
Project 3 _19 Report

Contact Title Assistant Director

Agency *Broward County Operations Division Water and Wastewater Services*

Program Title <i>Florida Area Coastal Environmental Initiative (FACE)</i>

Project Title Florida Area Coastal Environmental Initiative (FACE)

Survey Submitted

InterviewDate

Responsibilities Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. Utilities must comply with regulations relating to point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches.

Description The Florida Area Coastal Environmental (FACE) Initiative was developed as a long-term program to gather quality controlled measurements of nutrients and to quantify those nutrients for sources at multiple locations in the coastal waters of Southeast Florida. It involves a multi-year study to identify sources, both naturally occurring and anthropogenic, of substances including nutrients and ammonia, to the coastal ocean. This project will help provide the scientific knowledge required, but presently largely lacking, for the identification and application of Best Management Practices.

Location Coastal and adjacent waters of Southeast Florida- specifically areas off the coast of Miami-Dade County, Broward County, the City of Hollywood, the City of Boca Raton, and the City of Delray Beach.

Objective/ Purpose The FACE initiative is intended to extensively measure and quantify a variety of known nutrient sources as well as naturally occurring levels of quantities of interest for comparison with levels of anthropogenic quantities delivered to the coastal ocean via inlets, outfalls and other routes in the Southeast Florida coastal ocean including, but not limited to the impacts of nutrient discharges from canals, ports, beach renourishment and dredging activities, subsurface groundwater discharges, septic tanks, atmospheric deposition, ocean outfalls, and deep ocean upwelling. At this time, only ocean outfalls have been studied, the other nutrient sources have been identified with varying contributions that are yet unknown or understood. Other potential causes of reef impacts that have been suggested but not studied extensively include: biological changes (loss of algae consumers in the food chain), contributions of global warming, weather patterns such as El Nino movement of Gulf waters into the open ocean and the flow of Caribbean waters into the Florida Current.

Contact Title Associate Director

Agency *Miami-Dade Water and Sewer Department*

Program Title	<i>Florida Area Coastal Environmental Initiative (FACE)</i>
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Survey Submitted

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Contact Title Director

Agency *City of Hollywood Public Utilities*

Program Title	<i>Florida Area Coastal Environmental Initiative (FACE)</i>
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Project Title Florida Area Coastal Environmental Initiative (FACE)

Survey Submitted

InterviewDate

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Contact Title Director of Municipal Services

Agency *Town of Lauderdale By the Sea*

Program Title	<i>Portals to the Sea</i>
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Project Title None

Survey Submitted 2/15/2005

InterviewDate

Responsibilities The town is elevating the six beach access points to reduce the water flowing off the street and onto the beach, which flows into the ocean.

Description none

Location none

Objective/ Purpose none

Contact Title Director of Public Works & Environmental Services

Agency *City of Deerfield Beach*

<i>Program Title</i>	<i>none</i>
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Project Title **none**

Survey Submitted 6/14/2007

InterviewDate

Responsibilities none

Description

Location

Objective/ Purpose

Contact Title Director of Public Works, Utilities and Engineering

Agency *City of Hallandale Beach*

<i>Program Title</i>	<i>Beach Revegetation</i>
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Project Title Beach Revegetation Double Dune System
Survey Submitted 4/25/2006
InterviewDate
Responsibilities Reduction of Sand Erosion
Description The double dune system is designed to retain the sand that would wash off in the ocean. The project will use sea oats as the primary erosion control plant. The BSWCD uses BMP's that extend the life of the sand staying on the beach.
Location Hallandale Beach coastline
Objective/ Purpose Reduce sand erosion & protection of sea walls. Fri

Contact Title Domestic Wastewater Licensing Supervisor (P.E.)
Agency *Broward County Environmental Protection Department Water Resources Division*

Program Title <i>Domestic Wastewater Licensing</i>

Project Title Domestic Wastewater Licensing

Survey Submitted 6/21/2007

InterviewDate 7/24/2007

Responsibilities Construction licensing of community wastewater collection systems and the compliance and monitoring of these facilities. Annual Broward County licensing of wastewater treatment plants (16); primary focus is on compliance of plant capacity.

Description The Domestic Wastewater Licensing staff of the WEAL performs county-wide evaluation and licensing of plans for wastewater facility and utilities construction in Broward County. The staff works with Administration and Enforcement staff in the remediation of wastewater spills and incidences that can have an acute impact of the county's water resources. Staff also prepares annual county licenses for the sixteen wastewater treatment plants within Broward County.

Location Wastewater facilities route flows to 16 WWTP's for treatment and disposal.

Objective/ Purpose Preserve and protect the beneficial uses of the County's water resources.

Contact Title East Central Florida Marine Habitat Management Coordinator

Agency *FL Fish and Wildlife Conservation Commission*

Program Title <i>Marine Habitat Management</i>

Project Title **Hydrologic restoration of the North Fork St. Lucie River**

Survey Submitted 3/24/2005

InterviewDate

Responsibilities The Marine Habitat Management unit provides statewide management of marine & estuarine habitat by addressing coordinated conservation protection & restoration needs & provides related information & services to the public.

Description Breaching artificial (dredge) riverbanks to rehydrate floodplain communities and to reconnect historical oxbows; includes feasibility planning using historical mapping and biological monitoring of improved areas.

Location North Fork St. Lucie River, downstream receivers are St. Lucie Estuary, Indian River Lagoon, Atlantic Ocean.

Objective/ Purpose To improve water storage, water filtration (water quality), and wetland function/productivity (plants, fishes, invertebrates, birds, amphibians, reptiles, mammals).

Contact Title Engineer III

Agency *Broward County Environmental Protection Department Water Resources Division*

<i>Program Title</i>	<i>NPDES/Industrial Licensing</i>
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Project Title National Pollutant Discharge Elimination System (storm drain)
Survey Submitted 6/21/2007
InterviewDate 7/24/2007
Responsibilities 1.) Develop and implement BMP's to reduce pollutants going to storm drains. 2.) Inspection and enforcement of illicit discharges.
Description 1.) Stormwater structural control of BMP's; 2.) Surface water regulation in new development & redevelopment areas. 3.) Street sweeping and roadway maintenance 4.) Flood Control 5.) Pesticides, herbicide and fertilizer application BMP's. 6.) Illicit discharge regulation. 7.) Industrial Runoff
Location Broward County located in SE of Florida. Receiving body waters are C-9, C-11, C-12, C-13, C-14, Hillsborough Canals.
Objective/ Purpose To reduce the pollutants entering into storm drain system due to human activities.

Contact Title Engineer IV (P.E.)

