

SARASOTA COUNTY

and the

CITY OF SARASOTA

ANNUAL REPORT for YEAR FIVE

January 1, 1999 to December 31, 1999

National Pollutant Discharge Elimination System

Municipal Separate Storm Sewer System

Permit Number FLS000004

Co-Permittees with:

City of Venice

City of North Port

Town of Longboat Key

Florida Department of Transportation, District 1

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Report Certification for Sarasota County

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

David R. Bullock, Deputy County Administrator
Sarasota County

Dated

Report Certification for the City of Sarasota

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

David R. Sollenberger, City Manager
City of Sarasota

Dated

Section 1 - List of Contacts for Each Co-Permittee

Sarasota County

John Ryan
Environmental Specialist III
Pollution Control
1301 Cattlemen Road
Sarasota, Florida 34232
Phone: (941) 378-6128, extension 5678
Fax: (941) 378-6563
jryan@co.sarasota.fl.us

Town of Longboat Key

Martin Black
Director of Community Development
Planning, Zoning and Building Department
600 General Harris Street
Longboat Key, Florida 34228
Phone: (941) 316-1966
Fax: (941) 316-1970

City of Venice

Patrick S. Collins, P.E.
City Engineer
Engineering Department
401 West Venice Avenue
Venice, Florida 34285
Phone: (941) 486-2626
Fax: (941) 484-8697
pcollin@ci.venice.fl.us

Florida Department of Transportation

T.W. Hunt, P.G.
NPDES Coordinator
Maintenance Division, District One
215 North Floral Avenue
Bartow, Florida 33831-1249
Phone: (941) 519-2560
Fax: (941) 534-7045
Thomas.Hunt@DOT.state.fl.us

City of Sarasota

David R. Sollenberger
City Manager
P.O. Box 1058
Sarasota, Florida 34230
Phone: (941) 954-4102
Fax: (941) 954-4129
david_sollenberger@ci.sarasota.fl.us

City of North Port

Juan Florensa
Public Works Department Director
5650 North Port Boulevard
North Port, Florida 34285
Phone: (941) 423-7220
Fax: (941) 423-6608
j2flora@aol.com

This Annual Report is compiled and produced for Sarasota County and the City of Sarasota. The co-permittees, including the Florida Department of Transportation, District 1, the Town of Longboat Key, the City of Venice, and the City of North Port, submit Annual Reports that have been produced independently. All co-permittees have participated in a committee discussion of the issues presented in this report that apply to all co-permittees, such as permit modifications.

Storm Water Management Program Evaluation

Section 2.1 Objective of Program

The objective of the Storm Water Management Program (SWMP) is to improve the quality of surface waters in Sarasota County by improving the quality of storm water runoff, through implementation of the many elements of the permit, that was developed by Sarasota County, the City of Sarasota, the co-permittees, the Florida Department of Environmental Protection (FDEP), and the Environmental Protection Agency (EPA).

Storm Water Management Program Evaluation Section 2.2 - Major Findings

The heavy metal investigation of Hudson Bayou identified substantial lead contamination in sediments. The investigation is summarized in Section 5.3 of this report. Data from the investigation is included in Appendices G and H.

There continued to be a real need for the comprehensive pollution control activities listed in the permit in order to achieve the desired result of reducing pollutant loading in receiving waters.

Storm Water Management Program Evaluation Section 2.3 - Major Accomplishments

In 1999 major accomplishments of the SWMP included:

- Additional progress was made in completing and updating Basin Master Plans and Capital Improvement Projects;
- All required monitoring was completed;
- Domestic wastewater utilities continued to improve specific collection systems that are most prone to overflow;
- Municipal agencies continued to improve housekeeping, storage, and disposal practices of contaminating materials;
- Streets and storm water systems were well maintained, although it required a substantial allocation of money, manpower, and coordination;
- Proper disposal methods were made more available to citizens and small businesses in Sarasota County, redirecting a tremendous amount of waste from potentially illicit disposal methods;
- The wise use, storage, mixing, and application of pesticides was enhanced;
- Many minor illicit discharges were alleviated through voluntary compliance with County ordinances; others required enforcement; and
- Lead contamination of Hudson Bayou was well defined, and planning to remediate the area was initiated.

Storm Water Management Program Evaluation

Section 2.4 - Overall Program Strengths and Weaknesses

SWMP strengths include:

- The outfall inventory has resulted in an improved understanding of the drainage system;
- The comprehensive nature of the SWMP addressed many important issues; and
- The portion of the monitoring program that focused on Hudson Bayou may result in actual improvements to water quality.

SWMP weaknesses include:

- Dry-weather field screening has not discovered polluted discharges and has redirected manpower away from more productive pursuits;
- The construction site inspection checklist is needlessly specific;
- Discharge monitoring report forms are inappropriate for ambient water quality data;
- Manufacturers required to be inspected as high-risk facilities are less likely to be contributing pollutants to storm water than are retail businesses, such as car repair shops, restaurants, and waterfront businesses;
- The monitoring program could be better focused on identifying areas in need of water quality improvements;
- The permit could be more concise in defining the SWMP. The same is true of the annual reporting requirements; and
- There are too many locations required in the outfall-screening program.

Storm Water Management Program Evaluation

Section 2.5 - Future Direction of Program

- Additional effort will be directed to improve runoff from all municipal properties.
- Utilities will continue to upgrade sewage collection systems and reduce raw sewage overflows.
- There may be increased interest in finding money for capital improvement projects dedicated to water quality improvements.

