF THE CITY OF COOPER CITY, FLORIDA, REAFFIRMING ITS COMMITMENT TO RESTORATION OF THE EVERGLADES, RECOGNIZING THE IMPORTANCE OF IMPROVING WATER QUALITY, AND SUPPORTING THE OPPORTUNITY TO PARTICIPATE IN THE BROWARD EVERGLADES WORKING GROUP.

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage and is recognized as one of the world's most significant yet imperiled ecosystems; and

WHEREAS, two-thirds of Broward County is Everglades and restoration of the Everglades will impact the economy, environment and water supply of Broward County residents; and

WHEREAS, the City of Cooper City is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is a key to restore the Everglades; and

WHEREAS, phosphorus pollution discharged to the Everglades is one of the primary causes of Everglades degradation; and

WHEREAS, in 1994 the Florida Legislature passed the *Everglades Forever Act* which set into action a plan for meeting the proposed water quality standard of 10 parts per billion phosphorus for waters discharged to the Everglades by the year 2006; and

WHEREAS, in 2003 the State of Florida revised the 1994 *Everglades Forever Act* to establish a process (the Long-Term Plan) and a funding source to improve water quality entering the Everglades by 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge to the Everglades (the C-11 West Basin, the North New River Basin and the North Springs Improvement District); and

WHEREAS, the South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, water management districts and the public; and

C-11 West Basin Pollution Reduction Action Plan

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003/004

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing the municipalities, water management authorities, industry, and special interest groups, Broward County and the South Florida Water Management District; and

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further the efforts to restore the Everglades; and

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a Comprehensive Basin-wide Pollution Prevention Plan that may include voluntary best management practices, public outreach and training, and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration, the largest ecosystem restoration initiative in the world, and the ability to improve water quality to meet State law by 2006, can only be realized through the coordination and participation of local leaders; and

WHEREAS, the City of Cooper City has a history of support for efforts to restore the Everglades; and

WHEREAS, the City of Cooper City supports the involvement and participation of local governments to restore the Everglades; and

WHEREAS, the City of Cooper City supports the opportunity to participate in the Broward Everglades Working Group to help achieve the goal of meeting state water quality standards by 2006.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF COOPER CITY, FLORIDA:

Section 1: The City of Cooper City recognizes the importance of restoration of the Everglades.

Section 2: The City of Cooper City further recognizes the importance of improving the quality of water discharged to the Everglades.

Section 3: The City of Cooper City will commit to a participatory role in the Broward Everglades Working Group by assisting the working group to set and achieve objectives of the Working Group.

Section 4: The City of Cooper City will give careful consideration to actions the City can take to realize the goals of the Everglades Forever Act.

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004/004

PASSED AND ADOPTED THE 13th DAY OF SEPTEMBER, A.D., 2004.


SUELEN H. FARDELMANN
Mayor

ATTEST:


SUSAN BERNARD
City Clerk

ROLL CALL	
Mayor Fardelmann	YES
Commissioner Roper	YES
Commissioner Estinger	YES
Commissioner Farnum	YES
Commissioner Valenti	YES

C-11 West Basin Pollution Reduction Action Plan

RESOLUTION NO. R-2005-166

A RESOLUTION OF THE TOWN OF DAVIE, FLORIDA, ACKNOWLEDGING THE TOWN'S PARTICIPATION IN THE BROWARD EVERGLADES PROTECTION INITIATIVE AND AUTHORIZING THE IMPLEMENTATION OF THE TOWN'S EVERGLADES PROTECTION ACTION PLAN AS DEVELOPED THROUGH PARTICIPATION IN THIS COLLABORATIVE EFFORT AND PROVIDING FOR AN EFFECTIVE DATE

WHEREAS, the Town Council seeks to collaborate with the South Florida Water Management District, Broward County DEP and sister municipalities in the C-11 canal basin to enact action plans to facilitate Everglades restoration; and

WHEREAS, the Town Council has acknowledged and encouraged efforts to improve the management of storm water through ongoing and planned efforts to upgrade infrastructure; and

WHEREAS, the Town Council desires to adopt landscape best management practices on Town-owned property; and

WHEREAS the Town Council seeks to encourage the adoption of landscape, nursery and manure best management practices on private property,

NOW, THEREFORE, BE IT RESOLVED BY THE TOWN COUNCIL OF THE TOWN OF DAVIE, FLORIDA.