Agency *Broward County Environmental Protection Department- Water Resources Division*

Program Title <i>Surface Water Management Licensing</i>

Project Title **Surface Water Management Licensing**

Survey Submitted 6/21/2007

InterviewDate 7/24/2007

Responsibilities The Surface Water Management Licensing staff of the WEAL is responsible for licensing construction and operation of surface water management systems and renewal of operation licenses for surface water management systems in areas outside of the independent drainage districts (both are required under Broward County Code of Ordinances, Chapter 27, Article V). In addition, staff is responsible for State-delegated environmental resource and surface water management permitting, compliance and enforcement under part IV, Ch 373, F.S. and the rules promulgated thereto as set forth in the "Delegation Agreement Among the Florida Department of Environmental Protection, the South Florida Water Management District and the Broward County Board of County Commissioners."

Description The Surface Water Management Licensing staff of the WEAL is responsible for licensing construction and operation of surface water management systems and renewal of operation licenses for surface water management systems in areas outside of the independent drainage districts (both are required under Broward County Code of Ordinances, Chapter 27, Article V). In addition, staff is responsible for State-delegated environmental resource and surface water management permitting, compliance and enforcement under part IV, Ch 373, F.S. and the rules promulgated thereto as set forth in the "Delegation Agreement Among the Florida Department of Environmental Protection, the South Florida Water Management District and the Broward County Board of County Commissioners."

Location Broward County outside of the independent drainage districts.

Objective/ Purpose Preserve and protect the beneficial uses of the County's water resources. Regulatory criteria for surface water management systems serving developments are set to provide adequate flood control (water quantity) and remove pollutants from storm runoff (water quality). Properly designed, constructed, operated, and maintained drainage systems are essential to achieving pollutant removal efficiency and providing the required levels of flood protection for proposed developments. The staff's application review, construction compliance inspections and five year renewal inspections ensure that the criteria are met and continue to be met for the life of the project.

Contact Title Environmental Administrator, Nonpoint Source Management Section

Agency *Florida Department of Environmental Protection*

Program Title <i>Section 319 (h)</i>

Project Title	1.) DEP Contract WM815: Implementation of BMPs for Flatwoods Citrus
Survey Submitted	3/23/2005
InterviewDate	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	The funding requested in this proposal will be used to: 1.) continue citrus BMP implementation and education efforts in the Indian River area which have been ongoing since the spring of 2002 in a 3 year project funded primarily through a Section 319 grant (FDEP Contract No. WM815), and 2.) begin implementation of similar activities in the PRMSB and other flatwoods citrus production areas of Florida. Funds will be used over a 3-year period primarily for salaries and expenses to equip and maintain a team of 3 positions dedicated to BMP implementation in addition to part-time help required to assist in evaluating BMP effectiveness. The Team will provide guidance to growers on effective BMP use, demonstrate BMP practices, provide quality assurance for BMP implementation develop training materials, and conduct training programs for all levels of grove operations (including owners, production managers, foreman, caretakers, and farm laborers). The proposed activities are the logical culmination of the BMP development process, which began in 1998 in the Indian River area and in 2003 in the PRMSB area. The funds will allow the existing BMP Implementation activities to continue without interruption, and allow for rapid expansion programs into the PRMSB and other flatwoods areas in southwest Florida.
Location	The described work will be conducted in citrus groves within the Indian River (Volusia, Brevard, Indian River, St. Lucie, Martin, Okeechobee, and Palm Beach Counties), the Peace River Valley/Manasota Basin (DeSoto, Hardee, Manatee, Sarasota and part of Charlotte county), and other flatwoods citrus production regions in southwest Florida. There are presently about 220,000 acres of citrus in the Indian River (IR) area and 185,000 in the Peace River and Manasota Basins (PRMSB). The USGS Hydrologic Unit Codes for these watersheds are: Peace-03100101, Myakka-03100102, Upper St. Johns-03080101, Vero Beach- 03080203, Northern Okeechobee Inflow-03090102, Everglades- 03090202
Objective/ Purpose	The programs described in this proposal are directed at the development, implementation, and demonstration of water quality/quantity BMPs for citrus groves that are intended to achieve pollution reduction in the receiving water bodies. The BMP effort is focused on achieving environmental goals in partnership with the citrus industry. Full implementation of appropriate BMPs should decrease the off-site effects of citrus production systems on water bodies of the state. Specific objectives of this project are to: Field an expert team focused on providing guidance to growers/managers for BMP implementation in commercial citrus groves. This team will conduct evaluations of grove physical features and production practices and then provide recommendations for changes and improved operation and management. Establish demonstrations of unfamiliar BMPs on commercial sites and conduct evaluations of their effectiveness to reduce off-site impacts of grove operations. Provide educational opportunities (workshops, demonstrations, field days, etc.) to demonstrate and discuss BMPs for all levels within the citrus production system, from upper management to grove laborers. Training materials and programs will be developed and presented in both English and Spanish for laborers. Work with the steering committees and implementation committees to identify new BMPs or improvements to existing BMPs that can result in practical solutions for improving water quality and the sustainability of citrus production. In addition, the Implementation Team will provide information on the status of BMP implementation to interested agencies and the general public.

Project Title 10.) DEP Contract G0047: Town of Ocean Ridge Stormwater Management System

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description Design, construct, and install a stormwater detention pond, two pump stations, and 5 baffle boxes. These improvements are aimed to regulate stormwater discharge to the Lake Worth Lagoon, to trap pollutants prior to discharge to the detention area and to improving water quality through the increased treatment/detention.

Location The town of Ocean Ridge is located in the southeast section of Palm Beach County, Florida. The location of the project is within the southeast portion of the town's limits. The receiving waterbody is the Lake Worth Lagoon.

Objective/ Purpose The objectives of this project include improving the water quality of the Lake Worth Lagoon while also improving the drainage conditions and reducing flooding within the Town of Ocean Ridge.

Project Title 11.) DEP Contract WM799: Tropic Vista Stormwater Improvement Project

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description The project improves water quality by capturing stormwater runoff from the Tropic Vista neighborhood (350 single-family homes) in a stormwater retention area this is being constructed in this project. A drainage system is being constructed in the neighborhood to route water to the retention area.

Location The project is located in Martin County along the border of Jonathon Dickinson State Park, 500 feet from the NW Fork of the Loxahatchee River, a federally designated Wild and Scenic River.

Objective/ Purpose Improve water quality from stormwater runoff entering the NW Fork of the Loxahatchee River.

Project Title 12.) DEP Contract WM800: Salerno Creek Stormwater Retrofit

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description The project improves water quality by capturing stormwater runoff in a retention area located within a stormwater utility retrofit park. The retention area will capture and treat water (3/4 of an inch) from a 780-acre watershed (primarily the City of Stuart).

Location The project is located in the City of Stuart in Martin County a quarter of a mile from Manatee Pocket, which is within the Indian River Lagoon.