Section 3 - Summary Table for SWMP Activities

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
1. Operation and Maintenance of Structural Controls and Storm Water Collection System	Sarasota County & City of Sarasota	Perform inspections and maintenance of structural controls. Maintain an internal record keeping system to track inspections and maintenance activities performed during the permit. Conduct an annual assessment of the effectiveness of inspection and maintenance schedule and provide a summary of the assessment in each Annual Report.	Inspect and keep records.	Yes	Structural controls were inspected and maintained, including mowing, debris removal, sediment removal, and erosion repair. Records were kept on computer.	Monthly wet retention system inspections. 1,176 total inspections. Herbicides applied as needed. Refer to the narrative section of this report for the assessment. Refer to Appendix A for inventories and schedules.
	Sarasota County & City of Sarasota	Identify and inventory each privately owned and maintained storm water management facility, which discharges into the MS4. Within 12 months of the effective date of the permit (1-1-96).	Update inventory.	Yes	The inventory continued to be updated in 1999.	Private treatment systems are identified and inventoried in the Storm Water Assessment database.
	Sarasota County & City of Sarasota	Develop a revolving inspection program for privately owned and maintained storm water treatment systems which discharge into the MS4 to determine the compliance with local permit conditions and/or local ordinances. Program developed shall include a description of the enforcement provisions for non-compliance. Following development, include a summary of the inspection program and schedule in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	The inspection program continued during 1999.	The new database identifies systems due for inspection. Inspectors are coordinating with SWFWMD.
	Sarasota County & City of Sarasota	Implement revolving inspection program for privately owned and maintained storm water systems, which discharge into the MS4 within 24 months of the effective date of the permit (1-1-97).	Inspect.	Yes	48 private storm water systems were inspected in 1999.	
	Sarasota County	Complete the Florida Water and Pollution Control Operators Association (FW&PCOA) course or equivalent.	Train 5 employees per year.	Yes	18 employees received FW&PCOA training in 1999.	
	City of Sarasota	Complete the Florida Water and Pollution Control Operators Association (FW&PCOA) course or equivalent.	Train 1 employee per permit.	Yes	The City inspector was FW&PCOA trained in 1995.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
2: Control of Discharges from Areas of New Development and Significant Redevelopment.	Sarasota County	Adopt as local ordinances storm water quality treatment criteria consistent with, but not necessarily similar to, the State of Florida Storm Water Treatment Regulations (FAC 40D-4, 40D-40, 62-25). Prior to the end of the permit term (12-31-99).	Completed in previous years.	Yes	Sarasota County Land Development Regulations require the detention and treatment of storm water in order to improve the quality of storm water runoff. Refer to Appendix J.	
	City of Sarasota	Adopt as local ordinances storm water quality treatment criteria consistent with, but not necessarily similar to, the State of Florida Storm Water Treatment Regulations (FAC 40D-4, 40D-40, 62-25). Prior to the end of the permit term (12-31-99).	Submitted with permit application.	Yes	Chapter 29.5 of the City Code, the City Engineering Design Criteria Manual, adopted in 1989, describes requirements for storm water detention.	
	Sarasota County & City of Sarasota	Continue on the current schedule to perform master basin studies on the major watersheds identified in Table 1 on page 4A-34 of Appendix A. Develop a course of action for each as they are completed. Include in each Annual Report a brief summary of each basin study completed during the permit year and resulting course of action. Effective date of permit (1-1-95).	Study & Summarize.	Yes	Two basin studies were adopted in 1999. Update studies were begun.	Basin updates better defined limits of floodplains. Updated basin models were used to determine effects of development.
	Sarasota County	Evaluate land development practices to reduce the amount of impervious surfaces in future development. After completing the evaluation, include a summary of the resulting course of action in the subsequent Annual Report for incorporation into the permit. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	County Land Development Regulations are updated annually.	Current zoning regulations require open space.
	City of Sarasota	Evaluate land development practices to reduce the amount of impervious surfaces in future development. After completing the evaluation, include a summary of the resulting course of action in the subsequent Annual Report for incorporation into the permit. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	The City Comprehensive Plan includes language about reducing impervious surfaces. In 1999 the City implemented a pilot program to reduce impervious surfaces on barrier islands. Refer to Appendix K.	
	Sarasota County	Implement appropriate land development practices and incentives for the reduction of impervious surfaces. As determined by the evaluation - prior to the end of the permit term (12-31-99).	Implement LDRs.	Yes	Developers were encouraged to retain open space; storm water assessments were reduced by the inclusion of open space in designs.	
	City of Sarasota	Implement appropriate land development practices and incentives for the reduction of impervious surfaces. As determined by the evaluation - prior to the end of the permit term (12-31-99).	Implement LDRs.	Yes	In 1999 the City implemented a pilot program to reduce impervious surfaces on barrier islands. Refer to Appendix K.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
3: Operation and Maintenance of Public Streets, Roads, and Highways	Sarasota County	Provide a description of the municipally operated litter control programs for highways and streets within the jurisdictional area for incorporation into the permit. Provide in first Annual Report.	Completed in previous years.	Yes	The program reported in the Annual Report for year one continued during 1999.	
	City of Sarasota	Provide a description of the municipally operated litter control programs for highways and streets within the jurisdictional area for incorporation into the permit. Provide in first Annual Report.	Completed in previous years.	Yes	The City continued the litter control programs reported in the Annual Report for year one, and continued to participate in Keep Sarasota Beautiful.	
	Sarasota County	Implement litter control programs for highways and streets within the jurisdictional area and properly dispose of collected material. Effective date of the permit (1-1-95).	Control litter.	Yes	Storm water Operations (Aquatic Plant Control), Adopt-a-Pond, Keep Sarasota Beautiful, storm drain placarding, and litter control of roads, ponds, shorelines, lakes, and canals continued.	
	City of Sarasota	Implement litter control programs for highways and streets within the jurisdictional area and properly dispose of collected material. Effective date of the permit (1-1-95).	Control litter.	Yes	Storm water Operations (Aquatic Plant Control), Adopt-a-Pond, Keep Sarasota Beautiful, storm drain placarding, and litter control of roads, ponds, shorelines, lakes, and canals continued.	
	Sarasota County	Implement street sweeping programs within the jurisdictional area and properly dispose of the collected material. Effective the date of the permit (1-1-95).	Sweep streets.	Yes	County employees and contractors swept 3124 miles in 1999. Disposal was to the landfill.	
	City of Sarasota	Implement street sweeping programs within the jurisdictional area and properly dispose of the collected material. Effective the date of the permit (1-1-95).	Sweep streets.	Yes	Three trucks swept streets 5 days per week and moved about 2100 tons of waste from roadways to landfill.	Approximately 225 miles of residential streets were swept weekly, and 36 miles of commercial streets were swept weekly.
	Sarasota County & City of Sarasota	Provide the maintenance schedule for storm water structures (i.e., catch basins) and roadside ditches. Provide in first Annual Report.	Completed in previous years.	Yes	Catch basins are cleaned as requested. Grates are cleaned during and after storm events. Ditches are cleaned as requested. Weirs are cleaned and maintained on a schedule, and as needed.	
	Sarasota County & City of Sarasota	Perform scheduled maintenance on catch basins, grates, and other storm water structures and roadside ditches and properly dispose of accumulated sediments. Maintain an internal log documenting maintenance activities. Effective date of permit (1-1-95).	Maintain storm water systems.	Yes	The maintenance schedule has been followed. Appropriate disposal has continued. Refer to Appendix A.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
3: Operation and Maintenance of Public Streets, Roads, and Highways (continued)	Sarasota County	As described in Part II.3.A. on page 7 of the permit, develop practices to reduce polluted discharges to the MS4 from road repair, and all municipal equipment yards and maintenance shops that support road maintenance activities. After development, include a summary of the practices in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	The BMP practices reported in the Annual Report for year one continued during 1999.	
	City of Sarasota	As described in Part II.3.A. on page 7 of the permit, develop practices to reduce polluted discharges to the MS4 from road repair, and all municipal equipment yards and maintenance shops that support road maintenance activities. After development, include a summary of the practices in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	The Transportation Department continued following the manual of BMP practices reported in the Annual Report for year one.	
	Sarasota County	Implement developed practices to reduce to the MEP pollutants from road repair and municipal yards. Within 24 months of permit (1-1-97).	Implement BMPs.	Yes	The BMPs reported in the Annual Report for year one continued to be implemented in 1999.	
	City of Sarasota	Implement developed practices to reduce to the MEP pollutants from road repair and municipal yards. Within 24 months of permit (1-1-97).	Implement BMPs.	Yes	The BMPs reported in the Annual Report for year one continued to be implemented in 1999.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
4: Ensure Flood Control Projects Comply with State Storm Water Quality Requirements	Sarasota County & City of Sarasota	Develop a priority list and construction schedule for the retrofit projects recommended by the basin master studies completed to date. Within 12 months of permit (1-1-96).	Completed in previous years.	Yes	Capital improvement projects continued. In 1999, 3 were completed, 2 were started, and 10 were in design.	
	Sarasota County & City of Sarasota	Include a copy of the prioritized list and construction schedule in the Annual Report for incorporation into the permit. Provide updates to this list in future annual reports as additional master basin studies are completed. Within 12 months of permit (1-1-96).	Update list in Annual Report.	Yes	Two basin master plans were completed in 1999, including Ainger Creek and Fox Creek. Refer to Appendix B for updated schedules.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
5: Identification, Monitoring, and Control of Discharges from Municipal Waste Treatment, Storage, or Disposal Facilities Not Covered by a NPDES Storm Water Permit.	Sarasota County & City of Sarasota	Develop a program to evaluate, through inspections and monitoring, the municipally operated solid waste transfer stations, maintenance and storage yards for waste transportation fleets, POTWs and sludge application and/or disposal sites. The goals of the evaluation program shall be to identify these facilities, determine the necessary control measures and procedures to be employed at each, and administer an appropriate implementation schedule. After developing the evaluation program, submit a program summary in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (7-1-97).	Completed in previous years.	Yes	Inspection and monitoring of solid waste and POTW facilities continued. The program summary was included in the Annual Report for year three.	All sites were regulated by EPA, FDEP, and/or the County.
	Sarasota County & City of Sarasota	Implement developed program to reduce pollutants in storm water discharges to the MEP and shall not cause or contribute to violations of State water quality standards of the receiving stream from these facilities. Within 36 months of permit (1-1-98).	Inspect.	Yes	Inspection and monitoring of solid waste and POTW facilities continued. Pollution Control inspects POTW and solid waste facilities. Hazardous Waste embarked on expanded inspections of many County facilities in 1999.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
6: Control of Pollutants Related to Application of Pesticides, Herbicides, and Fertilizers.	Sarasota County & City of Sarasota	Provide the details, for the incorporation into the permit, of the specific public education programs designed to encourage the public to reduce their use of pesticides, herbicides and fertilizers. Provide in the first Annual Report.	Completed in previous years.	Yes	Details were reported in the Annual Report for year one.	Florida Yards and Neighborhoods. County Integrated Pest Management.
	Sarasota County & City of Sarasota	Implement the public education programs. Effective date of permit (1-1-95).	Educate.	Yes	The Florida House continued to encourage reductions in use of pesticides, herbicides, and fertilizers in 1999.	
	Sarasota County & City of Sarasota	Evaluate current training requirements and certification procedures for employees who handle pesticides, herbicides and fertilizer. After completing the evaluation, include a summary of the results in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Applicators are either certified or directly supervised by a certified person. Certification is maintained through training courses, with CEUs.	
	Sarasota County & City of Sarasota	Implement any revised procedures for the training and certification of these employees. As necessary - Within 36 months of the effective date of the permit (1-1-98).	Continue program from previous years.	Yes	Applicators are either certified or directly supervised by a certified person. Certification is maintained through training courses, with CEUs.	
	Sarasota County & City of Sarasota	Require evidence of proper certification and licensing for all applicators contracted to apply pesticides, herbicides and fertilizers on municipal property. Effective date of the permit (1-1-95).	Continue program from previous years.	Yes	Applicators are either certified or directly supervised by a certified person. Certification is maintained through training courses, with CEUs.	
	Sarasota County & City of Sarasota	Develop a program with procedures to minimize the use of pesticides, herbicides, and fertilizers and to properly store and mix these products. The program developed should also consider planning assistance and promoting voluntary use of native Florida plantings and slow-release fertilizers. After development, include a summary of the procedures in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	The administrative directive reported in the Annual Report for year one continued to be in place.	
	Sarasota County & City of Sarasota	Employ the program procedures to minimize the use of pesticides, herbicides, and fertilizers and to properly store and mix these products. Within 36 months of the effective date of the permit (1-1-98).	Continue program from previous years.	Yes	The IPM Program addressed these issues. Biological and mechanical pest control minimized the use of pesticides.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7a: Illicit Discharges and Improper Disposal. Inspections, ordinances, and enforcement measures.	Sarasota County & City of Sarasota	Complete the assessment of non-storm water discharges allowed to be discharged to the MS4 as detailed on page 9 of the permit. After completing the assessment, include a summary of the results in the subsequent Annual Report for incorporation into the permit. Within 18 months of the effective date of the permit (7-1-96).	Completed in previous years.	Yes	The list of 20 non-storm water discharges remained unchanged from the list in the Annual Report for year three.	
	Sarasota County & City of Sarasota	Develop an inspection program to enforce ordinances, which prohibit illicit connections and illegal dumping into the MS4. After development, include a summary of the inspection program in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (7-1-97).	Continue program from previous years.	Yes	The inspection and enforcement program continued in 1999.	
	Sarasota County & City of Sarasota	Implement an inspection program to enforce ordinances, which prohibit illicit connections and illegal dumping into the MS4. Maintain an internal log documenting inspections and enforcement actions performed and provide a summary of these reports in each Annual Report. Within 36 months of the effective date of the permit (1-1-98).	Inspect and keep records.	Yes	Inspection, enforcement, and internal log recordkeeping was continued in 1999.	In 1999, Pollution Control investigated and resolved 391 incidents, many involving illicit discharges to the MS4. Refer to Appendix C for investigation logs.
	Sarasota County	Provide photocopies of signed adopted storm water ordinances as identified in Table II.A.7.a.(3) on page 10 of the permit. Provide in first Annual Report.	Completed in previous years.	Yes	The storm water regulatory language from Ordinance No. 93-038 is currently part of Ordinance No. 96-020, as amended.	
	City of Sarasota	Amend ordinances as identified in Table II.A.7.a.(4) on page 11 of the permit to reflect correct citation for "industrial activity" {40CFR 122.26(b)(14)}. Include a copy of the amended ordinances in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	The City gave the County authority, via Resolution No. 93-685, to enforce County Ordinance No. 93-038 within the City's jurisdictional boundaries. The contents of County Ordinance No. 93-038 were included in County Ordinance No. 96-020, as amended.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7b: Illicit Discharges and Improper Disposal. Field Screening.	Sarasota County & City of Sarasota	Conduct field screening of the MS4 for illicit discharges and improper disposal as shown in Table II.A.7.b. on page 12 of this permit. Collect inventory information on outfalls, and on portions of the MS4 not mapped and update a database on an ongoing basis. Maintain an internal log documenting the results of all field screening performed. At least 1/3 of Grid Areas Screened in Permit Years Three, Four and Five with Entire MS4 screened once every five years.	1/3 of grid areas screened in permit year four.	Yes	42 outfalls in the City of Sarasota, and 57 outfalls in unincorporated Sarasota County were screened in 1999. The internal log was updated. During 1999, the remaining portions of the MS4 were screened; the entire MS4 was screened during the permit term.	Field inspections included photos and sampling as needed. Refer to Appendix D for a tabulation of inspections. Very few illicit discharges were discovered by implementing this permit element.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7c: Illicit Discharges and Improper Disposal. Investigation of Suspected Illicits and/or Improper Disposal.	Sarasota County & City of Sarasota	Develop standard investigative procedures to identify and terminate the sources of illicit connections or discharges to the MS4. After development, include a summary of the investigative procedures in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Standard investigative procedures were included in the Annual Report for year four (1998).	
	Sarasota County & City of Sarasota	Implement standard investigative procedures to identify and terminate the sources of illicit connections or discharges to the MS4. Within 30 months of the effective date of the permit (7-1-97).	Continue program from previous years.	Yes	Standard investigative procedures continued to be used in 1999 for complaint investigation, high-risk facility inspections, and outfall field screening.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7d: Illicit Discharges and Improper Disposal. Spill Prevention and Response	Sarasota County	Provide a copy of the applicable portions of Sarasota County's Hazardous Materials Emergency Plan which effectively mitigate potential pollutant discharges to surface waters. Provide in first Annual Report.	Completed in previous years.	Yes	A copy of the plan was included in the Annual Report for year one. Refer to Appendix M for an updated plan.	
	City of Sarasota	Adopt Sarasota County's Hazardous Materials Emergency Plan, FDOT's Emergency Operations Procedures, or a comparable plan and procedures which effectively mitigate potential pollutant discharges to surface waters. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	As reported in the Annual Report for year one, the City and County Fire Departments merged. Therefore, Sarasota County's Hazardous Materials Emergency Plan applies within the City.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7e: Illicit Discharges and Improper Disposal. Public Notification.	Sarasota County & City of Sarasota	Develop a program to promote, publicize, and facilitate public reporting of the presence of illicit discharges and improper disposal of materials to the MS4. After development, include a summary of the public programs in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (7-1-97).	Completed in previous years.	Yes	The program was continued during 1999.	
	Sarasota County & City of Sarasota	Implement public reporting program. Within 36 months of the effective date of the permit (1-1-98).	Publicize illicit reporting.	Yes	Pollution Control continued to distribute promotional materials with the 24-hour on-call phone number displayed. Presentations to schools and organizations continued.	
	Sarasota County & City of Sarasota	Maintain a citizen complaint log documenting all reports of illicit discharges and what actions were taken to investigate and resolve the problem. Include a summary of this log in each Annual Report. Within 36 months of the effective date of the permit (1-1-98).	Inspect and keep records.	Yes	In 1999 Pollution Control investigated and resolved 391 incidents, many involving discharges to the MS4. Hazardous Waste completed 58 such investigations. The summary of the logs is in Appendix C.	Pollution Control investigations resulted in 25 enforcement actions. Hazardous Waste investigations resulted in 5 enforcement actions.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7f: Illicit Discharges and Improper Disposal. Oils, Toxics and Household Hazardous Waste Control	Sarasota County & City of Sarasota	Support and promote on a regular basis the six oil recycling site locations within Sarasota County and the two permanent collection centers for household hazardous waste materials. Continue Amnesty Days program. Document the total amount of household hazardous waste materials collected. Effective date of permit (1-1-95).	Collect wastes and keep records.	Yes	Six used oil recycling stations were open through most of 1999. In October, a Countywide curbside used oil collection program was initiated, and all but two of the six used oil recycling stations were closed. CESQG collections were conducted one day per month. Two permanent household hazardous materials collection centers were open 2-3 days per week, including weekends. Household Chemical Collections (Amnesty Days) were conducted six days per year.	In 1999, 24,495 gallons of used oil were collected and recycled; 362,711 pounds of household and CESQG hazardous waste were collected.
	Sarasota County & City of Sarasota	Actively promote and support a voluntary stenciling program for all storm sewer inlets that discharge directly or indirectly into surface waters. Within 12 months of the effective date of the permit (1-1-96).	Stencil drains.	Yes	More than 900 storm drains were placarded with the message: Dumping Here Pollutes Our Bay.	Placards replaced stenciling because the placards were found to be more durable and easier to install.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7g: Illicit Discharges and Improper Disposal. Limitation of Sanitary Sewer Seepage.	Sarasota County	Develop procedures to limit the infiltration of sanitary sewer seepage into the MS4, in areas where wastewater infiltration is suspected. After development, include a summary of the procedures in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (7-1-97).	Completed in previous years.	Yes	Flushing of pipes, lift station telemetry, video of pipes, improved lift station maintenance, and SSES.	
	City of Sarasota	Develop procedures to limit the infiltration of sanitary sewer seepage into the MS4, in areas where wastewater infiltration is suspected. After development, include a summary of the procedures in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (7-1-97).	Completed in previous years.	Yes	Annual maintenance and capital upgrades. Infiltration and inflow control projects. Cleaning and televising (SSES) of collection system. Pilot project replacing leaking privately owned collection systems. Spill response procedures approved by Pollution Control.	
	Sarasota County	Implement developed procedures to limit the infiltration of sanitary sewer seepage into the MS4. Within 36 months of the effective date of the permit (1-1-98).	Continue program from previous years.	Yes	Procedures continued to be implemented in 1999.	
	City of Sarasota	Implement developed procedures to limit the infiltration of sanitary sewer seepage into the MS4. Within 36 months of the effective date of the permit (1-1-98).	Continue program from previous years.	Yes	Procedures continued to be implemented in 1999.	
	Sarasota County & City of Sarasota	Advise appropriate utility owner of violation if constituents common to wastewater contamination are discovered in the MS4 during dry-weather field screening. Effective date of permit (1-1-95).	Continue program from previous years.	Yes	Pollution Control advised appropriate utilities of all reported discharges to the MS4.	No sanitary sewer seepage was found during dry-weather field screening.
	Sarasota County & City of Sarasota	Identify areas served by septic tanks. Advise appropriate State Agency of violation if constituents common to wastewater contamination due to malfunctioning septic systems are discovered in the MS4 during dry weather field screening. Within 12 months of the effective date of the permit (1-1-96).	Continue program from previous years.	Yes	Pollution Control notified the Health Dept. of every reported septic system incident. No septic system seepage was found during dry weather field screening.	Areas served by septic systems were identified in the Preliminary Report on County Water and Sewer Service in Sarasota County by Post, Buckley, Schuh, & Jernigan (1994).