SECTION 1. The Town Council of the Town of Davie does hereby authorize the Town Administrator and/or appropriate staff to continue to implement planned improvements to storm water management infrastructure and to adopt landscape best management practices (BMP's) on all Town-owned and Town-managed properties including parks, trails, open spaces and rights of way;

SECTION 2. The Town Council of the Town of Davie authorizes the Town Administrator and/or appropriate staff to conduct and/or partner with other organizations to conduct needed outreach to encourage the adoption of landscape, nursery and manure management BMP's;

SECTION 3. This resolution shall take effect immediately upon its passage and adoption.

PASSED AND ADOPTED THIS 1st DAY OF June, 2005.

ATTEST:


TOWN CLERK


MAYOR/COUNCIL MEMBER

APPROVED THIS 1st DAY OF June, 2005.

RESOLUTION 2004 - 101

A RESOLUTION OF THE TOWN COUNCIL OF THE TOWN OF SOUTHWEST RANCHES, FLORIDA, REAFFIRMING ITS COMMITMENT TO THE RESTORATION OF THE EVERGLADES AND THE IMPORTANCE OF IMPROVING WATER QUALITY; SUPPORTING THE OPPORTUNITY TO PARTICIPATE IN THE BROWARD EVERGLADES WORKING GROUP; SUPPORTING THE GOALS OF THE EVERGLADES FOREVER ACT; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage and as one of the world's most significant, yet imperiled, ecosystems; and

WHEREAS, two-thirds of Broward County is Everglades and the restoration of the Everglades will positively impact the economy, the environment, and the water supply of Broward County residents; and

WHEREAS, the Town of Southwest Ranches is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is the key to restoring the Everglades; and

WHEREAS, phosphorus pollution discharged into the Everglades is one of the primary causes of Everglades degradation; and

WHEREAS, in 1994, the Florida Legislature passed the Everglades Forever Act which set into action a plan for meeting the proposed water quality standard of 10 parts per billion phosphorus for waters discharged into the Everglades by the year 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge into the Everglades including the C-11 West Basin, the North New River Basin, and the North Springs Improvement District; and

WHEREAS, the South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, the water management districts, and the public; and

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing the

C-11 West Basin Pollution Reduction Action Plan

municipalities, water management authorities, industry, and special interest groups, Broward County and the South Florida Water Management District; and

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further the efforts to restore the Everglades; and

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a Comprehensive Basin-Wide Pollution Prevention Plan that may include voluntary best management practices, public outreach and training, and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration, the largest ecosystem initiative in the world, and the ability to improve water quality to meet State law by 2006 can only be realized through the coordination and participation of local leaders; and

WHEREAS, the Town of Southwest Ranches has a history of supporting efforts to restore the Everglades; and

WHEREAS, the Town of Southwest Ranches supports the involvement and participation of local governments to restore the Everglades; and

WHEREAS, the Town of Southwest Ranches supports the opportunity to participate in the Broward Everglades Working Group to help achieve the goal of meeting state water quality standards by 2006.

NOW, THEREFORE, BE IT RESOLVED by the Town Council of the Town of Southwest Ranches, Florida

Section 1: The above recitals are true and correct and are incorporated herein by reference.

Section 2: The Town Council of the Town of Southwest Ranches, Florida, hereby reaffirms its commitment to the restoration of the Everglades and it recognizes the importance of improving the quality of water discharged to the Everglades.

Section 3: The Town Council hereby supports the opportunity to participate in the Broward Everglades Working Group and to assist the Working Group in setting and achieving its objectives.

C-11 West Basin Pollution Reduction Action Plan

Section 4: The Town Council hereby supports the goals of the Everglades Forever Act and the Town Council will remain cognizant of how the Town's actions may effect the Everglades.