Objective/ Purpose Improve water quality from stormwater runoff entering Mantee Pocket and Indian River Lagoon.

Project Title	2.) DEP Contract G0041: Best Management Practices for Florida's Green Industries.
Survey Submitted	3/23/2005
InterviewDate	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	The educational component of the BMPs for Florida's Green Industries is necessary to provide training to all segments of the lawn and landscape industry in use of the BMP manual to protect water quality. This will be done through the following methods: Training modules were implemented around the major emphasis in the BMP manual (irrigation, fertility, other cultural, pest management). Powerpoint presentations have been the primary mode of delivery at the time of training; participants also receive a CD-ROM version and a workbook. The manual and an additional summary booklet meant to be carried in the service vehicle, in both English and Spanish versions, is being distributed to all 67 Florida County Extension offices and to major industry participants. In addition, an online training program will be implemented as part of this project extension beyond the first two years. Initial outlets for training have consisted of the following: FTGA Educational Conferences, CPCO Conferences, FPMA Conferences, Lesco Service Centers, Tru-Green Chem Lawn facilities, County Extension Service activities. The "train-the-trainer" component began prior to industry outreach and included a 6 hour session in more than 15 locations statewide. Trainers consisted of BMP steering committee members, BMP committee chair and other interested parties, Institute of Food and Agricultural Sciences (IFAS) Extension, Water Management District personnel, etc. Following training, the trainees are responsible for extending the information throughout the state through the various venues listed above.
Location	Statewide
Objective/ Purpose	Task 1.) Develop committee and assign specific duties toward producing modules. An educational committee will be formed with representatives from industry, IFAS, and water management districts. The four sections of the training module (fertilization, cultural, irrigation, and pesticide) will be assigned to various sub-committees for development. A series of meetings will take place from August through December to accomplish module development (completed). Task 2.) Develop certificate program. A certificate of completion recognition program will be included to provide a means of distinguishing those companies and individuals who have completed training (completed). Task 3.) Develop timeline for "train-the-trainer" sessions. Train the trainer sessions began in January 2003 and will continue through April 2007. These will be administered as IFAS In-Service Trainings in several locations statewide, as well as at corporate offices, and other sites as appropriate for the audience. In addition to county extension faculty, industry, and government staff may also participate to develop their own trainers. Task 4.) Conduct train-the-trainer sessions and conduct additional training statewide. The agents and industry representatives who receive training will then administer their industry training programs in the future. Task 5.) Conduct statewide training to certify at least 15,000 lawn and landscape industry workers. Although more than 30,000 manuals have been distributed at training sessions, trade shows and other venues, only about 4,500 people have actually obtained certification in the first 18 months of the program. Four-hour training sessions will continue to be conducted at the county extension level and in-house at larger pest control companies. Targeted groups include pest control operators, lawn and landscape maintenance operators, and others associated with the green industry. Task 6.) Plan for reaching more workers. Expand the green industry audience to include such groups as irrigation personnel, arborists, retail centers, vendors, and policy makers. Concentrate on recruiting other segments of the industry in year 2-5 to reach as many people working in the green industry as possible. The training materials will be translated into Spanish and statewide training will be conducted in Spanish using bilingual extension agents as needed to reach non-English speaking workers. The number of training sessions will be determined depending on industry need. Task 7.) Online Training. Coordinate and subcontract with the Green Industries Institute through North Florida Community College to restructure the Green Industry BMP training program for delivery online and to conduct online training in the Green Industries for a period of two years at no charge to the trainee. The program shall be designed to provide at least 4 CEU's approved by the Florida Department of Agriculture and Consumer Services for pesticide licensing and shall provide training certification.

Project Title	3.) DEP FY05 Section 319 contract XXXXX: Implementation of BMPs for Florida Vegetable & Row Crops
Survey Submitted	3/23/2005
InterviewDate	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	The programs described in this proposal are directed at the development, implementation, and demonstration of water quality/quantity BMPs for vegetable and row crop producers that are intended to achieve pollution reduction in the receiving water bodies. Full implementation of appropriate BMPs should decrease the off-site effects of vegetable production systems on water bodies of the state. The funding requested in this proposal will be used to begin BMP implementation and education efforts in the North Florida, Dad County, East Coast, and Southwest Florida production areas. Fund will be used over a 3 year period primarily for salaries and expenses to equip and maintain a team of 3 full-time positions dedicated to BMP implementation in addition to part time help required to assist in evaluating BMP effectiveness. The Team will provide guidance to growers on effective BMP selected and use, demonstrate BMP practices, provide quality assurance for BMP implementation, develop training materials, and conduct training programs for all levels of farm operations (including owners, production managers, foreman, and farm laborers).
Location	The BMP implementation and demonstration activities will be conducted primarily in the following locations: South Florida (Dade County), Southwest Florida (Collier to Manatee County), East Coast: Palm Beach, Martin, St. Lucie; North Florida: Suwannee and Sante Fe Basins
Objective/ Purpose	1.) Field a BMP implementation team focused on providing guidance to growers/managers for BMP implementation in commercial farms. This team will conduct evaluations of physical features and production practices and then provide recommendations for changes and improved operation and management. 2.) Through partnerships, establish demonstrations of unfamiliar BMPs on commercial sites and conduct evaluations of their effectiveness to reduce off-site impacts of farming operations. 3.) Provide educational opportunities (workshops, demonstrations, field days, etc.) to demonstrate and discuss BMPs for all levels within the production system, from upper management to laborers. Training materials and programs will be developed and presented in both English and Spanish for laborers. 4.) Work with the steering committees and implementation committees to identify new BMPs or improvements to existing BMPs that can result in practical solutions for improving water quality and the sustainability of vegetable production. In addition, the Implementation Team will provide information on the status of BMP implementation to interested agencies and the general public. 5.) Review pertinent research relating to BMPs and develop summaries in formats suitable for dissemination to growers.