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
8a: Industrial and High Risk Runoff. Identification of Priorities and Procedures for Inspections.	Sarasota County & City of Sarasota	Develop an inventory of all existing high-risk facilities discharging into the MS4. This inventory shall identify the outfall and surface waterbody into which each high-risk facility drains. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Pollution Control tracks permits issued by FDEP and EPA, as well as facilities found during inspections that are subject to Multi-Sector Permits.	
	Sarasota County & City of Sarasota	Based on historical information and available monitoring and screening data, prioritize the identified high-risk facilities. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Pollution Control inspectors prioritize their inspection activities based on local knowledge, cooperation with FDEP, and awareness of FDEP and EPA permits.	
	Sarasota County & City of Sarasota	Develop procedures for inspecting high-risk facilities and establish an inspection schedule. After development, include a summary of the procedures and inspection schedule in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	The inspection forms were included in the Annual Report for year three. Standard investigative procedures and permitting manual were included in the Annual Report for year four.	
	Sarasota County & City of Sarasota	Begin inspections of identified high-risk facilities. Maintain an internal log documenting the results of the inspections performed. Within 36 months of the effective date of the permit (1-1-98).	Inspect and keep records.	Yes	Pollution Control inspected 12 high-risk facilities in the City of Sarasota and 56 in unincorporated Sarasota County. The internal log was updated.	
	Sarasota County & City of Sarasota	Maintain a list of all industrial storm water sources discharging to the MS4 and update in Annual Reports. Effective date of permit (1-1-95).	Continue program from previous years.	Yes	The lists were updated.	EPA and FDEP issue regulatory permits to some industrial sources. Facilities inspected by Pollution Control were evaluated for applicability of EPA Multi-Sector Permits.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
8b: Industrial and High Risk Runoff. Monitoring for High Risk Industries.	Sarasota County & City of Sarasota	Develop a monitoring (or self-monitoring) program for high-risk industrial facilities. Include a description of the specific enforcement steps to be taken to require compliance with local storm water ordinances if violations are identified. After development, include a summary of the monitoring program in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Pollution Control evaluates high-risk facilities subject to multi-sector permits, and provides information to subject businesses. Monitoring may be a part of the EPA Multi-Sector Permit. FDEP may also require monitoring for Industrial Waste permitted facilities.	
	Sarasota County & City of Sarasota	Implement the monitoring program for high-risk industrial facilities. Within 36 months of the effective date of the permit (1-1-98).	Monitor.	Yes	Facilities with EPA or FDEP permits conducted monitoring as required by permit conditions.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9a. Construction Site Runoff. Site Planning & Structural and Non-Structural Controls.	Sarasota County	Review erosion and sediment control requirements to determine modifications necessary to correlate with SWFWMD's requirements and EPA's NPDES Construction Activity General Permit. Summarize the necessary modifications in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	Requirements and modifications were reported in previous Annual Reports.	
	City of Sarasota	Review erosion and sediment control requirements to determine modifications necessary to correlate with SWFWMD's requirements and EPA's NPDES Construction Activity General Permit. Summarize the necessary modifications in the subsequent Annual Report for incorporation into the permit. Within 12 months of the effective date of the permit (1-1-96).	Completed in previous years.	Yes	Requirements and modifications were reported in previous Annual Reports.	
	Sarasota County	Incorporate the necessary modifications to the erosion and sediment control requirements. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	LDRs are regularly updated and include erosion considerations.	
	City of Sarasota	Incorporate the necessary modifications to the erosion and sediment control requirements. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	Erosion/siltation permits adequately address control requirements.	
	Sarasota County	In land development regulations, incorporate guidelines and recommendations for reducing the amount of sediment leaving construction sites. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	LDRs are regularly updated and include erosion considerations.	
	City of Sarasota	In land development regulations, incorporate guidelines and recommendations for reducing the amount of sediment leaving construction sites. Within 36 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	City Code, Chapter 29.5 Site Improvements - Engineering Design Criteria, subsection 29.5-8., addresses erosion and siltation control.	
	Sarasota County	Track construction projects required to install erosion and sediment controls. Document the installation, maintenance, and effectiveness of the controls. Integrate these records with the education program for training site contractors. Within 18 months of the effective date of the permit (7-1-96)	Inspect and keep records.	Yes	Land Development Services and Pollution Control included BMPs in reviews of construction documents. Resource Permitting required BMPs at sites. Land Development Services, Transportation and Natural Resources inspected.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9a. Construction Site Runoff. Site Planning & Structural and Non-Structural Controls (continued)	City of Sarasota	Track construction projects required to install erosion and sediment controls. Document the installation, maintenance, and effectiveness of the controls. Integrate these records with the education program for training site contractors. Within 18 months of the effective date of the permit (7-1-96)	Inspect and keep records.	Yes	As reported in the Annual Reports for years two and three, inspectors with the City Engineer's Office routinely check for compliance with BMPs and require improvements as necessary.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9b: Construction Site Runoff. Inspection and Enforcement.	Sarasota County	Review existing inspection policies and code enforcement programs to first identify all agencies conducting site inspections and then to determine which agency is responsible for issuing enforcement actions for which code violations. Summarize the results and include in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	The summary was included in the Annual Report for year three.	
	City of Sarasota	Review existing inspection policies and code enforcement programs to first identify all agencies conducting site inspections and then to determine which agency is responsible for issuing enforcement actions for which code violations. Summarize the results and include in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	The City Engineer's office inspects and requires compliance with erosion control measures.	
	Sarasota County	Train inspectors (regardless of specialty) who are likely to be on-site during earth moving activities in erosion control techniques. One inspector per year.	Train one inspector per year.	Yes	12 County employees were FW&PCOA trained. Pollution Control trained one inspector in 1999.	FDEP Sediment and Erosion Control Training was included in Suncoast Public Works Academy curriculum, which is taught by trained municipal employees.
	City of Sarasota	Train inspectors (regardless of specialty) who are likely to be on-site during earth moving activities in erosion control techniques. One inspector per year.	Train one inspector per year.	Yes	The City inspector was FW&PCOA trained in 1995.	FDEP Sediment and Erosion Control Training was included in Suncoast Public Works Academy curriculum, which is taught by trained municipal employees.
	Sarasota County	Implement the use of an erosion and sediment control checklist for all inspectors. Include verification that construction sites subject to the NPDES Storm Water Regulations have NPDES permit coverage and a Storm Water Pollution Prevention Plan on site. Include the checklist in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes and No	This specific checklist was not used for most of 1999; reorganization of County Departments confused this issue. A checklist was back in use in early 2000. BMPs were always required by Land Development Services and Pollution Control throughout 1999. LDS inspectors worked with developers to maintain BMPs.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9b: Construction Site Runoff. Inspection and Enforcement (continued)	City of Sarasota	Implement the use of an erosion and sediment control checklist for all inspectors. Include verification that construction sites subject to the NPDES Storm Water Regulations have NPDES permit coverage and a Storm Water Pollution Prevention Plan on site. Include the checklist in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Erosion/siltation permits function as checklists and were included with documents submitted during the permit application.	
	Sarasota County	Develop a program to inspect construction projects for compliance with local storm water ordinances and/or local permits. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	The program was developed in previous years.	
	City of Sarasota	Develop a program to inspect construction projects for compliance with local storm water ordinances and/or local permits. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	City Engineering inspectors check for water quality violations during inspections for compliance with City Codes.	
	Sarasota County	Implement program developed to inspect construction projects for compliance with local storm water ordinances and/or local permits. Within 36 months of the effective date of the permit (1-1-98).	Inspect.	Yes	Pollution Control investigated referrals from other agencies about violations of the Pollution Control Code and 62-302, FAC, Surface Water Quality Standards.	
	City of Sarasota	Implement program developed to inspect construction projects for compliance with local storm water ordinances and/or local permits. Within 36 months of the effective date of the permit (1-1-98).	Inspect.	Yes	City inspectors require corrections or refer water quality violations to Pollution Control, FDEP, or SWFWMD.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9c: Construction Site Runoff. Site Operator Training.	Sarasota County & City of Sarasota	Implement an annual NPDES workshop for design professionals, land developers, inspectors, and contractors, including earth-moving contractors. Topics to include are measures to reduce pollutants from sites, awareness of the NPDES program requirements for construction activities, and solutions to erosion and sediment problems found by inspectors during construction. Within 24 months of the effective date of the permit (1-1-97).	Educate.	No	The Suncoast Public Works Academy has scheduled two training events for 2000.	
	Sarasota County & City of Sarasota	Evaluate the feasibility of an erosion and sediment control certification program for construction site operators (contractors and developers), plan reviewers, and inspectors that work on sites that discharge to the MS4. Upon conclusion of the evaluation, include a summary of the findings in the subsequent Annual Report for incorporation into the permit. Within 30 months of the effective date of the permit (1-1-98).	Completed in previous years.	Yes	The FDEP already had a similar program. There is no need for a local certification program.	
	Sarasota County & City of Sarasota	If the certification program is deemed feasible, implement program for construction site operators, plan reviewers, and inspectors. Within 36 months of the effective date of the permit (7-1-98).	Completed in previous years.	Yes	Training is useful, and available, but certification is unnecessary.	
	Sarasota County	Develop a procedure to notify building permit applicants in developments which, because of the amount of land area disturbed, are subject to the NPDES storm water regulations of their application responsibilities under the NPDES permitting program for construction site runoff. After development, include a summary of the procedures in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Builders were notified about necessary NPDES permits for sites over five acres during the plans review phase.	Sarasota County will modify the language on plan review forms to reflect NPDES Phase II regulations when the new rules are implemented.
	City of Sarasota	Develop a procedure to notify building permit applicants in developments which, because of the amount of land area disturbed, are subject to the NPDES storm water regulations of their application responsibilities under the NPDES permitting program for construction site runoff. After development, include a summary of the procedures in the subsequent Annual Report for incorporation into the permit. Within 24 months of the effective date of the permit (1-1-97).	Completed in previous years.	Yes	Builders were notified about necessary NPDES permits for sites over five acres during the plans review phase.	