Section 5: This Resolution shall become effective immediately upon its adoption.

PASSED AND ADOPTED by the Town Council of the Town of Southwest Ranches, Florida, this 28th day of July 2004, on a motion by Council Member Don Maines and seconded by Council Member Forest Blanton.

Fink	<u>Y</u>	Ayes	<u>4</u>
Knight	<u>N</u>	Nays	<u>1</u>
Blanton	<u>Y</u>	Absent or	
Maines	<u>Y</u>	Abstaining	<u>0</u>
Nelson	<u>Y</u>		

Mecca Fink, Mayor

ATTEST:

Shari Canada, Town Clerk

Approved as to Form and Correctness:

Gary A. Poliakoff, J.D., Town Attorney

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PROPOSED RESOLUTION NO. 2004-R-35

RESOLUTION NO. 3003

A RESOLUTION OF THE CITY OF PEMBROKE PINES, FLORIDA, REAFFIRMING ITS COMMITMENT TO RESTORATION OF THE EVERGLADES, RECOGNIZING THE IMPORTANCE OF IMPROVING WATER QUALITY, AND SUPPORTING THE OPPORTUNITY TO PARTICIPATE IN THE BROWARD EVERGLADES WORKING GROUP; PROVIDING FOR CONFLICTS; PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage and is recognized as one of the world's most significant yet imperiled ecosystems; and

WHEREAS, two-thirds of the land area of Broward County is within the Everglades; and

WHEREAS, restoration of the Everglades will beneficially impact the economy, environment and water supply of Broward County residents; and

WHEREAS, the City of Pembroke Pines is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is an essential element in the restoration of the Everglades; and

WHEREAS, the City Commission of the City of Pembroke Pines has been informed that phosphorus pollution discharged to the Everglades is one of the primary causes of Everglades degradation; and

WHEREAS, in 1994 the Florida Legislature passed the Everglades Forever Act, which set into action a plan for meeting the proposed water quality

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PROPOSED RESOLUTION NO. 2004-R-35

RESOLUTION NO. 3003

standard of 10 parts per billion phosphorus for waters discharged to the Everglades by the year 2006; and

WHEREAS, in 2003 the State of Florida revised the 1994 Everglades Forever Act to establish a process (the Long-Term Plan) and a funding source to improve water quality entering the Everglades by 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge to the Everglades (the C-11 West Basin, the North New River Basin, and the North Springs Improvement District); and

WHEREAS, the South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, water management districts, and the public; and

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing the municipalities, water management authorities, industry, special interest groups, Broward County, and the South Florida Water Management District; and

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further the efforts to restore the Everglades; and

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a Comprehensive Basin-wide Pollution Prevention Plan that may include voluntary best management

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PROPOSED RESOLUTION NO. 2004-R-35

RESOLUTION NO. 3003

practices, public outreach and training, and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration, the largest ecosystem restoration initiative in the world, and the ability to improve water quality to meet State standards by 2006, can only be realized through the coordination and participation of local leaders; and

WHEREAS, the City of Pembroke Pines has historically supported efforts to restore the Everglades; and

WHEREAS, the City Commission of the City of Pembroke Pines supports the involvement and participation of local governments to restore the Everglades; and

WHEREAS, the City Commission of the City of Pembroke Pines finds it to be in the best interest of the citizens and residents of the City of Pembroke Pines to, and does, support the opportunity to participate in the Broward Everglades Working Group to help achieve the goal of meeting state water quality standards by 2006;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COMMISSION OF THE CITY OF PEMBROKE PINES, FLORIDA THAT:

Section 1. The foregoing "WHEREAS" clauses are hereby ratified and confirmed as being true and correct and are hereby made a specific part of this Resolution.

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PROPOSED RESOLUTION NO. 2004-R-35

RESOLUTION NO. 3003

Section 2. The restoration of the Everglades in accordance with the Everglades Forever Act is an important and necessary undertaking to protect the environment and water supply.

Section 3. The water quality of water discharged to the Everglades must be improved.