Project Title	4.) DEP Contract G0034: Old Palm City Water Quality Improvement Project
Survey Submitted	3/23/2005
Interview Date	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	Stormwater runoff is drained from Old Palm City into the South Fork of the St. Lucie River via a road swale system with scattered catch basins and culverts at road intersections. The Old Palm City watershed area consists of approximately 310 acres of mostly single family residential development bound to the east by the South Fork of the St. Lucie River, to the north by SR 714 (also known locally as Martin Downs Blvd.), to the south by the All American drainage ditch and to the west by Mapp Road. This project involves the construction of a 2-acre detention area and the creation of a 1.5 acre wetland area in Old Palm City for the treatment of stormwater flowing from west to east into the South Fork of the St. Lucie River and into the Indian River Lagoon. The required volume of water quality by SFWMD and Martin County for residential developments is the greater of the first inch of rainfall over the entire site minus lake area or 2.5 inches that fall in the total impervious area of the basin. For the 30th Street pond project the total runoff contributing area into the pond is 39.7 acres. The contributing area has an estimated total impervious area of 12.35 acres. The existing lake has an area of 0.64 acres.
Location	Old Palm City is located in the northwest portion of Martin County. The longitude of the project site is 80 degrees East, 16 minutes, and 15 seconds. The latitude of the project site is 27 degrees North, 10 minutes, 0 seconds. The site is located in Section 17, Township 38 South, Range 41 East. Stormwater runoff is drained from Old Palm City into the South Fork of the St. Lucie River via a road swale system with scattered catch basins and culverts at road intersections.
Objective/ Purpose	This project is listed as a project for completion in Martin County's Stormwater Management Program & Assessment Rate Structure, Final Report, 1994. This project is included as part of Martin County's 10-year Capital Improvement Plan. This project is generally listed in the Indian River Lagoon National Estuary Program's Comprehensive Conservation and Management Plan, revised in 1998 under the Freshwater and Stormwater Discharge Section. Contributions from local governments, like Martin County, in Action FSD-13 to be completed during the next two years are estimated at \$6,000,000 in funding. Completion of the Old Palm City project will address stormwater improvements and directly support the IRLCCMP, Action FSD-13, "Upgrade existing stormwater drainage systems". It is also listed as a priority objective in the 1994 Indian River Lagoon Surface Water Improvement and Management Plan (SWIM). The drainage/watershed basin for this project is a highly urbanized area that was developed prior to water quality and flood protection requirements. The basin discharges untreated stormwater into the St. Lucie River, and area of degraded water quality that then flows into the IRL. The primary objective of the project is to provide water quality treatment for the untreated stormwater discharges to the River. The water quality treatment will also allow flood protection improvements in areas where needed, but that can not meet the water quality requirements necessary for flood protection improvements. Martin County identified the five objectives to be achieved by the Old Palm City Quality Improvement Project including: Provision of/or maintenance of existing levels of flood protection for residences & roads, reduction of water quality impacts the receiving water bodies (St. Lucie River and Indian River Lagoon), enhancement of wetland habitats, the plan must be permissible by federal, state, and local jurisdictional agencies, and the plan must be cost effective.

Project Title	5.) DEP Contract WM754: Everglades Agricultural Area BMPs for Reducing Particulate Phosphorus Transport
Survey Submitted	3/23/2005
InterviewDate	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	The research evaluates the effectiveness of implemented phosphorus load reduction BMPs in the Everglades Agricultural Area. The research also includes the development of management practices to reduce particulate phosphorus transport off the farm. Particulate phosphorus constitutes 20-70% of total phosphorus loads off the EAA farms. Growers in the EAA are mandated by law to implement BMPs to reduce phosphorus discharge off their farms. The general categories of BMPs originally developed by the BMP program at the University of Florida, the South Florida Water Management District and the EAA growers are: 1.) water management practices; 2.) nutrient control practices; 3.) particulate matter and sediment controls. The research program has monitored the progress of BMPs on ten farms in the EAA that are representative of the soils and cropping systems of the EAA since 1992. In addition, the program has included the evaluation of potential additional BMPs, consultation to growers in matter in farm and EAA drainage canals.
Location	The Everglades Agricultural area located in southern Florida, south east of Lake Okeechobee. The Everglades Agricultural Area basin ultimately discharges to the Everglades Protection Area which includes the water conservation areas as well as the Everglades National Park. Discharge from EAA farms though goes first to storm treatment areas for further reduction of phosphorus loads before being discharged into the Everglades Protection Area.
Objective/ Purpose	The major purpose of this project is to develop, implement, and test the efficacy of agricultural Best Management Practices for the reduction of phosphorus loads from farms in the Everglades Agricultural Area (EAA) in south Florida. More specific objectives include: 1.) To demonstrate the long-term viability of on-farm BMPs, including improvements on the current BMPs that are already implemented. 2.) To aid in the enhancement of the uniformity of BMP implementation across the Everglades Agricultural Area through demonstration and educational programs. 3.) To identify the P sources, P content, and P cycling characteristics of the main farm canal floating aquatic plants, sediments, and suspended particulate matter and to demonstrate how they can be used to further reduce farm-level P loading. 4.) To demonstrate farm water management systems that could lead to greater levels of particulate matter retention.

Project Title 6.) DEP Contract G0040: Evaluation of full scale Stormwater Treatment Area Enhancements

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description The Everglades Forever Act requires that water released from the Everglades Agricultural Area and other sources into the Everglades Protection Area meet an interim target for total phosphorus of 50ppb. Over 41,000 acres of Stormwater Treatment Areas (STAs) were designed and constructed to reduce concentrations of TP in waters discharged to the EPA to comply with with interim phosphorus target of 50 ppb. This project will enhance the phosphorus removal performance of two of these STAs.; hence implementation of this project will contribute to the reduction of the TP load delivered to the EPA.is

Location STA-1W and STA-3/4 located in Palm Beach County, Florida, Everglades Watershed

Objective/ Purpose Demonstrate and document the ability of a limerock berm to contribute to improved treatment effectiveness, and demonstrate and document effective means of converting emergent vegetation treatment effectiveness, and demonstrate and document effective means of converting emergent vegetation treatment cells to Submerged Aquatic Vegetation (SAV) treatment cells.