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9c: Construction Site Runoff. Site Operator Training (continued).	Sarasota County	Implement developed procedures to notify building permit applicants in developments which, because of amount of land area disturbed, are subject to the NPDES storm water regulations of their application responsibilities under the NPDES permitting program for construction site runoff. Within 30 months of the effective date of the permit (7-1-97).	Notify builders.	Yes	Builders were notified about necessary NPDES permits for sites over five acres during the plans review phase.	Standard language on forms.
	City of Sarasota	Implement developed procedures to notify building permit applicants in developments which, because of amount of land area disturbed, are subject to the NPDES storm water regulations of their application responsibilities under the NPDES permitting program for construction site runoff. Within 30 months of the effective date of the permit (7-1-97).	Notify builders.	Yes	Builders were notified about necessary NPDES permits for sites over five acres during the plans review phase.	
	Sarasota County & City of Sarasota	Conduct presentations to local professional organizations, which are associated with the construction industry to discuss proper construction site management for water quality. Ongoing.	Educate.	Yes	County and City Employees were very involved with the Florida Association of Storm Water Utilities and the Florida Storm Water Programs Association.	

Narrative Reports for SWMP Activities

Section 4.1 - Maintenance of Structural Controls

Ponds and Lakes - All City, County, and State ponds continued to be mowed, treated, and to have litter removed monthly. All underdrains were maintained annually. Fence repair and other maintenance were completed as required. Debris was properly disposed of at a lined landfill. Maintenance activities increased through additional contracts for mowing, ditch cleaning, and pond maintenance. Inspectors continued to check the side slopes, inlets, and outlets for damage or sediment buildup. A certified contractor applied all herbicides and a trained inspector reviewed the work.

Wet Retention Systems - Ninety-eight County wet retention systems were inspected monthly, totaling 1,176 inspections in 1999. Sixty-two County dry ponds were inspected and mowed monthly, totaling 744 inspections annually. The City of Sarasota had 32 wet retention areas inspected and maintained monthly, totaling 384 inspections annually. The City had three dry ponds inspected and maintained monthly, totaling 36 inspections annually.

Weirs and Flow Control Devices - Litter control and vegetation removal was done monthly on weirs and flow control devices. Annual structural inspections included checking major defects, erosion, sedimentation, bleed-down devices, and underdrains. Maintenance schedules were rearranged to address deficiencies identified in the inspector's reports.

Channels - Maintenance included debris removal, noxious vegetation removal, sediment removal, and restabilization of slopes. These tasks were accomplished both in-house and by

contractors. Sarasota County had 81 annual inspections of channel control structures in 1999. All County canals (185 miles) were inspected annually, but not all were maintained annually. The City of Sarasota had eight control structures inspected once each in 1999. All 37 miles of City canals were inspected or maintained by hand cleaning contractors or mowing contractors.

Street Sweeping - On a quarterly cycle, 530 miles of residential streets were swept, totaling 2,120 miles annually. Monthly, 84 miles of rural roads were swept, totaling 1,004 miles per year.

In the City of Sarasota, three trucks swept streets five days per week and moved about 2100 tons of waste from roadways to landfill. Approximately 225 miles of residential streets were swept monthly and 36 miles of commercial streets were swept weekly.

Private Storm Water Systems - The inventory of residential subdivisions and commercial parcels receiving Storm Water Assessment credits has been updated to account for new development. The credit is applied to developments that operate and maintain the private storm water management system serving a specific area. The Sarasota County Stormwater Ordinance (No. 94-066) and supporting Resolutions require inspections of these credited systems to assure appropriate application of the credits. During inspections, inspectors checked the condition of skimmers, outfall structures, sediment sumps, slope stabilization, underdrain/filtration systems, and other above ground features or otherwise visible features. As needed, existing conditions were compared to construction drawings or as-builts.

The Ordinance calls for owner notification if a private storm water system does not pass inspection. Notification includes a 90-day time frame to perform remedial action to bring the system into compliance. Failure to do so results in the revocation of the Storm Water Assessment credits. During 1999, 48 private systems were inspected under this program. It was not necessary to revoke the credits for any of these private systems.

Training - Erosion and sediment control training continued in Sarasota County during 1999. Per permit requirements, 18 County employees attended the Florida Water and Pollution Control Operators Association (FW&PCOA) training/certification course through the year. These employees earned storm water certification to either A, B, or C levels.

In addition to the training specified in the permit, Public Works staff members received training from County personnel holding FW&PCOA certifications. In addition, one employee, who has completed the “Train the Trainer” program for the FDEP Erosion and Sediment Control Inspectors Certification course provided additional training. This in-house training dealt with the proper installation, inspection, and maintenance of the standard Best Management Practices (BMPs). The City also has an employee certified as an instructor in the FDEP “Train the Trainer” program.

County employees attended the 1999 Florida Association of Storm Water Utilities annual conference. Representatives from the County and City routinely attended the Florida Storm Water Programs Association meetings.

A technical advisor was contracted in 1999 to increase the coordination between the County and the Southwest Florida Water Management District (SWFWMD) and to eliminate duplication of efforts. Additional inspections may be considered in the future to improve compliance with maintenance needs.