Section 4. The City of Pembroke Pines will commit to a participatory role in the Broward Everglades Working Group by assisting the working group to set and achieve the objectives of the Working Group

Section 5. The City of Pembroke Pines will give careful consideration to actions the City can take to realize the goals of the Everglades Forever Act.

Section 6. All resolutions or parts of resolutions on in conflict herewith be and the same are hereby repealed to the extent of such conflict.

Section 7. If any clause, section, other part or application of this Resolution is held by any court of competent jurisdiction to be unconstitutional or invalid, in part or application, it shall not affect the validity of the remaining portions or applications of this Resolution.

Section 8. This Resolution shall become effective immediately upon its passage and adoption.

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PROPOSED RESOLUTION NO. 2004-R-35

RESOLUTION NO. 3003

PASSED AND ADOPTED BY THE CITY COMMISSION OF THE CITY OF
PEMBROKE PINES, FLORIDA, THIS 18 DAY OF August, 2004.

CITY OF PEMBROKE PINES, FLORIDA

ATTEST:

Eileen M. Tesh
EILEEN M. TESH, CITY CLERK

By: Ben Fiorendino
MAYOR BEN FIORENDINO

FIORENDINO AYE

ARMSTRONG AYE

CASTILLO AYE

ORTIS AYE

SCHECHTER AYE

APPROVED AS TO FORM:

Julie Blahn 8/18/04
OFFICE OF THE CITY ATTORNEY

C-11 West Basin Pollution Reduction Action Plan

Ratified by BCAS Board at 6/10/04 meeting:

**RESOLUTION OF THE BROWARD COUNTY AUDUBON SOCIETY,
REAFFIRMING ITS COMMITMENT TO RESTORATION OF THE
EVERGLADES, RECOGNIZING THE IMPORTANCE OF IMPROVING
WATER QUALITY, AND SUPPORTING THE OPPORTUNITY TO
PARTICIPATE IN THE BROWARD EVERGLADES WORKING GROUP**

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage and is recognized as one of the world's most significant yet imperiled ecosystems; and

WHEREAS, two-thirds of Broward County is Everglades and restoration of the Everglades will impact the economy, environment and water supply of Broward County residents; and

WHEREAS, the BROWARD COUNTY AUDUBON SOCIETY is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is a key to restore the Everglades; and

WHEREAS, phosphorus pollution discharged to the Everglades is one of the primary causes of Everglades degradation; and

WHEREAS, in 1994 the Florida Legislature passed the *Everglades Forever Act* which set into action a plan for meeting the proposed water quality standard of 10 parts per billion phosphorus for waters discharged to the Everglades by the year 2006; and

WHEREAS, in 2003 the State of Florida revised the 1994 *Everglades Forever Act* to establishes a process (the Long-Term Plan) and a funding source to improve water quality entering the Everglades by 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge to the Everglades (the C-11 West Basin, the North New River Basin and the North Springs Improvement District); and

WHEREAS, the South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, water management districts and the public; and

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing the municipalities, water management authorities, industry, and special interest groups, Broward County and the South Florida Water Management District; and

C-11 West Basin Pollution Reduction Action Plan

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further the efforts to restore the Everglades; and

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a **Comprehensive Basin-wide Pollution Prevention Plan** that may include voluntary best management practices, public outreach and training, and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration, the largest ecosystem restoration initiative in the world, and the ability to improve water quality to meet State law by 2006, can only be realized through the coordination and participation of local leaders; and

WHEREAS, the **BROWARD COUNTY AUDUBON SOCIETY** has a history of support for efforts to restore the Everglades; and

WHEREAS, the **BROWARD COUNTY AUDUBON SOCIETY** supports the involvement and participation of local governments to restore the Everglades; and

WHEREAS, the **BROWARD COUNTY AUDUBON SOCIETY** supports the opportunity to participate in the Broward Everglades Working Group through its appointed representative to help achieve the goal of meeting state water quality standards by 2006; and

NOW, THEREFORE, BE IT RESOLVED BY THE **BROWARD COUNTY AUDUBON SOCIETY**:

Section 1. The **BROWARD COUNTY AUDUBON SOCIETY** recognizes the importance of restoration of the Everglades.