Project Title	7.) DEP Contract G0090: Kitching Creek/Flora Avenue Water Quality Improvement Project
Survey Submitted	3/23/2005
InterviewDate	
Responsibilities	The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.
Description	The Kitching Creek/Flora Avenue Restoration Project (the Project) is located in southern Martin County and is designed to improve water quality and quantity in the Flora Avenue area of the larger watershed. The historic Flows that fed Kitching Creek provided major freshwater contributions to the North and northwest Fork of the Loxahatchee River. The headwaters of Kitching Creek and the North Fork are located south of Cove Road, east of the South Fork of the St. Lucie River and west of U.S. Highway 1 in Martin County. The proposed improvements include the design and construction of a stormwater treatment area (STA) and an attendant flow-through marsh to trap sediment and remove nutrients, associated conveyance piping and ditch improvements for Flora Avenue, and culvert improvements in the FPL transmission easement service road west of Flora Avenue. This road forms a dike that bisect the basin and impedes the historic drainage flows in this area of the Kitching Creek Basin. Currently there are limited stormwater treatment practices employed in this drainage basin that consist primarily of conveyance swales and wetlands. These proposed improvements will enhance the wetlands in the area, provide water quality treatment and water quantity attenuation for the area. Surface water flows in the watershed have been impacted and redirected by land development such as roads, commercial, residential and agricultural activities. This project proposes to increase flows and improve water quality by redirecting stormwater flows into the STA and flow-through marsh that will then release treated water into JDP and ultimately to the North Fork of the Loxahatchee River. Recommended improvements for this project include the installation of four (4) 24 inches culverts through the Florida Power and Light service road, construction of a four-acre STA area and attendant flow-through marsh along the west side of Flora Avenue, installation of two 2 feet by 5 feet box culverts Flora Avenue, establishment of roadside ditches along the west side of Flora Avenue to direct flows to the STA, improvement of the roadside ditch on the east side of Flora Avenue, and elevating 2000 feet of roadway for flood protection. The STA will be designed with sediment sumps and littoral areas to maximize pollutant removal. This project will be one component of the overall restoration plan for Kitching Creek. Wetland rehydration will be provided for wetland southeast of Flora Avenue via the proposed 2 feet by 5 feet box culverts. Flora Ave., running north to south, acts as a dam that blocks historic northwest to southeast wetland flow. Choosing a strategic location for the culvert will allow flow to move through a roadside ditch and through a firebreak in JDP to the wetlands on the east side of Flora Ave. that provide flow to the Loxahatchee River. The STA and flow-through marsh will be constructed in an area that was until recently an outparcel of JDP. Martin County has worked with the Park and the Florida Department of Environmental Protection Division of State Lands to work out issues related to easements and/or ownership of the land required for treatment facility construction.
Location	The project site is partially located in the southern portion of Gomez Grant, and the balance of the project is within Sections 28 & 33, Township 39S, Range 42E in southern Martin County, Florida. The project area boundaries are Bridge Road (CR 708) on the north, Flora Avenue to the east, and various residential/commercial properties and Jonathon Dickson State Park to the south and west. The contributing drainage basin for the project study area is approximately 221 acres. The design outfall will enhance flows to the North Fork of the Loxahatchee River.
Objective/ Purpose	The purpose of the Kitching Creek/Flora Avenue Water Quality Project is threefold: 1.) Improve water quality treatment in the basin. 2.) Enhance freshwater flow to the Loxahatchee River, 3.) Enhance the flood protection level of service (LOS) for Flora Avenue. This project is part of an on-going effort by Martin County to improve water quality in the Loxahatchee River System. With funding from the Jonathon Dickinson State Park (JDP), plans have been created that will treat the 221-acre contributing basin and, with the use of outparcels from the Park, stormwater will be routed to a wet detention facility with an attendant flow-through marsh providing additional treatment prior to discharge. As a retrofit project, the proposed improvements attempt to restore the historic drainage patterns while improving the current level of service criteria for flood protection and discharge attenuation. More importantly, a significant increase in water quality benefit is gained with the addition of the STA and the wet swale detention areas and the wetland hydro-periods will also be re-established to the natural patterns of the North Fork of the Loxahatchee River.

Project Title 8.) DEP Contract G0097: Enhancing Sediment Phosphorus Storage in Impacted Regions of the Everglades Protection Ar

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description The historical discharge of phosphorus to the northern Everglades has increased sediment phosphorus, and favored the growth of cattail. External phosphorus loads are being curtailed, however restoration cannot be accomplished until sediment phosphorus loads are reduced and reflux has ceased. This project determines, for the first time, in-situ sediment phosphorus reflux rates under reduced input conditions, and evaluates several potential management options for reducing phosphorus bioavailability.

Location The project is located within the Everglades nonpoint source priority watershed, hydrologic unit code 030090202.

Objective/ Purpose The principle objectives of the project are to 1.) quantify in-situ sediment phosphorus flux rates in an impacted area of WCA-2A, 2.) using filed enclosures, evaluate management practices to immobilize sediment P, and 3.) model sediment phosphorus flux under different management scenarios.

Project Title 9.)DEP Contract G0044: Little Club Drive Stormwater Improvement Project

Survey Submitted 3/23/2005

InterviewDate

Responsibilities The Non-Point Source Management administers the state nonpoint source management program pursuant to Section 319 of the Federal Clean Water Act. This program brings in about \$7-8 million per year in federal grant funds that are used to reduce nonpoint sources of pollution in priority water bodies. This involves development, refinement, and coordinating program implementation which is carried out by various DEP programs along with programs administered by other state agencies, the water management districts and local governments.

Description Design and construct a stormwater detention pond, a stormwater treatment area, and stormwater conveyance systems (roadway swales, culverts, and catch basins).

Location The site is located within Sections 22 and 23, Township 40, Range 42, in southern Martin County. The longitude of the project site is 80 degrees, 07 minutes, and 30 seconds W and the latitude is 26 degrees, 59 minutes North. The receiving water body is the North Fork of the Loxahatchee River.

Objective/ Purpose The objective of this project is to better provide better conveyance and peak flow attenuation while improving water quality through increased treatment/detention

Contact Title Environmental Resource Supervisor

Agency *City of Fort Lauderdale, City Engineer*

Program Title	<i>Stormwater Management Program</i>
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Project Title Stormwater Master Plan
Survey Submitted 3/10/2006
InterviewDate 7/24/2007
Responsibilities The Stormwater System Maintenance Administrator NPDES Permit for the City of Fort Lauderdale.
Description Identify, catalog, and categorize storm drainage problems, develop planning level improvement recommendations and identify funding methods.
Location City of Ft. Lauderdale, Middle River, New River, ICW, canals
Objective/ Purpose Improve Stormwater management and water quality; meet upcoming impaired waters need.

Contact Title Environmental Specialist
Agency *U.S. Environmental Protection Agency*

<i>Program Title</i>	<i>South Florida Wetlands Program</i>
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Project Title None

Survey Submitted

InterviewDate 7/18/2007

Responsibilities Review & comment on applications for wetland fills, proposed new policy & regulations & wetland grant proposals; conduct enforcement activities. (Interview:) Once the EPA reviews the permit, it goes to the Army Corps of Engineers who decide whether the EPA's suggestions should be implemented into the permit. The EPA has veto authority over the Army Corps of Engineers, although a veto is a rare occurrence. Coral Reef impacts from a Wetland perspective include: proposals for beach renouishment/port projects and gas pipelines. They don't usually look at dock eprmits. Applicants for the Wetland permit have to show avoidance, minimization and then mitigation if they disrupt to the natural resource.. The BMP's for this areas are critical in maintaining the natural resource. Local governments are looking at TMDL's to implement in the future. A BMP they would like to be implemented is requiring all Dredge operations to be at least 400 feet away from reefs. Particle size of the sand grain is important so that it doesn't wash off the beach quickly. Also, very turbid. In the pipeline projects, they minimize impats by using directional drilling. This way, the reef is avoided because the the drill is directional. The nearshore habitat (hardbottom) needs protections and consideration when settling on BMP's. Also, stormwater is a big issue on the Southeast Florida coast. The established limit for turbidity is 29 ntu's.

Description None

Location None

Objective/ Purpose None

Contact Title Executive Director

Agency *South Central Regional Wastewater Treatment Advisory Board*

Program Title *Florida Area Coastal Environmental Initiative (FACE)*

Project Title Florida Area Coastal Environmental Initiative (FACE)

Survey Submitted

InterviewDate

Responsibilities Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. Utilities must comply with regulations relating to point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches.

Description The Florida Area Coastal Environmental (FACE) Initiative was developed as a long-term program to gather quality controlled measurements of nutrients and to quantify those nutrients for sources at multiple locations in the coastal waters of Southeast Florida. It involves a multi-year study to identify sources, both naturally occurring and anthropogenic, of substances including nutrients and ammonia, to the coastal ocean. This project will help provide the scientific knowledge required, but presently largely lacking, for the identification and application of Best Management Practices.

Location Coastal and adjacent waters of Southeast Florida- specifically areas off the coast of Miami-Dade County, Broward County, the City of Hollywood, the City of Boca Raton, and the City of Delray Beach.

Objective/ Purpose The FACE initiative is intended to extensively measure and quantify a variety of known nutrient sources as well as naturally occurring levels of quantities of interest for comparison with levels of anthropogenic quantities delivered to the coastal ocean via inlets, outfalls and other routes in the Southeast Florida coastal ocean including, but not limited to the impacts of nutrient discharges from canals, ports, beach renourishment and dredging activities, subsurface groundwater discharges, septic tanks, atmospheric deposition, ocean outfalls, and deep ocean upwelling. At this time, only ocean outfalls have been studied, the other nutrient sources have been identified with varying contributions that are yet unknown or understood. Other potential causes of reef impacts that have been suggested but not studied extensively include: biological changes (loss of algae consumers in the food chain), contributions of global warming, weather patterns such as El Nino movement of Gulf waters into the open ocean and the flow of Caribbean waters into the Florida Current.

Contact Title GIS Manager

Agency *Martin County Utilities*

Program Title *Martin Ship Pump Out Operation Program (M.S. POOP)*

Project Title none
Survey Submitted 6/21/2007
InterviewDate
Responsibilities Free removal of sewage from holding tanks aboard vessels.
Description
Location
Objective/ Purpose

Contact Title Manager, Policy & Planning Program

Agency *Broward County Environmental Protection Department Water Resources Division*

Program Title <i>Know the Flow</i>

Project Title Know the Flow (KTF) Water Management in South Florida
Survey Submitted 6/21/2007
InterviewDate 7/24/2007
Responsibilities Education and Outreach
Description KTF is a 4 hour outreach program that is offered monthly throughout Broward County. It is presented in four 1-hour segments: South Florida's Natural History, Management of S. Florida's water, stormwater BMP's, Landscaping BMP's. 4 CEU's are offered.
Location Broward County waters including coastal waters.
Objective/ Purpose To teach property managers, municipal employees, landscape professionals, and others about our unique water management system and how to protect water quality and quantity through best management practices.

Contact Title Naturescape Broward Program Coordinator
Agency *Broward County Environmental Protection Department Water Resources Division*

Program Title <i>Naturescape Broward</i>

Project Title NatureScape Broward
Survey Submitted 6/21/2007
InterviewDate 7/24/2007
Responsibilities Education and Outreach
Description Create and certify Florida- friendly yards that conserve water, use less pesticides and fertilizers, and enhance wildlife habitat, and are maintained with BMP's.
Location Broward County's waterways which flow to the Atlantic Ocean and at times, the Everglades.
Objective/ Purpose Reduce nutrients and pollutants that enter our waterbodies and to provide education and awareness of water issues.

Contact Title Pollution Prevention Coordinator

Agency *Florida Department of Environmental Protection - SE District Office (SED)*

Program Title <i>Pollution Prevention (P2) Program</i>

Project Title Outreach and Technical Assistance

Survey Submitted 6/20/2007

InterviewDate 7/18/2007

Responsibilities U.S. EPA: Pollution prevention (P2) is reducing or eliminating waste at the source by modifying production processes, promoting the use of non-toxic or less-toxic substances, implementing conservation techniques, and re-using materials rather than putting them into the waste stream. Since Pollution Prevention is a key policy in national environmental protection activities, a number of Partnership Programs and other EPA initiatives utilize this approach in their work (<http://www.epa.gov/p2/>). Florida DEP: Pollution prevention (P2) is simply the implementation of measures to avoid, eliminate, or reduce pollution at the source. P2 alternatives can increase profitability, protect the health and safety of employees, and improve the environment (<http://www.dep.state.fl.us/waste/categories/p2/pages/aboutus.htm>).

The Southeast District of Florida implements VOLUNTARY P2 activities throughout the region. There are 3 arms to the Southeast Florida P2. (Interview:) The first activity is entitled "Special Programs" and includes Green Lodging, which is geared toward the hotel industry. The second activity is Green Yards, which are auto salvage places which runs out of Tallahassee. When an industry is involved in an enforcement case, they have the option of offsetting their pollution by doing a P2 project. When an industry gets caught, they have to spend the money somehow so they can choose to either pay the fine or put this money towards revamp with BMP's because this saves them money through low energy costs. When she visits an industry and is able to "prevent" pollution from occurring, she is also able to save the industry money. This is her "hook" in trying to get people to become more pollution aware. The P2 Coordinator has no technical resources because her office has recently moved under the Public Relations wing. Her resources & money come directly from Tallahassee, so she does not work with a budget. She gives homeowners talks, set up booths at health fairs, and hosts an annual P2 event which is the 3rd week in September. She works by word of mouth, especially with industries because cold calls and visits do not work. Most industries cannot differentiate between what she does as a P2 coordinator and the regulatory agency. She usually partners with someone at the county (Health Dept.) for outreach events. If SEFCRI could make businesses write BMP's in their licenses before it is built this would help to prevent pollution. She thinks that stormwater runoff is a big factor that hasn't been controlled to the extent it should be. She recommended we look up Stew Comstock & ask him about the BMP program he started at the University of Maryland.

Description Provide technical assistance and outreach to industries interested in implementing P2, including source reduction, material substitution, onsite recycling/reuse - media affected could be air, water, and/or waste.

Location any body of water in the 6-county area may be affected by these activities

Objective/ Purpose Reduce the amount of toxicity of waste generated within the SED; reduce the carbon footprint of facilities through energy efficiency programs; reduce the amount of potable water used through water conservation strategies.

Contact Title Project Manager, Village of Wellington Building Department

Agency *Village of Wellington*

Program Title	<i>none</i>
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Project Title none

Survey Submitted 5/30/2007

InterviewDate

Responsibilities none

Description

Location

Objective/ Purpose

Contact Title Public Works Director (P.E.)

Agency *City of Stuart*

Program Title	<i>Stormwater Management Program/Stormwater Master Plan/Baffle Boxes</i>
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Project Title Stormwater Master Plan/Baffle Box Program
Survey Submitted 7/13/2007
InterviewDate
Responsibilities Operate and Maintain storm drain systems and control structures, improve the city's level of cleanliness, and reduce the level of pollutants to receiving waters.
Description Improvements to stormwater drainage systems within the City of Stuart by installing baffle box control structures to reduce pollutant loads to receiving waters. BMP's include visual inspections and removal of floatables and sediments as needed.
Location Seven Locations: Florida Ave./Osceola, Indian River Court, Indian Grove Drive, SW Flagler Ave. (2 control structures), SE Channel Ave., and Overlook Drive. Receiving water body- St. Lucie River
Objective/ Purpose To reduce pollutant loads by capturing debris and sediments that may otherwise drain into the St. Lucie River, and to proactively meet future TMDL requirements

Contact Title Senior Planner

Agency *South Florida Regional Planning Council*

Program Title <i>Strategic Regional Policy Plan for South Florida</i>

Project Title South Miami-Dade Watershed Study and Plan

Survey Submitted 11/3/2004

InterviewDate

Responsibilities The Strategic Regional Policy Plan for South Florida (SRPP) is the document that provides policy guidance to regional decision-makers. The South Florida Regional Planning Council (SFRPC) is responsible for its development, maintenance and implementation. The SRPP contains Goal 16 & its corresponding policies which seek to protect marine and estuarine habitats and water quality. Implementation is carried out through the review of state and federal permits and projects, review of amendments to local government comprehensive plans, and review of Developments of Regional Impact (DRIs).

Description Land use and water management study in 376 square mile watershed to test the impacts of 3 different policy scenerios on water quality and quantity entering Biscayne National Park, as well as costs of potable water, wastewater treatment, schools, parks, transportation, and economic impacts. Study will result in a fourth "Preferred" scenerio designed to perform better than the 3 test scenerios. Timeframes of the Study are 2025 and 2050. Acceptance of preferred scenerio begins process for developing an implementation plan. Project involves 30-member stakeholder Advisory Committee, 20 member Technical Review Committee, and 8 meetings with the general public. This project will not measure water quality within the Bay, but water quality entering the Bay.

Location Watershed includes 376 square miles roughly bounded by Tamiami Trail (US Hwy 41) on N, Douglas Road, Biscayne Bay on E, Krome Avenue on W, US Hwy 1 on South.

Objective/ Purpose The Watershed Plan is required by the CDMP to fulfill the following specific objectives: 1.) Identify and protect lands, including their uses and functions, that are essential for preserving the environmental, economic, and community values of Biscayne National Park. 2.) Identify and establish mechanisms for protecting constitutional private property rights of owners of land identified in 3(a) above, 3.) Support a viable, balanced economy including agriculture, recreation, tourism, and urban development in the Plan area, and 4.) Assure compatible land uses and zoning decisions in the Study Area consistent with long-term objectives for a sustainable South Miami-Dade.

Contact Title Senior Scientific Associate, Everglades Division

Agency *South Florida Water Management District*

Program Title *Coastal Watersheds Program*

Project Title **Local Government Partnerships for Stormwater Retrofits**

Survey Submitted 2/15/2005

InterviewDate

Responsibilities Develop and implement projects and flood management planning activities that improve the quality, quantity, timing, and distribution of flows to coastal water bodies from their tributary watersheds. Also provide scientific and technical support to SFWMD priority projects, and to develop water quality targets that may lead to pollutant load reduction goals or total maximum daily loads.

Description These are "turn-dirt" projects that focus on retrofitting stormwater and/or wastewater systems to result in improved water quality in receiving water bodies. Monitoring is often not included in these construction efforts.

Location Coastal watersheds within the boundaries of the SFWMD, including: Indian River Lagoon/St. Lucie Estuary, Biscayne Bay, Florida Keys and Florida Bay, Estero Bay, Naples Bay, Caloosahatchee River/Estuary, Charlotte Harbor.

Objective/ Purpose To assist and work cooperatively with local governments to complete stormwater/wastewater retrofit projects, and to improve water quality.

Contact Title Storm Water Administrator

Agency *City of Delray Beach*

<i>Program Title</i>	<i>NPDES</i>
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Project Title **Construction Site Runoff- Inspection and Enforcement**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Implement the formalized checklist covering current stormwater management and water quality inspection items in order to standardize the inspection process.
Include verification that the construction sites subject to the NPDES Stormwater regulations have a Stormwater Pollution Prevention Plan.

Location Delray Beach Region

Objective/ Purpose Implement the formalized checklist covering current stormwater management and water quality inspection items in order to standardize the inspection process.
Include verification that the construction sites subject to the NPDES Stormwater regulations have a Stormwater Pollution Prevention Plan.

Project Title **Construction Site Runoff-Inspection and Enforcement**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Maintain training and supporting materials to present an annual course for all inspectors on proper building and construction stormwater management and erosion and sediment control BMP's for construction sites and on protocol to facilitate compliance

Location City of Delray Beach

Objective/ Purpose To facilitate the education of inspectors on proper building and construction stormwater management.

Project Title **Flood Control Projects**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Maintain a schedule for the flood control & water quality improvements. Maintain a list of the priority projects proposed for design and construction during the 5-year term of this permit. Provide additions and/or deletions to this list in each subsequent Annual Report.

Location Delray Beach Region

Objective/ Purpose Compile a list that is constantly having additions and/or deletions in the Annual Subsequent Report.

Project Title **Illicit Discharges and Improper Disposal- Investigation of Suspected Illicit Discharges and/or Improper Disposal**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Continue to implement at a periodic training course to educate municipal personnel and field staff to identify and report conditions in the storm water facilities that may indicate the presence of illicit discharges to the MS4.

Location Delray Beach Region

Objective/ Purpose Training courses provided for municipal personnel and field staff.

Project Title **Illicit Discharges and Improper Disposal- Limitation of Sanitary Sewer Seepage**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Continue to update and identify areas served by septic systems. Advise appropriate agency of potential violation if constituents common to wastewater contamination due to malfunctioning septic tank systems are discovered in the MS4 during any inspection.

Location Delray Beach Region

Objective/ Purpose Update and identify areas served by septic systems, advise agency of potential violation of malfunctioning septic systems.

Project Title **Illicit Discharges and Improper Disposal- Oils, Toxics, and Household Hazardous Waste Control**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Continue implementation of the outreach programs to instruct the public on the proper disposal of used motor oil, leftover hazardous household products and lead acid batteries. And to publicize the locations of the Palm Beach County operated collection sites for these products.

Location Delray Beach Region

Objective/ Purpose Instruct public on proper disposal of hazardous substances.

Project Title Industrial and High Risk Runoff- Identification of Priorities and Procedures for Inspections

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Maintain an inventory of all existing high risk facilities discharging into the MS4. The inventory shall identify the outfall and surface water body into which each high risk facility discharges. Prioritize identified high risk facilities.

Location Delray Beach Region

Objective/ Purpose The inventory should identify high risk facility discharges.

Project Title **Pesticides, Herbicides, and Fertilizer Application**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Provide a summary of the public education programs, including the number of participants, where applicable, in subsequent Annual Reports

Location Delray Beach Region

Objective/ Purpose Provide a summary of public education programs

Project Title **Roadways Maintenance**

Survey Submitted 6/8/2007

InterviewDate

Responsibilities Implement permit responsibilities

Description Continue to provide a description of the litter control programs employed in each Co-Permittee's jurisdictional area. Implement the program and provide proper disposal of collected material.

Location Co-Permittee's jurisdictional area

Objective/ Purpose Implement the program and provide proper disposal of collected material.

Project Title **Special Event Annual Coastal Cleanup**
Survey Submitted 6/8/2007
InterviewDate
Responsibilities Implement permit responsibilities
Description Approximately 2,000 lbs. of debris removed on a beach stretch of 2 miles.
Location unknown (in Delray Beach)
Objective/ Purpose To remove debris from the beach

Contact Title Utilities Director
Agency *City of Pompano Beach*

<i>Program Title</i> <i>Storm Water Maintenance Program/Storm Water Master Plan</i>

Project Title Storm Water Maintenance Program/ Storm Water Pipe Lining Program
Survey Submitted 6/14/2007
InterviewDate
Responsibilities Implement maintenance activities, including inspections and maintenance for the MS4 and structural controls to reduce pollutant loads to receiving waters.
Description Reconstructing the interior integrity of storm drain pipes discharging into tidal water bodies within the City's jurisdiction. This procedure is performed by outside contractor's using a cured in-place liner. BMP's consist of annual pipe flushing, structure repair, inspections, and storm drain marking.
Location Main Intercoastal, numerous amount of finger canals.
Objective/ Purpose Restore deteriorated drain pipe back to the original designed capability. Reduce pollutant loads entering receiving waters by eliminating polluted soils and debris entering the system through deteriorating pipe, causing sinkholes & property damage.

Contact Title Utility Services Program Policy Coordinator

Agency *City of Boca Raton*

Program Title <i>Florida Area Coastal Environmental Initiative (FACE)</i>

Project Title Florida Area Coastal Environmental Initiative (FACE)

Survey Submitted 6/26/2007

InterviewDate

Responsibilities Water pollution degrades surface waters making them unsafe for drinking, fishing, swimming, and other activities. Utilities must comply with regulations relating to point sources that discharge pollutants into waters of the United States. Point sources are discrete conveyances such as pipes or man-made ditches.

Description The Florida Area Coastal Environmental (FACE) Initiative was developed as a long-term program to gather quality controlled measurements of nutrients and to quantify those nutrients for sources at multiple locations in the coastal waters of Southeast Florida. It involves a multi-year study to identify sources, both naturally occurring and anthropogenic, of substances including nutrients and ammonia, to the coastal ocean. This project will help provide the scientific knowledge required, but presently largely lacking, for the identification and application of Best Management Practices.

Location Coastal and adjacent waters of Southeast Florida- specifically areas off the coast of Miami-Dade County, Broward County, the City of Hollywood, the City of Boca Raton, and the City of Delray Beach.

Objective/ Purpose The FACE initiative is intended to extensively measure and quantify a variety of known nutrient sources as well as naturally occurring levels of quantities of interest for comparison with levels of anthropogenic quantities delivered to the coastal ocean via inlets, outfalls and other routes in the Southeast Florida coastal ocean including, but not limited to the impacts of nutrient discharges from canals, ports, beach renourishment and dredging activities, subsurface groundwater discharges, septic tanks, atmospheric deposition, ocean outfalls, and deep ocean upwelling. At this time, only ocean outfalls have been studied, the other nutrient sources have been identified with varying contributions that are yet unknown or understood. Other potential causes of reef impacts that have been suggested but not studied extensively include: biological changes (loss of algae consumers in the food chain), contributions of global warming, weather patterns such as El Nino movement of Gulf waters into the open ocean and the flow of Caribbean waters into the Florida Current.

<i>Program Title</i>	<i>Project In-City Reclamation System (I.R.I.S)</i>
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Project Title **In Plant IRIS capacity expansion, distribution system expansion, and storage tank construction.**

Survey Submitted 6/26/2007

InterviewDate

Responsibilities Reuse is an integral part of water resources management, wastewater management, and ecosystem management in Florida. It reduces demands on valuable surface and ground waters used for drinking water sources, eliminates discharges that may pollute valuable surface waters, recharges groundwater, and postpones costly investment for development of new water sources and supplies.

Description In-plant capacity will increase the capacity of reclaim water production from 10 MGD to 15 MGD and will take approximately 2 years to complete. Concurrent to the project will be the expansion of the reclaim water distribution system yielding an increase customer demand of over 8 MGD and the construction of an off-site 5 MG reclaim water storage capacity and to ensure continuity of service. All 3 facets of this project will result in the reduction the amount of effluent discharged.

Location On-site expansion at 1501 Glades Rd., distribution system expansion west on Spanish River Blvd. to Military Trail, then north to Yamato Rd. Effluent Receiving Water Body is: City of Boca Raton Atlantic Ocean Outfall pipe ~90 feet deep and ~1 mile offshore east of Palmetto Park Rd. and A1-A.

Objective/ Purpose Objective of this project is to replace potable and well/surface water irrigation with reclaimed water thus conserving water and reducing the amount of effluent discharged through the City's Outfall pipe.

Contact Title Water Resources Manager

Agency *Broward County Environmental Protection Department Water Resources Division*

Program Title <i>Water Use Efficiency Program</i>

Project Title NatureScape Irrigation Service

Survey Submitted 6/21/2007

InterviewDate 7/24/2007

Responsibilities Preserve and protect the natural resources of Broward County. Protect water quality and coordinate with local government.

Description Conduct irrigation evaluations to determine capacity and efficiency, as well as to develop a feasible irrigation management plan to minimize water use and runoff while maximizing water quality and healthy vegetation.

Location Broward County, FL (see attached map)

Objective/ Purpose Reduce water consumption while reducing runoff of fertilizers and pesticides.