Narrative Reports for SWMP Activities

Section 4.2 - Development Planning Procedures

Basin Master Planning - Sarasota County continued the Basin Master Planning program, approving new studies and updating previously completed studies. The newly approved studies, covering Fox Creek and Ainger Creek, were adopted by the Board of County Commissioners during 1999. Several other basin studies were updated to include a significant amount of detailed information. The City of Sarasota continued to participate in the Basin Master Planning process.

The current status of the Basin Master Planning program is shown in the following table:

Completed Studies	Updated Studies	Studies Underway	Future Studies
Ainger Creek	Phillippi Creek **	Whitaker Bayou **	Deer Prairie Slough
Alligator Creek	Matheny Creek	Business District	Myakka River
Big Slough	Forked Creek		Little Salt Creek
Clower Creek	North Creek *		Braden River
Elligraw Bayou	Woodmere Creek *		Shackett Creek
Fox Creek	Holiday Bayou *		
Gottfried Creek			
Hudson Bayou **			
Catfish Creek *			
Cowpen Slough *			

Completed Studies	Updated Studies	Studies Underway	Future Studies
Curry Creek *			
Hatchett Creek *			
South Creek *			

* Studies Complete; not yet adopted by Board of County Commissioners

** Basin located entirely or partially within the City of Sarasota

Narrative Reports for SWMP Activities

Section 4.3 - Roadway Maintenance

Best management practices were used on all road repairs, including silt fences, temporary and permanent vegetative cover, and turbidity screens.

Litter Control - Keep Sarasota Beautiful coordinated 9,480 volunteer hours in 1999 in many litter control programs, including Adopt-a-road, park, spot, shore, and pond. Bag it in Your Car Day distributed car litter bags at car washes and fast food restaurants. The Boaters and Anglers Pledge encouraged promises to keep waterways free of litter. The annual Florida Coastal Cleanup coordinated 6,656 donated work hours. Two community gardens changed littered areas into beautiful shared plots of flowers and vegetables. Control Your Butts collected over 100 pounds of cigarette butts. The Great American Cleanup coordinated 374 volunteers.

Municipal Maintenance Yards - County and City equipment yards and maintenance shops of all sizes continued to minimize the discharge of pollutants by employing good housekeeping and materials handling methods. Established procedures required immediate clean up of all spills. Some wastes were recycled, others had proper disposal. All recycling and disposal contractors were required to possess the necessary authorizations and certifications to transport and handle the specific materials involved.

The County Fleet Management, Transit, and Fire Departments operated facilities for the maintenance and repair of vehicles and equipment and for storage and distribution of supplies.

As reported in previous Annual Reports, proper procedures continued to be used for the acquisition, storage, and disposal of solid, liquid, and gaseous materials used at these facilities.

Narrative Reports for SWMP Activities

Section 4.4 - Flood Management

Several flood control projects were completed during 1999. Recommended by the Basin Master Plans, these projects addressed structure and street flooding level of service deficiencies. Although focused on flood control, the projects, by design, also have some water quality attributes as well. Bank stabilization, removal of sediments, and creation of lakes and ponds undoubtedly improved downstream water quality. It is anticipated that, upon completion of the flood control projects, focus will shift to water quality issues as the main objective.

A summary of 1999 flood control projects is contained in the following table:

Completed Projects	Projects Started	Projects in Design
Celery Fields, Phase II	Coral Lakes	Arlington Canal
Loma Linda	Sunnyside Lane	Breakwater Branch
Leon/Noble	Newtown Canal	Clark Road
Colonial Gables	Arlington Canal Bypass	Williamsburg Branch
Caribbean Drive		Gulf View Estates Outfall
		Euclid Avenue
		North Manasota Amended
		Manasota South
		Hyde Park
		Woodmere Canal

Narrative Reports for SWMP Activities

Section 4.5 - Municipal Facilities

Sarasota County Bee Ridge Landfill

The former Bee Ridge Landfill is still subject to NPDES Permit FLS0039306. The landfill began closure construction in 1999 and is scheduled to be completed in early 2000. The runoff from closed portions of the landfill drained to storm water retention basins. Interim control measures include temporary berms, silt fences, and hay bale dikes. Drainage structures were mowed, cleaned to grade, and maintained as needed. The FDEP also regulates this site.

Central County Solid Waste Disposal Complex (CCSWDC)

The CCSWDC was opened to full operation in November 1998 and was subject to the NPDES storm water discharge requirements for municipal landfills. FDEP also regulates the site.

Jackson Road Transfer Station (former Venice Landfill)

The landfill was closed in 1986 and was subject to a FDEP Long Term Care Permit that included storm water issues. The transfer station leachate control system was deactivated October 1998. FDEP also regulates the site.

Browning Ferris Industries (BFI) Transfer Station

The City of Sarasota continued to contract with BFI to operate a solid waste transfer facility. The facility was regulated by a NPDES multi-sector permit, the Southwest Florida Water Management District (SWFWMD), and a FDEP Solid Waste Transfer Station Operation Permit. Leachate was discharged to the sanitary sewer. Runoff was detained in a SWFWMD regulated storm water pond.

Publicly Operated Wastewater Treatment Works (POTWs)

Sarasota County Utilities owned and operated nine wastewater treatment facilities:

- Bee Ridge Water Reclamation Facility (WRF) – FLA013372
- Central County WRF – FLA013455
- Meadowood WRF – FLA013385
- Venice Gardens WRF – FLA043494
- Atlantic-Brentwood Wastewater Treatment Plant (WWTF) – FLA134333
- Plantation WRF – FLA013365
- Circlewoods WWTF – FLA013406
- Gulf View WWTF – FLA013465
- Proctor Road WWTF – FLA013447

All were designed, constructed, and operated according to FDEP regulations. The FDEP permits required the County to develop and implement procedures to reduce polluted discharges from POTWs, including overflows, and spills of materials stored on the facility sites. Appropriate clean up, disinfection, and sampling procedures were followed. All abnormal events were reported to FDEP and County Pollution Control, as required.

All wastewater treatment facilities were designed with considerations for flood protection. Facility service commitments were required to consider capacity analysis to ensure no hydraulic overloads. The facilities were typically inspected a minimum of twice a day for leaking pipes and malfunctioning equipment. Daily inspections were for pretreatment, biological nutrient

reduction, chlorination equipment, and effluent. A private contractor hauled and land applied stabilized residuals. The contract held the contractor responsible for any non-compliance issues.

Most of the treated effluent discharged from County-owned wastewater treatment facilities was reclaimed and used for irrigation of golf courses and residential areas. All plants that discharge are required to meet permit limitations for effluent quality. Quarterly ground water monitoring is required at most sites where reclaimed water is applied. The plant effluent is monitored once a year for all primary and secondary State Drinking Water Standards. In addition, all ground water monitor wells are tested during permit renewal for primary and secondary State Drinking Water Standards. Most golf courses have storage ponds that the facility discharges effluent into for later use as irrigation. These ponds are regulated by FDEP. When a reclaimed water storage pond is part of a storm water management system, the appropriate storm water permits are obtained from the SWFWMD.

Mineral acid tanks, fuel tanks, and hazardous substance tanks with a capacity greater than 550 gallons are regulated and inspected by the FDEP. Although State rules require a visual inspection of these tanks once a month, they are actually inspected daily.

The City of Sarasota Public Works Department continued to operate one domestic wastewater treatment facility (City of Sarasota-FL0040771), which was staffed 24 hours per day. Diesel, acid, and caustic tanks were all within secondary containment. Wastewater residuals were composted and reused. Effluent disposal was subject to a NPDES permit for direct discharge to

Whitaker Bayou, or to reuse irrigation. The Spill Response Plan approved by Pollution Control was still employed. The wastewater treatment facility site was operated according to a storm water pollution prevention plan. Four underground diesel tanks were upgraded at lift stations. Contamination issues are being handled in a legal and appropriate manner.

The City of Sarasota Public Works and Police Departments maintained three fleet maintenance facilities in 1998. Materials and wastes were stored in appropriate containers until they were either recycled or disposed of by a licensed waste hauler. Housekeeping practices improved at these facilities during 1999.

Sarasota County Mosquito Management Services

- Flammable gas and other flammable products are stored in locked, fire and leak proof cabinets;
- Used motor and other oils are collected and taken to the County's Fleet Management for proper recycling;
- Equipment parts cleaning is completed with formula SW-3 (OZZY Juice) in a closed-loop parts cleaning tank;
- Equipment and vehicle washing is completed at an approved facility (SCAT);
- Vehicle maintenance is completed by County Fleet Maintenance;
- Used six-volt gel-cell batteries for insect traps are turned over to a battery recycler;
- Dry cell batteries are turned over to County Hazardous Waste for recycling; and
- The County's HHW contractor removes pesticide, PPE, and consumer container wastes.

Narrative Reports for SWMP Activities

Section 4.6 - Pesticides, Herbicides, and Fertilizers

Cooperative Extension Service - Public education programs continue to address the reduction of landscape watering, the reduced use of pesticides, herbicides, and fertilizers, and the design of landscapes to minimize storm water runoff. The Sarasota County Cooperative Extension Service primarily sponsors and performs these programs. Sarasota Extension also provides advice on native plantings, xeriscaping, appropriate use of fertilizers (including slow-release), and Integrated Pest Management (emphasizing least-toxic approaches).

Most of these services are provided through the Florida Yards & Neighborhoods program, utilizing Environmental Landscape Management principles. The primary Sarasota Extension facility demonstrating and educating these principles is the Florida House Learning Center, which utilizes many innovative materials and methods to reduce energy, wastes, and environmental impact.

In 1999 Sarasota County Cooperative Extension Service conducted 126 tours and welcomed 12,800 visitors to the Florida House. Another 29,900 people received landscape assistance from Extension staff in other ways, primarily through contact with the Extension Helpdesk and the Helpmobile (or Satellite Service), and there were over 16,000 hits on the office website, which features resources conservation and Environmental Landscape Management information. There were 44 landscape and pesticide educational programs conducted, 114 citizens were enrolled into the Florida Yards & Neighborhoods program, and 12 achieved Certified Florida Yard status (bringing the total number of Certified Florida Yards to 98 in Sarasota County). There is an

active outreach program to the public school system to promote the responsible use of pesticides, herbicides, and fertilizers. Additionally, a pilot program is being conducted targeting builders, developers, and landscape architects to design and install new landscapes and communities using principles taught in the Florida Yards & Neighborhoods Program. All Sarasota Extension programs are offered and available to all County residents, including residents of the cities of Sarasota, Venice, North Port, and Longboat Key.

Sarasota County employees whose duties include the application of pesticides and herbicides are certified by the Florida Department of Agriculture and Consumer Services and are trained and tested by the Sarasota County Cooperative Extension Service.

The County Environmental Pest Management Advisory Board reviewed the Integrated Pest Management (IPM) programs of selected departments, including Parks and Recreation, Solid Waste, General Services, Fleet Maintenance, and Forestry. Employees of the School Board, the City of Sarasota, the City of North Port, and the City of Venice participated in the IPM working group.

Sarasota County Mosquito Management Services

- All pesticides are stored, applied, and disposed according to their individual registered labels;
- Storage of pesticides is confined to the pesticide building, a 40 by 60-foot building with concrete floors and a 120-gallon impervious sump;
- Personnel who store, handle, and apply pesticides are state certified and/or work under supervision of a state certified applicator;

- Application of pesticides is completed as specified on the pesticides label;
- No pesticide rinsates are accumulated; all pesticide rinsates are applied at treatment sites;
- Pesticide drums are removed by a registered recycling service and containers are disposed of according to their label instructions;
- Personnel are trained to handle and apply pesticides to eliminate chances of spills or accidents. However, if spills were to occur, personnel also have the training and skills to contain and clean-up spills. Any spilled pesticides/materials and clean-up materials are identified and packaged for pick-up by the County's registered HHW contractor;
- The Safety and Health Specialist or designee inspects the chemical storage building weekly;
- The Safety and Health Specialist or designee inventories pesticides monthly; and
- Fifteen staff members hold Florida Department of Agriculture and Consumer Services, Public Health, Pest Control certifications, that requires 16 hours of continuing education units during a four-year period.

The Safety and Health Specialist trains the staff in the following:

- Hazard Communication (Right to Know);
- Fire Prevention and Evacuations;
- Emergency Preparedness;
- Personal Protective Equipment;
- Respirator;
- Hazardous Waste Operations; and
- Hurricane Emergency.

In 1999 Sarasota County Mosquito Management Services began construction of a vehicle washing station that will discharge vehicle wash water to the sanitary sewer.

County Transportation - All applicators are State certified and all contract applicators are required by contract to be certified. Ongoing training is conducted monthly.

Narrative Reports for SWMP Activities

Section 4.7 - Illicit Discharges - Inspection, Investigation and Enforcement

Pollution Control and the Hazardous Waste Program investigated hundreds of citizen complaints and agency referrals, and also initiated dozens of proactive facility inspections. A substantial number of these investigations involved illicit discharges to the MS4. State rule or County ordinance violations were primarily resolved by voluntary compliance, others involved code enforcement or referral to another regulatory agency.

Narrative Reports for SWMP Activities

Section 4.8 - Field Screening

Dry-weather field screening of major storm water outfalls was completed for all remaining outfalls included in the database. During 1999 no illicit discharges were found. No field measurements or laboratory analyses detected contaminants above State Water Quality Standards. Refer to Appendix D for lists of dry-weather field screening sites in the City and County.

Narrative Reports for SWMP Activities

Section 4.9 - Spill Response

The Sarasota County Hazardous Materials Plan described procedures to be followed in the event of a hazardous materials spill, as reported in the Annual Report for year one. An interlocal agreement between the City of Sarasota and Sarasota County consolidated the Fire Departments in 1996, so the plan is followed in both jurisdictions. The Fire Department Special Operations Team is the lead agency and responded to hundreds of calls in 1999. Hazardous Waste assisted in some instances.

Narrative Reports for SWMP Activities

Section 4.10 - Public Reporting of Illicit Discharges

Pollution Control continued the 24-hour on-call hotline to receive reports of pollution incidents and citizen complaints. A summary table of the 391 reports in 1999 is in Appendix C.

The public was educated about storm water rules and reporting of illicit discharges at several events in 1999, including:

- The Sarasota County Hazardous Waste Regulation Training
- Sarasota County Fair
- Earth Day
- 4 R's Teacher Training
- Sarasota County Government Expo

Other public education methods included:

- Each complaint investigation involved educating the persons involved.
- Refrigerator magnets and other promotional materials were created and distributed. Each item advertised the 24-hour service to receive reports of pollution events.
- The Natural Resources newsletter, that was distributed to the public, included several articles about investigations of illicit discharges and storm water issues.
- Presentations were made to environmental clubs and other interested groups regarding illicit discharges.

Narrative Reports for SWMP Activities

Section 4.11 - Oil and Household Hazardous Waste

The Hazardous Waste Program provided citizens with proper methods of disposal for household hazardous waste and used oil. Project Green Sweep provided an inexpensive method of disposal for hazardous wastes generated by businesses defined as Conditionally Exempt Small Quantity Generators (CESQGs). Hazardous Waste Program funding came from a Solid Waste tipping fee (landfill) surcharge of \$3.00 per ton for residential and municipal waste, and \$1.25 per ton for commercial waste.

Six used oil recycling stations were open to the public 24 hours a day, 7 days a week, through most of 1999. In October a Countywide curbside used oil collection program was initiated and all but two of the six used oil recycling stations were closed. CESQG collections were conducted one day per month.

In 1999, 24,495 gallons of used oil were collected and recycled; 362,711 pounds of household and CESQG hazardous waste were collected. Two permanent household hazardous materials collection centers were open 2-3 days per week, including weekends. Household Chemical Collections (Amnesty Days) were conducted six days per year.

In 1999 Sarasota County Hazardous Waste began inspecting renovation and demolition projects to ensure proper disposal of mercury-containing bulbs and thermostats.

Narrative Reports for SWMP Activities

Section 4.12 - Sanitary Sewer Seepage

The three most likely sources of sanitary sewage seepage were from sewer lines, manholes, and lift stations. All wastewater treatment facilities are regulated by local, State, and Federal rules and permits regarding all aspects of design and operation.

Sarasota County Utilities continued to make improvements to nine treatment facilities and associated collection systems, thereby reducing the severity of system failures and sewage overflows:

- All aspects of wastewater systems construction were inspected for compliance by the County;
- Lift stations were fenced to prevent vandalism that could cause station failures or overflows;
- A County vacuum truck flushed an average of 2000 lineal feet of gravity sewer lines daily;
- Utilities completed the first phase of a telemetry system (SCADA) that was installed on an additional 45 lift stations in 1999. The system dramatically reduced the response time to malfunctioning lift stations, reducing the volume discharged;
- An improved program of regular lift station maintenance was continued, including \$2,400,000 spent on lift station maintenance and rehabilitation;
- The Spill Response Standard Operations Procedure was continued;

- A video truck was used to view broken and misaligned pipes that could result in leakage to the MS4; and
- A Sanitary Sewer Evaluation Study (SSES) continued to assess the integrity of gravity sewer lines and manholes. Inflow and infiltration were reduced in the worst portions of the collection system first. Because of the SSES findings, \$800,000 was spent relining gravity sewer lines and rehabilitating manholes.

Seventy-four wastewater treatment facilities in Sarasota County reported 69 abnormal events involving discharges. All citizen reports of discharges from sanitary sewers were promptly reported to the appropriate utility. All reports of septic system discharges were promptly referred to the Sarasota County Health Department.

The City of Sarasota Public Works Department continued to improve one domestic wastewater treatment facility:

- Substantial maintenance and capital upgrades improved the system in 1999;
- Although grant funding was no longer available, an infiltration and inflow control project was continued;
- The cleaning and televising study of the collection system focused repairs (including slip lining) on the weakest components;
- A pilot project to reduce infiltration by replacing 500 privately owned portions of the collection system was continued. Phase One (\$227,000) will include video inspection and installation of a cleanout. Phase Two will replace the private sewers and will commence at the end of 2000;
- The Spill Response Plan approved by Pollution Control was still employed;

- Wastewater residuals were composted and reused as mulch; 1500 dry tons of sewage sludge were composted, rather than being land applied; and
- Effluent disposal was subject to a NPDES permit for direct discharge to Whitaker Bayou, or to reuse irrigation.

Narrative Reports for SWMP Activities

Section 4.13 - High Risk Industrial Facility Inspections

In 1999, 66 high-risk industrial facilities were inspected by Pollution Control; none were found to have prohibited discharges. Each facility was evaluated for the necessity of an EPA Multi-Sector NPDES Permit. Lists of inspected facilities in the City of Sarasota and in unincorporated Sarasota County are in Appendix E.

The County Hazardous Waste Management inspected 72 businesses during 1999 as part of the Small Quantity Generator (SQG) program. The inspection included a NPDES Storm Water Inspection screening form that was forwarded to Pollution Control.

Narrative Reports for SWMP Activities

Section 4.14 - Construction Planning Procedures

During 1999 various County entities reviewed the Land Development Regulations for possible revisions to be implemented during the year 2000. The revisions include a more stringent requirement for installation, inspection, and maintenance of BMPs. Final acceptance and verbiage of the revisions will be reported in the subsequent Annual Report (for year 2000).

Another proposed procedural revision relative to construction site runoff involves the checklist used by the inspectors. The proposal calls for a checklist to be included in the paperwork when the project is assigned to an inspector. The inspector will complete the checklist as appropriate and forward it to Pollution Control for filing and inclusion in subsequent Annual Reports.

Narrative Reports for SWMP Activities

Section 4.15 - Construction Inspections

County Land Development Services and Resource Protection Services inspected hundreds of construction sites, and advised the developers about proper installation and maintenance of erosion control devices (BMPs).

Chapter 29.5 of the City Code of the City of Sarasota required erosion and siltation permits for all soil disturbing activities, all commercial construction permits, and some residential construction permits. The permit required implementation of BMPs for erosion, siltation, and pollution prevention. Inspections were conducted by an employee of the City Engineer's office, who was certified through FW&PCOA for construction site erosion and siltation BMPs. Enforcement was handled by Development Services using code enforcement or stop work orders.

Narrative Reports for SWMP Activities

Section 4.16 - Education Activities

One County Pollution Control employee and one City employee attended the FDEP Erosion & Sediment Control Inspector's Training. Eighteen County employees received FW&PCOA training in 1999.

Narrative Reports for SWMP Activities

Section 4.17 - Monitoring Activities

Section 5 of this Annual Report details the many monitoring accomplishments of 1999.

Narrative Reports for SWMP Activities
Section 4.18 - Additional SWMP Activities

There are no additional activities to report at this time.

Monitoring Program Report

Section 5.1 - Monitoring Objectives

The monitoring program was developed in two phases. The permit required:

- Seasonal loading and event mean concentration data to be reported in the Annual Report for year four (Part V.A.1.);
- Investigation of organic pollutants identified in the permit application to be reported in the Annual Report for year three (Part V.A.2.); and
- Development of additional monitoring conditions (Part V.B.).

The additional monitoring conditions were defined in a letter from the U.S. EPA to Sarasota County Government, dated March 27, 1997, and required:

- Long term monthly bay and stream ambient water quality sampling from Sarasota Bay, Lemon Bay, upper Myakka River, and lower Myakka River, starting December 31, 1996, and to be reported on Discharge Monitoring Report forms with the Annual Report for year five (Part V.B.1.a.);
- Long term sampling near the North Port water plant to be reported by the City of North Port (Part V.B.1.b.);
- Long term ambient sediment, water, and biological sampling from Big Slough, Phillippi Creek, and Hudson Bayou to be reported in the Annual Report for year five (Part V.B.2.);
and

- Two-phased investigation of metals contamination in Hudson Bayou, including sediment and storm water samples, to be reported in the Annual Report for year five (Parts V.B.3. and 4.).

The objectives for these monitoring activities are two-fold. The objective of long term ambient monitoring, as well as the seasonal load and event mean concentration data, is to characterize water quality trends (improvements or degradations). The objective of the Hudson Bayou and organics investigation data is to find and eliminate sources of pollutants.

Monitoring Program Report

Section 5.2 - Summary Table of Completed Monitoring

Table 5.2 - Monitoring Completed in 1999.

Station Locations	Sample Type	Parameters	Frequency	Completed	Comments
Seasonal loading and event mean concentration (Part V.A.1.).	Water	BOD, COD, TSS, TDS, TKN, NO ₂ +NO ₃ , TP, O&G, Cd, Cr, Cu, Pb, Zn, and dissolved P.	Once.	Yes. Completed in 1998-99.	The report was submitted on October 14, 1999, subsequent to the Annual Report for year four.
Richardson Road / 1 station. (Part V.A.2.)	Storm Water	Bis(2-ethylhexyl)phthalate.	Once.	Yes. Completed in 1999.	The investigation is explained in Section 5.7, and the data is in Appendix I.
East Avenue / 1 station. (Part V.A.2.)	Storm Water	3,4 benzofluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, and 4,4'-DDE.	Once.	Yes. Completed in 1999.	The investigation is explained in Section 5.7, and the data is in Appendix I.
Sarasota Bay, Lemon Bay and Myakka River / 40 stations. (Part V.B.1.a.)	Water	Temperature, pH, DO, salinity, specific conductance, BOD, color, turbidity, TSS, dissolved NO ₂ , dissolved NO ₃ , NO ₂ +NO ₃ -N, dissolved and total ammonia, dissolved inorganic nitrogen, TKN, TN, orthophosphate, TP, chlorophyll, and secchi depth.	Monthly.	Yes. Completed in 1999.	Appendix F contains all data from January 1, 1996 through December 31, 1999 on diskette in Microsoft Excel format.
Sarasota Bay, Lemon Bay and Myakka River / 40 stations. (Part V.B.1.a.)	Water	In-situ: water temperature, pH, dissolved oxygen, salinity, and specific conductance.	One early morning per month.	Yes. Completed in 1999.	Appendix F contains all data from January 1, 1996 through December 31, 1999 on diskette in Microsoft Excel format.
Sarasota Bay, Lemon Bay and Myakka River / 40 stations. (Part V.B.1.a.)	Water	Hydrolabs measure continuous 24-hour in-situ: water temperature, pH, dissolved oxygen, salinity, and specific conductance.	Two per month.	Yes. Completed in 1999.	Appendix F contains all data from January 1, 1996 through December 31, 1999 on diskette in Microsoft Excel format.
Phillippi Creek, Hudson Bayou, and Big Slough / 6 stations. (Part V.B.2.)	Water	COD, BOD, NO ₂ +NO ₃ -N, TKN, total and dissolved P, TDS, TSS, oil & grease, cadmium, chromium, copper, lead, zinc, temperature, pH, DO and specific conductance.	Twice annually in wet season and dry season.	Yes. Completed in 1999.	Appendix G contains all data from January 1, 1996 through December 31, 1999 on diskette in Microsoft Excel format.
Phillippi Creek, Hudson Bayou, and Big Slough / 6 stations. (Part V.B.2.)	Biological	Analysis of Biological Community.	Twice annually in wet season and dry season.	Yes. Completed in 1999.	Appendix G contains all data from January 1, 1996 through December 31, 1999.
Phillippi Creek, Hudson Bayou, and Big Slough / 6 stations. (Part V.B.2.)	Sediment	Particle size, aluminum, cadmium, chromium, copper, lead, zinc, TN, TP, and TOC.	Annually in December.	Yes. Completed in 1999.	Appendix G contains all data from January 1, 1996 through December 31, 1999 on diskette in Microsoft Excel format.
Hudson Bayou / 5 stations. (Parts V.B.4.)	Storm Water	Cadmium, lead, copper, zinc, and chromium.	Four times.	Yes. Completed in 1999 and 2000.	Appendix H contains all data on diskette in Microsoft Excel format.

Monitoring Program Report

Section 5.3 - Monitoring Conclusions

Estimates of seasonal pollutant load and event mean concentrations for a representative storm were calculated using a watershed management model for each major watershed. The model is based on the observation that storm water characteristics vary with land use. The same method was used for the permit application in 1993. The report concluded that total pollutant loads increased slightly because of increased urbanization, despite the addition of storm water control structures. The report was submitted on October 14, 1999, subsequent to the Annual Report for year four. This element was required by permit Part V.A.1.

The investigation of organic pollutants identified in the permit application was completed in 1999. There was no evidence of a point source discharge of pollutants to either sub-basin investigated. Section 5.7 of this Annual Report details the results of these investigations. This element was required by permit Part V.A.2.

Long term monthly bay and stream ambient water quality sampling from Sarasota Bay, Lemon Bay, upper Myakka River, and lower Myakka River, have not yet been subjected to trend analysis. The quality of the data, completed under contract by Mote Marine Laboratory, was excellent. This element was required by permit Part V.B.1.a.

Long term monitoring of sediments in Hudson Bayou, Phillippi Creek, and Big Slough assisted in producing some conclusions about Hudson Bayou. The sediment samples were compared to FDEP guidelines based on negative effects to aquatic organisms. Hudson Bayou was found to have elevated levels of lead, copper, and cadmium. Big Slough at I-75 had one sample with elevated cadmium. Phillippi Creek near Coburn Road had elevated levels of copper and cadmium. Additional sampling, already scheduled, will better determine the importance of these data. Appendix G includes a diskette; the file entitled Three Watersheds Sediment Data.xls contains all sediment data in a Microsoft Excel spreadsheet. This element was required by permit Part V.B.2.

A small number of data points have been produced for water samples taken from Phillippi Creek, Hudson Bayou, and Big Slough. Preliminary evaluation shows elevated lead, copper, and zinc in Hudson Bayou. Phillippi Creek also had elevated copper levels. Appendix G includes a diskette; the file entitled Three Watersheds Water Data.xls contains all surface water data in a Microsoft Excel spreadsheet. This element was required by permit Part V.B.2.

Only three biological community sampling events have been completed for Phillippi Creek, Hudson Bayou, and Big Slough. Benthic habitat is characterized by sampler observations, and suggests Myakkahatchee Creek near the water plant is best, and Hudson Bayou is the worst. Phillippi Creek near Coburn Road has the greatest number of taxa, and Hudson Bayou has the fewest. After more sample events are completed, this information should become more informative. Appendix G includes a diskette; the file entitled Three Watersheds Biological Data.xls contains a summary of biological community data in a Microsoft Excel spreadsheet.

Data from 1999 is contained in Appendix G. Previous data reports were included with previous Annual Reports. This element was required by permit Part V.B.2.

Phase I of heavy metals monitoring in Hudson Bayou required 12 sediment cores to be analyzed for metals, grain size, total organic carbon, and total nutrients. The samples were compared to FDEP guidelines based on negative effects to aquatic organisms. The central and northern portions of Hudson Bayou were found to have elevated levels of lead, copper, zinc, and chromium. Stations H-6 and H-7 were most elevated and receive drainage from separate sub-basins, that suggested no single point source of contamination. All of these data were reported in Appendix P of the Annual Report for 1998. Appendix H includes a diskette; the file entitled Hudson Bayou Phase I.xls contains a summary of these sediment data in a Microsoft Excel spreadsheet. This element was required by permit Parts V.B.3.

Phase II of the Hudson Bayou heavy metals monitoring plan was amended by the Annual Report for 1998 to require four storm water sampling events. Lead, copper, and zinc frequently exceeded Florida Surface Water Quality Standards, but were not higher than typical urban runoff. The sub-basin that enters Hudson Bayou just south of Sarasota High School had lower levels than the more urban sub-basins to the north. No pollutant point source was identified by these storm water samples. Cadmium and chromium levels were low. On average, dissolved metals to total metals ratios were 19%, 46%, and 38% for Pb, Zn, and Cu, respectively. The data that were completed in 1999 are in Appendix H. An analysis of all the data is in Appendix H, entitled Hudson Bayou Phase II.xls in a Microsoft Excel spreadsheet format. This element was required by permit Parts V.B.4.

In Hudson Bayou, Sarasota County Pollution Control conducted additional monitoring beyond what was required by the permit. An interagency team was developed to review the data and develop a remediation plan. Details are available on request.

Monitoring Program Report Section 5.4 - Monitoring Compliance

In 1999 all monitoring was completed with the exception of few minor details. Some incidental parameters were accidentally omitted from a storm water sampling event in Hudson Bayou.

Discharge monitoring reports will not be submitted as required by the permit. Several telephone conversations with EPA personnel concluded with verbal permission to submit monitoring data in the Microsoft Excel format instead; refer to Appendices F, G, H, and I. Tens of thousands of ambient water quality data points could not easily be transferred to DMR forms, and no effluent limits were applicable to the vast majority of this monitoring data. Most or all of these data are available on EPA's STORET database.

Monitoring Program Report

Section 5.5 - Monitoring Program Revisions

There are no Monitoring Program Revisions at this time. Refer to Section 6.2 of this report for Monitoring Program Modifications.

Monitoring Program Report Section 5.6 - Inventory of Major Outfalls

A complete, updated inventory of all outfalls in both unincorporated Sarasota County and the City of Sarasota is in Appendix L.

Monitoring Program Report

Section 5.7 - Investigation of Organic Pollutants

Industrial Site 002 - East Avenue, Sarasota - The industrial site is comprised of a 9.5 acre area within the City of Sarasota. The watershed consists of a predominantly industrial area along East Avenue extending from 20th Street south to 18th Street. The undeveloped area north of 20th Street has been determined to be a former landfill. The buildings in the watershed have been constructed since 1970. Many of these are subdivided into smaller spaces that are leased or rented to business owners. The area has witnessed a significant turn over in the businesses, so much so, that few have been in place longer than five years. All facilities in the sub-basin were inspected by Pollution Control personnel and none were found to be discharging pollutants.

The outfall location is a 30" diameter RCP entering the north side of an east-west ditch on the west side of East Avenue roughly adjacent to 1800 East Avenue. The location is subject to backwatering from the larger ditch.

Review of the analytical results obtained for the MS4 permit application does not support a possible single source for any identified contaminants. Sampling conducted in 1999 corroborates levels of the pollutants identified in 1992-1993 as slightly above the detection limits.

The Acid and Base/Neutral compounds identified are typically associated with incomplete combustion of fossil fuels and as such are not unusual in an urban industrial environment. Neither 3,4-Benzofluoranthene nor Chrysene are produced or used commercially. Each was

identified by laboratory analysis as being slightly above the detection limit during the 1992-1993 preliminary studies. The 1999 analytical results do not identify either substance above the detection limits.

4,4'-DDE is found in small amounts as a contaminant in technical DDT and is also identified as a product of the breakdown of DDT in soil. While the compound may be indicative of previous use or disposal of DDT, the 1999 samples did not reveal levels above the method detection limit.

Bis(2-ethylhexyl)phthalate is a widely used plasticizer and as such is frequently identified in the environment. Levels found in the 1992-1993, and 1999 samples are slightly above the detection limit and do not indicate a single point source.

In conclusion, runoff from this industrial sub-basin intermittently contains trace pollutant residues typical of this land use, but there was no evidence of any active prohibited discharges from the area.

Low Density Residential Site 003 - Richardson Road, Sarasota - The drainage basin is comprised of an 11.5 acre area in the unincorporated portion of northern Sarasota County. Residential lots of one to five acres were developed in the early 1980's. The lots consist of single-family homes, many with stables or barns. The sampling location is a grassy swale along the north side of Richardson Road at 7401 Richardson Road. The site was visited several times by Pollution Control inspectors, but on no occasion was any evidence of a prohibited discharge observed.

A single sample from October 2, 1992 tested above the detection limit for Bis(2-ethylhexyl)phthalate. Subsequent samples from the 1992-1993 and the 1999 investigations could not confirm elevated, detectable levels. The July 21, 1999 the sample was analyzed at the lower drinking water limit with the results being non-detectable. As noted in the East Avenue investigation, Bis(2-ethylhexyl)phthalate (DEHP) is a widely used plasticizer. The major use is in the production of polyvinyl chloride to make the plastic flexible.

In conclusion, there was no evidence of any prohibited discharge from the subject area. The one sample that showed the presence of this ubiquitous compound may be typical of this land use type, or a one-time leak or spill. Appendix I contains the analytical data conducted subsequent to the permit application.

Monitoring Program Report Section 5.8 - Seasonal Pollutant Loading and Event Mean Concentrations

Estimates of the seasonal pollutant load and of the event mean concentration of a representative storm for specified parameters was completed in 1999. On October 14, 1999 the completed study was mailed to EPA and FDEP, subsequent to the Annual Report for year four.

Permit Modifications

Section 6.1 - SWMP Modifications

The following suggestions are intended to focus resources on activities more likely to effect positive changes in water quality.

- Construction site inspectors are required to complete a checklist that includes observing a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) on site. The NOI is submitted during development review with plans that include BMPs that are substantially the same as the SWPPP. Please delete the checklist requirement from the permit.
- The feasibility of an erosion and sediment control certification program for construction site operators has been completed. The FDEP provides an appropriate certification and there is no need for a local certification program. Please amend the permit to reflect this change.
- The FW&PCOA training course has been found to be substantially the same as the FDEP Erosion and Sediment Control training. Please amend the permit to reflect this change.

Permit Modifications

Section 6.2 - Monitoring Program Modifications

As discussed in the previous section, the Discharge Monitoring Report is inappropriate for the permit-required non-discharge water quality data. There are no applicable effluent limits and the forms are too small to handle the amount of data generated. Please delete this element from the permit.

The Hudson Bayou monitoring requirements were completed. Please delete these elements from the permit.

The Pollutant Loading and Event Mean Concentration monitoring has not generated any useful information. To conclude that pollutant loads increase as urbanization occurs is not a useful conclusion, because it is common knowledge. The other conclusion, that pollutant loads increase less than would occur without the presence of BMPs, was also known beforehand. Please delete the Pollutant Load and Event Mean Concentration element from the permit.

Sarasota County is willing to develop new monitoring elements to replace those that were completed, as long as the total cost does not increase. The replacement element needs to be focused on finding a pollution source that can be remediated, or accurately measuring trends in water quality. A negotiation with EPA, NEP, FDEP, and SWFWMD is suggested to develop a useful monitoring element.

Permit Modifications
Section 6.3 - Other Permit Modifications

No other permit modifications are suggested at this time.

Section 7 - Fiscal Analysis

These figures were based on the best available information from Sarasota County and the City of Sarasota employees who were responsible for implementing the elements.

Table 7.1 Financial Survey for Year Five (1999):

Program Activity	Previous Year (FY 1998)	Current Year (FY 1999)	Future Year (FY 2000)	Funding Source/Comments
1. O & M of Structural Controls; Inspect Structural Controls	\$37,000	\$187,000	\$191,000	Storm water Fees
1. O & M of Structural Controls; Private Storm Water Systems	Not Available as a Line Item Cost			Costs included with Inspections of Structural Controls
1. O & M of Structural Controls; Inspector Training	\$8,450	Drainage: \$2,000	Drainage: \$2,500	Storm water Fees & Transportation General Funds
2. Control of Discharges; Adopt Ordinances and LDRs	Not Available as a Line Item Cost			Negligible Costs
2. Control of Discharges; Basin Planning	\$1,929,953	\$2,033,000	\$1,815,000	Storm water Fees
3. O & M of Roads; Litter Control	\$80,000	\$68,000	\$80,000	Transportation General Funds & Solid Waste Fees
3. O & M of Roads; Street Sweeping - County	\$3,143,525	\$3,100,000	\$3,000,200	Storm water Fees
3. O & M of Roads; Street Sweeping - City	\$250,000	\$250,000	\$250,000	Public Works Department
3. O & M of Roads; Street Sweeping - Keep Sarasota Beautiful - City & County	\$130,000	\$130,000	\$150,000	Solid Waste Tipping Fees & FDEP Grants.
3. O & M of Roads; Catch Basin and Ditch Maintenance	\$1,975,000	\$1,961,297	\$2,150,000	Storm water Fees
3. O & M of Roads; Pollution Reduction Practices - County	\$2,844	Drainage:\$2,250 \$2,844	Drainage: \$2,888 \$2,844	Transportation General Funds

Program Activity	Previous Year (FY 1998)	Current Year (FY 1999)	Future Year (FY 2000)	Funding Source/Comments
3. O & M of Roads; Pollution Reduction Practices - City	\$4,000	\$4,000	\$4,000	Police & Public Works Waste Hauling Costs
4. Flood Control Projects; Basin Plans	\$1,975,000	\$7,728,221	\$7,352,000	Storm water Capital Improvement Assessments
5. Discharges from Municipal Waste and POTW Facilities - County		Mosquito: \$4,000		Utility Fees & Solid Waste Fees
5. Discharges from Municipal Waste & POTW Facilities - City	Not Available as a Line Item Cost			Utility Fees & Solid Waste Fees
6. Pesticides, Herbicides, and Fertilizers; Public Education	\$8,000	\$35,885	\$33,000	Extension Service General Funds
6. Pesticides, Herbicides, and Fertilizers; Employee Training	\$7,000	Extension: \$815 Mosquito: \$5,000 Drainage: \$800	Drainage: \$1,000	Storm water & Transportation & Extension Service General Funds
6. Pesticides, Herbicides, and Fertilizers; Minimize Use and Proper Storage	\$166,608	Drainage: \$7000 Mosquito: \$1260	Drainage: \$10,000	Storm water & Transportation & Extension Service General Funds
7a. Illicit Discharges & Disposal; Non-Storm Water Discharges Allowed	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
7a. Illicit Discharges & Disposal; Inspections and Enforcement	\$355,529	\$376,124	\$376,124	Unincorporated Area Services Funds
7a. Illicit Discharges & Disposal; Amend Ordinances	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
7b. Illicit Discharges & Disposal; Outfall Inventory & Field Screening	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
7c. Illicit Discharges & Disposal; Investigate Illicit Connections	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
7d. Illicit Discharges & Disposal; Spill Response	\$181,940	\$181,940	\$181,940	Landfill Fee Surcharges & Fire Department General Funds
7e. Illicit Discharges & Disposal; Publicize Reporting of Illicit Discharges	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
7f. Illicit Discharges & Disposal; Hazardous Waste Collection	\$415,000	\$386,490	\$386,490	Landfill Fee Surcharge
7f. Illicit Discharges & Disposal; Storm Drain Stenciling	Not Available as a Line Item Cost			Costs Included in Litter Control

Program Activity	Previous Year (FY 1998)	Current Year (FY 1999)	Future Year (FY 2000)	Funding Source/Comments
7g. Illicit Discharges & Disposal; Sanitary Sewer Seepage - County	\$3,800,000	\$3,200,000	\$3,200,000	Utility Fees
7g. Illicit Discharges & Disposal; Sanitary Sewer Seepage - City	\$2,500,000	O&M: \$1,870,132 CIP: \$3,627,250	O&M: \$1,815,626 CIP: \$2,155,283	Utility Fees
8a. Industrial and High Risk Runoff; Facility Inspections	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
8b. Industrial and High Risk Runoff; Monitoring	Not Available as a Line Item Cost			Included in Cost of Illicit Inspections and Enforcement
9a. Construction Site Runoff; Amend Rules & Track Projects	Not Available as a Line Item Cost			Natural Resources & Transportation General Funds
9b. Construction Site Runoff; Inspection and Enforcement	Not Available as a Line Item Cost			NA
9c. Construction Site Runoff; Site Operator Training & Notification	NA	NA	NA	NA
V.A.1. Seasonal Loadings and Event Mean Concentrations	NA	\$7500	NA	Storm water Fees
V.A.2. Investigation of Organic Pollutants	NA	\$1000	NA	Storm water Fees
V.B.1. Existing Monthly Bay and Stream Runs	\$119,941	\$119,941	\$119,941	Unincorporated Area Services Funds
V.B.2. Monitoring in Big Slough, Hudson Bayou & Phillippi Creek Basins	\$28,020	\$28,020	\$28,684	Storm water Fees
V.B.3. Heavy Metals Monitoring Program in Hudson Bayou, Phase I	NA	\$2020	NA	Storm water Fees
V.B.4. Heavy Metals Monitoring in Hudson Bayou, Phase II	NA	NA	\$4600	Storm water Fees
Totals	\$17,117,810	\$25,323,789	\$23,313,120	