Section 2. The **BROWARD COUNTY AUDUBON SOCIETY** further recognizes the importance of improving the quality of water discharged to the Everglades.

Section 3. The **BROWARD COUNTY AUDUBON SOCIETY** will commit to a participatory role in the Broward Everglades Working Group by assisting the working group to set and achieve objectives of the Working Group

Section 4. The **BROWARD COUNTY AUDUBON SOCIETY** will give careful consideration to actions the city or drainage district, etc. can take to realize the goals of the Everglades Forever Act.

For Broward County Audubon Society:

Barry N. Heimlich, President



**South Florida
Aquatic Plant Management Society**

P.O. Box 491737
Ft. Lauderdale, Florida 33349

Resolution of the SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY reaffirming its commitment to restoration of the Everglades, recognizing the importance of improving water quality and supporting the opportunity to participate in the Broward Everglades Working group.

WHEREAS, the Everglades is recognized as a vital part of Florida's natural heritage and is recognized as one of the world's most significant yet imperiled ecosystems; and

WHEREAS, two-thirds of Broward County is Everglades and restoration of the Everglades will impact the economy, environment and water supply of Broward County residents; and

WHEREAS, the **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** is located within a drainage basin that is part of a water quality initiative to restore the Everglades; and

WHEREAS, improving water quality is a key to restore the Everglades; and

WHEREAS, in 2003 the State of Florida revised the 1994 **Everglades Forever Act** to establishes a process (the Long-Term Plan) and a funding source to improve water quality entering the Everglades by 2006; and

WHEREAS, the Everglades Forever Act of 2003 expanded the 1994 Everglades Forever Act to include those basins in Broward County that discharge to the Everglades (the C-11 West Basin, the North New River Basin and the North Springs Improvement District); and

WHEREAS, the South Florida Water Management District adopted modifications to the Long-Term Plan with specific consideration of Broward County municipalities, water management districts and the public; and

WHEREAS, the Long-Term Plan recommends the creation of a broad-based Working Group in Broward County, with members representing the municipalities, water management authorities, industry, and special interest groups, Broward County and the South Florida Water Management District; and

WHEREAS, participation in the Working Group provides a significant leadership opportunity for local governments to further the efforts to restore the Everglades; and

C-11 West Basin Pollution Reduction Action Plan

WHEREAS, the Broward Everglades Working Group provides the opportunity for collaborative efforts to develop a **Comprehensive Basin-wide Pollution Prevention Plan** that may include voluntary best management practices, public outreach and training, and other efforts beneficial to the local community; and

WHEREAS, the success of Everglades restoration, the largest ecosystem restoration initiative in the world, and the ability to improve water quality to meet State law by 2006, can only be realized through the coordination and participation of local leaders; and

WHEREAS, the **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** has a history of support for efforts to restore the Everglades; and

WHEREAS, the **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** supports the involvement and participation of local governments to restore the Everglades; and

WHEREAS, the **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** supports the opportunity to participate in the Broward Everglades Working Group to help achieve the goal of meeting state water quality standards by 2006;

THEREFORE, BE IT RESOLVED BY **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** of the State of Florida:

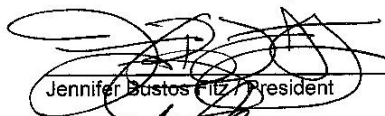
Section 1. The **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** recognizes the importance of restoration of the Everglades.

Section 2. The **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** further recognizes the importance of improving the quality of water discharged to the Everglades.

Section 3. The **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** will commit to a participatory role in the Broward Everglades Working Group by assisting the working group to set and achieve objectives of the Working Group

Section 4. The **SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY** will give careful consideration to actions it can take to realize the goals of the Everglades Forever Act.

SOUTH FLORIDA AQUATIC PLANT MANAGEMENT SOCIETY, INC.


Jennifer Bustos-Fitz / President

6-7-04
Date


Adam Grayson / Secretary

bewg.let.sfapms: