SARASOTA COUNTY

and the

CITY OF SARASOTA

ANNUAL REPORT

for PERMIT YEAR SEVEN

January 1, 2001 to December 31, 2001

National Pollutant Discharge Elimination System

Municipal Separate Storm Sewer System (MS4)

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

_____

Date

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.

_____

Michael McNees, City Manager
City of Sarasota

_____

Date

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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 were produced independently. All co-permittees have participated in a committee discussion of the issues presented in this report that apply to all co-permittees.

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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 stormwater runoff, through implementation of the many elements of the permit that was developed by the co-permittees in cooperation with the Florida Department of Environmental Protection (DEP), and the United States Environmental Protection Agency (EPA).

Storm Water Management Program Evaluation
Section 2.2 - Major Findings

The City and County continued the Basin Master Planning program; approving new studies and updating previously completed studies. The newly approved studies, covering Catfish Creek, Holiday Bayou, South Creek, Curry Creek and Hatchett Creek, were adopted by the Board of County Commissioners during 2001. Several previously approved basin studies were updated to include a significant amount of additional information reflecting new development and infrastructure improvements. It is anticipated that the basin studies and necessary updates will be completed in 2002. Upon reaching completion of this element, the permit will require modification. Although complete and approved, the basin studies will be maintained through annual updates to reflect on-going development and new information as it is discovered. In addition, staff previously involved in the master planning process will be able to focus more directly on water quality issues rather than flood control.

Storm Water Management Program Evaluation
Section 2.3 - Major Accomplishments

Additional progress was made in completing and updating Basin Master Plans and Capital Improvement Projects. Five Basin Master Plans were completed and approved, and seven were updated.

All required monitoring was completed. The forty stations sampled monthly provided data useful to state and regional agencies involved in watershed studies. An evaluation of the data is in Section 5 of this report.

A tremendous amount of work was involved in maintaining the stormwater system.

Hazardous Waste Management continued to provide many methods to properly recycle and dispose of powerfully polluting wastes.

Storm Water Management Program Evaluation
Section 2.4 - Overall Program Strengths and Weaknesses

The greatest strength of the SWMP is the cohesion that it brings to many separate activities, personnel, and programs. The SWMP reminds all these disparate people that what they do has an impact on stormwater quantity and quality and ultimately on the quality of the creeks, river, and bays in our community.

There were no weaknesses identified in the SWMP.

Storm Water Management Program Evaluation
Section 2.5 - Future Direction of Program

The SWMP will be modified by the new permit that was issued by DEP on April 1, 2002. Most of the SWMP remains substantially the same, although dry weather field screening and monitoring of industrial facilities will be reduced greatly.

Management of stormwater is likely to evolve in the coming years. Recent droughts have renewed public and municipal interest in proper use of water resources. Stormwater has been identified as a source of irrigation water, and may be reused more.

The EPA and DEP have embarked on a program of watershed management that will restrict pollutant loading. The Total Maximum Daily Load (TMDL) initiative will also be focusing management efforts on stormwater, since most other local pollutant load sources were ameliorated by past efforts. It is expected that stormwater improvements could improve the trophic states of our bays.

Various agencies of Sarasota County have united in a comprehensive approach to all issues associated with water. The Sarasota County Integrated Water Resource Team (IWRT) has developed three initiatives:

- Enhance water quality in bays, rivers, creeks, and natural systems;
- Provide adequate potable and irrigation water to meet projected needs; and
- Maximize flood protection.

A holistic approach will be developed to interconnect the hydraulic cycle so water resources can be conserved and utilized to the greatest advantage.

Summary Table for SWMP Activities
Section 3.1 - Maintenance of Structural Controls

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
1. Maintenance of Structural Controls.	Sarasota County	Inspect and maintain structural controls. Maintain an internal record keeping system. Summarize effectiveness in annual report.	85 wet retention areas. 62 ponds. 51 channel structures. 500 miles channels.	Yes	100 wet retention areas. Ponds maintained. 87 weirs & flow controls. 500 miles channels.	Drainage Operations records are in Appendix A.
	City of Sarasota	Inspect and maintain structural controls. Maintain an internal record keeping system. Summarize effectiveness in annual report.	4 wet retention areas. 11 ponds. 30 miles channels.	Yes	5 wet retention areas. 24 ponds. 30 miles channels.	Drainage Operations records are in Appendix A.
	Sarasota County & City of Sarasota	Inspect inventory of privately-owned stormwater systems. Summary and schedule in annual report.	Inspect.	Yes	129 inspections.	Stormwater Planning's inventory is the Storm Water Assessment database.
	Sarasota County	Complete the Florida Water and Pollution Control Operators Association (FW&PCOA) course or equivalent.	5 employees/year	Yes	28 in Drainage Operations.	Drainage Operations, Stormwater Planning & LDS.
	City of Sarasota	Complete the Florida Water and Pollution Control Operators Association (FW&PCOA) course or equivalent.	1 employee/permit.	Yes	4	The City Engineering inspector was FW&PCOA trained in 1995.

Summary Table for SWMP Activities
Section 3.2 - Development Planning Procedures

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
2: Development Planning.	Sarasota County	Adopt local stormwater treatment ordinances.	Similar to FAC 40D-4, 40D-40, 62-25.	Yes	Sarasota County Land Development Regulations.	Land Development Services keeps records.
	City of Sarasota	Adopt local stormwater treatment ordinances.	Similar to FAC 40D-4, 40D-40, 62-25.	Yes	Engineering Design Criteria Manual, Chapter 29.5 of the Code of the City of Sarasota.	City Engineering keeps records.
	Sarasota County & City of Sarasota	Complete master basin studies on schedule. Develop a course of action as completed. Summarize in annual report.	Completed studies. Course of action. Summarize.	Yes	6 basin studies were updated. 5 approved by BCC.	Stormwater Planning's capital improvement projects are in Appendix B.
	Sarasota County	Implement land development practices to reduce impervious surfaces.	Land development practices.	Yes	LDRs allow some pervious parking lots.	AWQP and LDS implement LDRs.
	City of Sarasota	Implement land development practices to reduce impervious surfaces.	Land development practices.	Yes	Zoning code updated.	City Planning does implementation.

Summary Table for SWMP Activities
Section 3.3 - Roadway Maintenance

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
3: Roadway Maintenance	Sarasota County	Control litter along roads. Properly dispose of wastes.	Control litter.	Yes	Adopt a road, park, shore or spot, Bag It In Your Car Day, Coastal Cleanup, Great American Cleanup, Cigarette butt anti litter program.	Keep Sarasota County Beautiful does implementation.
	City of Sarasota	Control litter along roads. Properly dispose of wastes.	Control litter.	Yes	274 tons from 150 cans emptied daily. 53 tons from crews. Prison crews. Keep Sarasota Beautiful.	City Public Services.
	Sarasota County	Sweep streets. Properly dispose of wastes.	Sweep streets.	Yes	5,067 miles swept in 2001.	Disposal was to the landfill. County Public Works.
	City of Sarasota	Sweep streets. Properly dispose of wastes.	Sweep streets.	Yes	1,338 tons from 261 miles.	Disposal was to the landfill. City Public Works.
	Sarasota County & City of Sarasota	Maintain catch basins, grates & roadside ditches by schedule. Dispose of sediments properly. Keep log of activities.	Maintain. Dispose. Log.	Yes	1,951 catch basins. 973 grates. 6.9 miles ditches.	No schedule. Cleaned as needed, by request, or because of storm. Drainage Operations implements this element.
	Sarasota County	Use BMPs to reduce polluted runoff from road repairs, equipment yards & maintenance shops.	BMPs	Yes	969 hours spent on BMPs.	County Public Works.
	City of Sarasota	Use BMPs to reduce polluted runoff from road repairs, equipment yards & maintenance shops.	BMPs	Yes	BMPs in place.	City Public Services BMPs are in Appendix C.

Summary Table for SWMP Activities
Section 3.4 - Flood Management

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
4: Flood Management	Sarasota County & City of Sarasota	List priorities and construction schedule for retrofit projects recommended by the basin master studies.	List.	Yes	4 projects completed, 1 started, 8 in design.	Stormwater Planning's Capital Improvement Program schedule for the beginning of Fiscal Year 2001 is included as Appendix B.

Summary Table for SWMP Activities
Section 3.5 - Municipal Facilities

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
5: Municipal Facilities	Sarasota County	Use BMPs to reduce polluted discharges from solid waste transfer stations, maintenance and storage yards for waste transportation fleets, POTWs and sludge sites.	BMPs.	Yes	Stormwater ponds. Careful fluid storage. Litter control. Leachate control. Tank inspections. Regulation. Setbacks.	Solid Waste, Utilities & AWQP.
	City of Sarasota	Use BMPs to reduce polluted discharges from solid waste transfer stations, maintenance and storage yards for waste transportation fleets, POTWs and sludge sites.	BMPs.	Yes	Stormwater ponds. Careful fluid storage. Leachate control. Recycling. Composting.	All sites were regulated by EPA, DEP, or AWQP. These activities are completed by Public Works & Utilities.

Summary Table for SWMP Activities
Section 3.6 - Pesticides, Herbicides, and Fertilizers

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
6: Pesticides, Herbicides, and Fertilizers	Sarasota County & City of Sarasota	Encourage the public to reduce usage of pesticides, herbicides, and fertilizers.	Encourage reductions.	Yes	10,220 visitors to Florida House plus 6500 visits to FH landscape. 39,928 assisted by Cooperative Extension. 138 enrolled in Florida Yards. 480,000 hits on CE website. 45 community associations assisted.	Public Service announcements. Mosquito habitat reduction. Cooperative Extension, Mosquito Management, & Facilities Maintenance.
	Sarasota County	Training and certify employees handling pesticides, herbicides, and fertilizers.	Train users.	Yes	176 test administered. > 20 employees trained.	Applicators were either certified or directly supervised by a certified person. Many groups involved.
	City of Sarasota	Training and certify employees handling pesticides, herbicides, and fertilizers.	Train users.	Yes	Cary Clark has the Certified Pesticide Operator license for the City of Sarasota. Foremen train employees.	Applicators were either certified or directly supervised by a certified person. City Public Services.
	Sarasota County	Minimize the use of pesticides, herbicides, and fertilizers. Properly store and mix.	Minimize use. Properly store & mix.	Yes	Reduce mosquito habitat. Mosquito fish. Special storage buildings. Use rinsates. Rubber mulch mats. Dry weather fertilization.	Extensive use of least-toxic alternatives. Many groups involved.
	City of Sarasota	Minimize the use of pesticides, herbicides, and fertilizers. Properly store and mix.	Minimize use. Properly store & mix.	Yes	Proper storage & mixing.	Extensive use of least-toxic alternatives. City Public Services.

Summary Table for SWMP Activities
Section 3.7 - Illicit Discharges and Improper Disposal

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7.a: Illicit Discharges & Improper Disposal - Inspections, Ordinances & Enforcement.	Sarasota County & City of Sarasota	List non-stormwater discharges allowed into MS4.	List.	Yes	The same 20 non-stormwater discharges allowed.	AWQP.
	Sarasota County & City of Sarasota	Inspect and prohibit illicit connections and illegal dumping into the MS4. Maintain inspection & enforcement log. Summarize in annual report.	Inspect. Enforce. Log. Summarize.	Yes	Hazardous Waste conducted 638 business inspections and investigated 52 citizen reports. AWQP investigated 567 citizen reports and conducted 86 business inspections.	Refer to Appendix D for investigation logs.
	Sarasota County	Prohibit illicit discharges into MS4.	Ordinance.	Yes	Ordinance 96-020.	AWQP
	City of Sarasota	Prohibit illicit discharges into MS4.	Ordinance.	Yes	County ordinance 96-020 applies in the city, via City Resolution No. 93-685.	AWQP
7.b: Illicit Discharges & Improper Disposal - Field Screening.	Sarasota County & City of Sarasota	Inspect major outfalls during dry weather. Inventory major outfalls with maps and database. Keep inspection log.	Entire MS4 screened once every five years.	Yes	20 new outfalls were inspected by AWQP. The inventory was updated and the log was updated.	No illicit discharges or improper disposal was found. The update to the inventory of major outfalls is in Appendix E.
7.c: Illicit Discharges and Improper Disposal - Investigations.	Sarasota County & City of Sarasota	Use standard investigative procedures	SOPs.	Yes	Field observation, interviews, test kits, meters, lab samples, enforcement, referrals to agencies.	AWQP used standard investigative procedures for citizen reports, facility inspections, and outfall screening.
7.d: Illicit Discharges & Improper Disposal - Spill Prevention and Response	Sarasota County & City of Sarasota	Use Sarasota County's Hazardous Materials Emergency Plan to mitigate potential pollutant discharges to surface waters.	Use SCHME plan.	Yes	Emergency Services, Special Operations was involved in 411 emergency responses.	A copy of the plan was included in the Annual Report for Year Five.
7.e: Illicit Discharges and Improper Disposal - Public Notification.	Sarasota County & City of Sarasota	Publicize citizen reporting of illicit discharges and improper disposal of materials to the MS4. Summarize in annual report.	Publicize reporting.	Yes	24 hour/day reporting system. Speeches, fairs & newsletters.	AWQP.
	Sarasota County & City of Sarasota	Investigate citizen reports. Log reports, investigation & resolution. Summarize log in annual report.	Investigate. Log.	Yes	AWQP investigated and resolved 567 citizen reports. Hazardous Waste completed 52.	The summary of the logs is in Appendix D.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
7.f: Illicit Discharges and Improper Disposal - Oils, Toxics and Household Hazardous Waste	Sarasota County & City of Sarasota	Support and promote oil recycling, collection of household hazardous wastes. Log amounts of waste materials collected.	Collect wastes.	Yes	472,00 pounds of waste collected. 3516 residential participants. 212 business participants.	Hazardous Waste Management.
	Sarasota County & City of Sarasota	Support and promote and support marking of storm sewer inlets that discharge directly or indirectly into surface waters.	Mark drains.	Yes	74 storm drains were marked by Keep Sarasota Beautiful.	Dumping Here Pollutes Our Bay
7.g: Illicit Discharges and Improper Disposal - Sanitary Sewer	Sarasota County	Limit the infiltration of sewage into the MS4.	Limit sewage in MS4.	Yes	Lift station rehab, SSES, manhole inserts.	County Utilities.
	City of Sarasota	Limit the infiltration of sewage into the MS4.	Limit sewage in MS4.	Yes	Sliplining, replace private sewers, compost residuals.	City Utilities.
	Sarasota County & City of Sarasota	Report to utility when sewage found in MS4.	Report to utility.	Yes	AWQP advised utilities of all reported sewage and effluent discharges.	No sanitary sewer seepage was found during dry-weather field screening.
	Sarasota County & City of Sarasota	Identify areas served by septic tanks. Report to Department of Health when septage found in MS4.	Identify septic service areas. Report to DOH.	Yes	The DOH maintains a database of septic system permits. AWQP notified the DOH of every reported septic system failure.	No septic system seepage was found during dry weather field screening.

Summary Table for SWMP Activities
Section 3.8 - High Risk Industrial Facilities

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
8.a: Industrial and High Risk Runoff. Identification of Priorities and Procedures for Inspections.	Sarasota County & City of Sarasota	Prioritize an inventory all high-risk facilities discharging into the MS4, including outfall and waterbody. Update in annual report.	Inventory dischargers.	Yes	AWQP maintains an inventory.	AWQP inspectors prioritize their inspection activities based on local knowledge, cooperation with DEP, and awareness of DEP and EPA permits. The inventory is in Appendix F.
	Sarasota County & City of Sarasota	Inspect facilities by schedule. Log inspections and results.	Inspect.	Yes	AWQP conducted 86 facility inspections (14 in the City of Sarasota).	The internal log was updated.
8.b: Industrial and High Risk Runoff - Monitoring of High Risk Industries.	Sarasota County & City of Sarasota	Monitor high-risk industrial facilities. Enforce when violations found.	Completed in previous years.	Yes	Facilities with EPA or DEP permits conducted monitoring as required by permit conditions. AWQP requires compliance or enforces against violations of water quality standards.	No monitoring was conducted by AWQP.

Summary Table for SWMP Activities
Section 3.9 - Construction

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9.a. Construction Site - Planning	Sarasota County	Regulate erosion and sediment like Southwest Florida Water Management District (SWFWMD) requirements and EPA NPDES Construction Activity General Permit. Reduce sediment leaving sites.	Regulate erosion.	Yes	Land Development Regulations require BMPs and NOIs.	LDS & AWQP.
	City of Sarasota	Regulate erosion and sediment like SWFWMD's requirements and EPA's NPDES Construction Activity General Permit. Reduce sediment leaving sites.	Regulate erosion.	Yes	Engineering Design Criteria require BMPs. NOIs required pre-development.	City Engineering conducted 120 inspections on >40 sites regulated by erosion permits, plus 30 other inspections.
	Sarasota County	Track projects. Document BMP installation, maintenance, and effectiveness.	Track & Document.	Yes	Projects were tracked, inspected by LDS. BMPs required during plans review and during construction.	The records of LDS inspections is in Appendix G.
	City of Sarasota	Track projects. Document BMP installation, maintenance, and effectiveness.	Track & Document.	Yes	Projects were tracked and inspected by the City Engineering Office. Inspectors require BMPs in compliance.	
9.b: Construction Site - Inspection and Enforcement.	Sarasota County	Train inspectors in erosion control techniques.	1 inspector/year	Yes	2 LDS & 2 AWQP inspectors received erosion training at the Public Works Academy.	All LDS inspectors are trained.
	City of Sarasota	Train inspectors in erosion control techniques.	1 inspector/year	Yes	All 4 city inspectors were trained.	City Engineering.
	Sarasota County	Use an inspection checklist that includes compliance with NPDES NOI and SWPPP. Require compliance with stormwater ordinance and local permits.	Require compliance.	Yes	LDS inspection checklists in use. Inspectors require compliance with 96-020 and construction permits. LDS refers water quality violations to AWQP.	AWQP investigates all reports of water quality violations. Inspection checklists are in Appendix E.
	City of Sarasota	Use an inspection checklist that includes compliance with NPDES NOI and SWPPP. Require compliance with stormwater ordinance and local permits.	Require compliance.	Yes	Erosion/siltation permits function as checklists. Engineering inspectors also checked for water quality and city code violations.	Compliance results (no off site sedimentation) is inspected and verified at completion (before releasing) each project. Water quality violations were referred to AWQP, DEP or SWFWMD.

PROGRAM ELEMENT	PERMITTEE	REQUIREMENT	ACTIVITY SCHEDULE			COMMENTS
			Activities Required by SWMP	Complied With	Activities Accomplished During Calendar Year	
9.c: Construction Site - Site Operator Training	Sarasota County & City of Sarasota	Conduct an annual NPDES workshop for design professionals, land developers, inspectors, and contractors, including earth-moving contractors. Present information about stormwater pollution BMPs, NPDES rules, and erosion BMPs.	Educate developers.	Yes	The Suncoast Public Works Academy offered the DEP erosion and sediment control training for developers twice in 2001, but both classes were cancelled because nobody registered.	
	Sarasota County & City of Sarasota	Offer erosion training for construction site operators, plan reviewers, and inspectors.	Train developers, reviewers & inspectors,	Yes	The Suncoast Public Works Academy offered the DEP erosion and sediment control training for inspectors in March and October.	
	Sarasota County	Notify building permit applicants about NPDES construction regulations.	Notify developers about NPDES.	Yes	During plans review, builders were notified about NPDES permits needed for sites over five acres.	LDS.
	City of Sarasota	Notify building permit applicants about NPDES construction regulations.	Notify developers about NPDES.	Yes	During plans review, builders were notified about NPDES permits needed for sites over five acres.	City Engineering.
	Sarasota County & City of Sarasota	Conduct presentations to construction professionals to discuss proper construction site management for water quality.	Presentations for developers.	Yes	The Suncoast Public Works Academy offered the DEP erosion and sediment control training for developers twice in 2001, but both classes were cancelled because nobody registered.	

Narrative Reports for SWMP Activities
Section 4.1 - Maintenance of Structural Controls

Inspect, Maintain & Assess Structural Controls - City and County

Ponds and Lakes:

City, County, and State ponds were mowed, treated, and had litter removed on a monthly schedule. Underdrains were not maintained, but will be again in 2002, as they are done on a 18 month cycle. Fence repair and other maintenance were completed as needed. Collected debris was landfilled. Mowing and herbicide inspections totaled 4,571. The City of Sarasota has an inventory of 5 lakes and 28 ponds; all were treated with herbicides and mowed in 2001. Maintenance activities continued at pre-existing levels 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:

Sarasota County has an inventory of 105 wet areas; 100 sites were inspected, mowed, and treated with herbicides on a monthly maintenance cycle. During the year, 138 ponds were inspected and treated with herbicides and cut monthly. Inspections for herbicide treatment and mowing totaled 4,572 in 2001. The City of Sarasota has an inventory of 5 lakes and 24 ponds, all were treated and mowed. A total of 732 inspections on City sites were completed in 2001. A total of 5,304 inspections were accomplished during the year.

Weirs and Flow Control Devices:

Litter control and vegetation removal were done as required on the 87 weirs and flow control devices. Annual structural inspections included checking major defects, erosion, sedimentation, bleed-down devices, and underdrains. These inspections were completed on 66 of the 87 weirs and flow control devices. Maintenance schedules were rearranged to address deficiencies identified in the inspector's reports. Repairs were completed on 16 structures for a cost of $4,928.

Channels:

Channel maintenance was completed by hand clearing contractors and by in-house staff. In 2001, the contractors completed 288 sites, totaling 175 miles. Hydraulic excavators cleared 18 miles, hydraulic mowers completed 208 miles, and prison labor cleared 15 miles. A total of 417 miles were cleared and maintained at a cost of $1,683,408.

All 500 miles of County channels were inspected, as well as 30 miles of City channels. In-house herbicide treatments were completed in the City and County. All 8 control structures in the City and 58 in the County were completed.

Cost Summary:

Channel maintenance:	$1,706,623;	309 inspections.
Pond maintenance:	$163,285;	31,000 inspections.
Catch basin maintenance:	$8,337;	1,951 inspections.
Weir maintenance:	$5,345;	82 inspections.
Mitigation maintenance:	$40,042;	748 hours.
Roadside ditch maintenance:	$598,474;	46 miles.
Pond excavation:	$14,386;	843 hours.

Permit Element: Inspect, Maintain & Assess Structural Controls

Objective: Prevent flooding and reduce pollutants in MS4.

Activities: Described above.

Compliance: In compliance. Schedules on track.

Strengths: 33,342 inspections.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Private Stormwater Systems: Inventory, Inspect & Require Compliance - City and County

The inventory of residential subdivisions and commercial parcels receiving Storm Water Assessment credits in Sarasota County and the City of Sarasota were regularly updated to account for new development. The credit was applied to developments that operate and maintain the private stormwater management system serving a specific area. Sarasota County Storm Water 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 and filtration systems, and other aboveground structures or features. Existing conditions were compared to construction drawings or as-built drawings as needed.

The Ordinance calls for owner notification if a private stormwater system does not pass inspection. After notification, the owner has 90 days to perform remedial actions to bring the system into compliance. Noncompliance can result in revocation of the stormwater assessment credits. During 2001, 129 private systems were inspected under this program. One hundred twenty systems passed the inspection, having been maintained and operated according to the original design. Five systems exhibited minor maintenance problems that were promptly corrected. Monitoring of draw-down time of three systems indicated that all three were operating adequately. Stormwater assessment credits were revoked for only one stormwater system, which serves a commercial shopping center. County staff is currently working with the property owners to bring the system into compliance.

Permit Element: Inventory, inspect & require compliance of private stormwater systems.

Objective: Prevent flooding and reduce pollutants in the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Inspection serves dual purposes of water quality and verifying assessment credit.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

FW&PCOA Training - Sarasota County

Twenty-eight Drainage Operations staff attended training, including Stormwater Inspector Certification, Stormwater License, Chemical Response, Environmental Permitting, and Aquatic Weed Control. County employees attended the Florida Association of Stormwater Utilities annual conference. Representatives of the City and County routinely attend the Florida Stormwater Programs Association meetings. Some County employees are members of the International Erosion Control Society.

FW&PCOA Training - Sarasota County

Four employees were certified as stormwater inspectors, making a total of five trained employees.

Permit Element: Train employees.

Objective: Improve stormwater maintenance and erosion controls.

Activities: Described above and in Section 4.9.b.

Compliance: In compliance.

Strengths: Better erosion controls.

Weaknesses: None were identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.2 - Development Planning Procedures

Local Stormwater Treatment Ordinance - Sarasota County

Sarasota County Land Development Regulations require the detention and treatment of stormwater in order to improve the quality of stormwater runoff.

Section B.4.e.3. of the Subdivision Technical Manual of the Land Development Regulations, Ordinance No. 2000-074, and Section C.4.c. of the Development Improvements Technical Manual of the Land Development Regulations for properties other than subdivisions require that "Wet detention treatment shall be designed to treat one inch of runoff, other treatment systems shall be designed to treat runoff resulting from the first one inch of rainfall. Stormwater systems discharging directly into saltwater tidal systems, bays, or the gulf shall be designed to treat 1.5 times the volume required for the selected treatment system".

Section B.4.e.3. of the Subdivision Technical Manual, Ordinance No. 2002-026 requires stormwater master plan for treatment for the entire site of all new rezones.

Local Stormwater Treatment Ordinance - City of Sarasota

Chapter 29.5 of Code of the City of Sarasota created the Engineering Design Criteria Manual (created 1989) which requires development in the City to meet SWFWMD rules for stormwater quality.

Permit Element: Require stormwater treatment for developments.

Objective: Reduce the amount of pollution entering the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Reductions in pollutants.

Weaknesses: With additional development, the total pollution load still increases. The rate of increase is diminished by the control structures.

Assessment: Big improvement over pre-regulated conditions.

Future: Additional controls may be needed to reduce pollutant loads, retain stormwater for irrigation reuse, and restore natural hydrology.

Modifications: None at this time.

Basin Master Planning - City and County

Basin Master Planning continued in 2001, with approval of new studies and updating of previously completed studies. Six plans were updated during 2001, and five were approved by the Sarasota County Board of County Commissioners (BCC), including Catfish Creek, Holiday Bayou, South Creek, Curry Creek, Hatchett Creek, and the Business District. Two plans were underway, with BCC approval expected in 2002. Subsequent to Board approval, all completed basin studies will be updated annually to reflect new development, infrastructure improvements, and physical changes to the stormwater system. Basin master plans include an estimation of pollutant loading based on land usage and BMPs.

Table 4.2. Basin Master Plans Status.

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

* Studies completed but not yet adopted by Board of County Commissioners.

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

It is anticipated that the basin studies and necessary updates will be completed in 2002. Upon reaching completion of this element, the permit will require modification. Although complete, the basin studies will be maintained through annual updates to reflect on-going development, infrastructure improvements, and new information. In addition, staff previously involved in the master planning process will be able to focus more directly on water quality issues rather than flood control.

To that end, various agencies of Sarasota County have united in a more comprehensive approach to all issues associated with water. The Sarasota County Integrated Water Resource Team (IWRT) has developed three initiatives:

- Enhance water quality in bays, rivers, creeks, and natural systems;
- Provide adequate potable and irrigation water to meet projected needs; and
- Maximize flood protection.

A holistic approach will be developed to interconnect the hydraulic cycle so water resources can be conserved and utilized to the greatest advantage.

Permit Element: Basin master planning.

Objective: Limit pollutant discharges from developments.

Activities: Described above.

Compliance: In compliance.

Strengths: Information from the master plans has tremendous value for flooding and water quality.

Weaknesses: Funding for projects exclusively for water quality was not readily available.

Assessment: The basin master planning program in Sarasota County is leading the way for other counties and cities.

Future: It is anticipated that water quality efforts will expand as flood control problems are resolved.

Modifications: None at this time.

Land Development Regulations Reducing Impervious Surfaces - Sarasota County

LDRs allow up to 25% of parking spaces to be grass or other impervious (unpaved) surface. Houses of worship, schools, and certain other land uses can have entirely pervious parking, except handicapped parking spaces, which must be impervious.

LDRs require pervious areas (buffers and greenbelts) in all new subdivisions.

Land Development Regulations Reducing Impervious Surfaces - City of Sarasota

The Sarasota City Plan (1988) includes the following Action Strategy in the Environmental Protection Chapter:

> 3.5 Impervious Surface Area: The City shall explore reducing the amount of existing impervious surface in the Sarasota Bay watershed and seek alternatives for reducing the impervious surface area in future development.

On April 29, 2002, The Sarasota City Commission adopted impervious surface limitations for all single family residential zone districts. Maximum impervious coverages (for individual lots) are as follows:

- RSF-E 60%
- RSF-1 70%
- RSF-2 75%
- RSF-3 75%
- RSF-4 75%
- RSM-9* 75%

*applies only to detached single family dwellings

Permit Element: Land development regulations to minimize impervious surfaces.

Objective: Reduce runoff to the MS4 and thereby reduce pollutant loading.

Activities: Described above.

Compliance: In compliance.

Strengths: An effort is being made.

Weaknesses: None identified.

Assessment: Moderately effective.

Future: County is considering increased buffer widths. No more than 110% of parking can be paved, and any parking above 110% shall be pervious.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.3 - Roadway Maintenance

Litter Control - City and County

Keep Sarasota County Beautiful coordinates volunteers in the following litter control programs:

- Adopt a road, park, shore or spot;
- Bag-It-In-Your-Car Day;
- Coastal Cleanup Day;
- Great American Cleanup Day;
- Cigarette butt anti-litter program.

Litter Control - Sarasota County

Mowing staff and contractors remove litter along roadways and ponds. All scheduled mowing was inspected during and after mowing.

Litter Control - City of Sarasota

- Approximately 150 trash receptacles from parking areas and commercial streets were emptied daily, including weekends, for a total of 274 tons per year.
- Landscaping crews picked up 53 tons per year of litter from commercial streets, parking lots, and state highways within the City limits.
- Day laborers picked up litter from alleys, railroad tracks, and other public areas.
- Keep Sarasota Beautiful and other neighborhood cleanups were supported.

Permit Element: Litter removal.

Objective: Capture litter before it enters the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Inspections result in better litter removal.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Street Sweeping - Sarasota County

Street sweeping was scheduled monthly. Rural roads were swept by contract and consisted of 732 sites. Residential streets were swept by contract and included 424 sites. In-house residential sweeping completed 3,716 miles of roads. Total inspections for the year were 1,156.

Street Sweeping - City of Sarasota

Public Works operates three sweepers on daily routes. Residential areas were completed once per month. Commercial areas were swept up to three times per week. State roads within the City were swept either monthly or bi-monthly depending on the area. Last year 1,338 tons were removed from the 225 miles of residential streets and 36 miles of commercial and state roads. All wastes were brought to the landfill.

Permit Element: Sweep streets.
Objective: Capture pollutants before they enter the MS4.
Activities: Described above.
Compliance: In compliance.
Strengths: Scheduling.
Weaknesses: None were identified.
Assessment: Highly effective.
Future: Continue the existing program.
Modifications: None at this time.

Maintenance of Roadside Stormwater Structures - City and County

Crews do not work from a schedule for this type of maintenance. Grates were cleared during or after storms. Catch basins were cleaned as needed. Roadside ditches were cleaned by request.

- 1,951 catch basins were cleaned.
- 973 gates were cleaned.
- 6.9 miles of roadside ditches were maintained and were sodded.

Permit Element: Maintain roadside stormwater structures.

Objective: Minimize flooding and minimize the pollutants in stormwater runoff.

Activities: Described above.

Compliance: In compliance.

Strengths: Much work accomplished.

Weaknesses: None identified.

Assessment: Schedules may be useful.

Future: Continue the established program.

Modifications: None at this time.

Road Repair - Sarasota County

BMPs were used during all road repairs, as follows:

- Silt screens were installed at all discharge locations from construction sites.
- Turbidity curtains were installed in waterways potentially impacted by construction activity, and turbidity was monitored in the waterways.
- Sedimentation devices were installed at stormwater inlet structures affected by construction activity.

Municipal Yards & Shops - Sarasota County

BMPs were implemented at work sites, equipment yards, maintenance shops, and fleet storage sites. In 2001, 969 hours were allocated to such maintenance measures.

Road Repair, Municipal Yards & Shops - City of Sarasota

City standards for erosion and siltation control were employed, as described in the Engineering Design Manual, Part 2, in Appendix C. The BMPs used for fleet maintenance are also included in Appendix C.

Permit Element: Implement BMPs at road work sites, yards, and shops.

Objective: Reduce pollutants in stormwater discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: BMPs were effective.

Weaknesses: None identified.

Assessment: Adequate.

Future: Continue with existing methods.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.4 - Flood Management

Several flood control projects were completed during 2001, as recommended by the Basin Master Plans. These projects addressed structure and street flooding level of service deficiencies. Although focused on flood control, the projects included some water quality design features as well. Bank stabilization, vegetation planting, water quality inlet structures, attenuation practices, 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, the focus of some projects will shift toward water quality issues.

Table 4.4 2001 Flood Control Projects

Completed Projects	Projects Started	Projects in Design
Redbug Slough	North Manasota Gardens	Arlington / Euclid
Phillippi Main B		Bahia Vista / Lockwood Ridge
Oakhurst Condo		Branch BA
Baywood Drive		Albee Road
		North Englewood Lateral
		St. Armands Circle
		Little Five Points
		Woodmere North Branch

Two projects were being designed with specific water quality features. The Northern Branch project in the Woodmere Creek basin is being coordinated with a wetland restoration project on the County-owned Lemon Bay Preserve. Stormwater flows will be diverted into a historic wetland that had been drained to control mosquito control in decades past. Approximately 50 acres of wetland will be re-hydrated as a result. In Hudson Bayou, an entirely urban drainage basin in the City of Sarasota, the Little Five Points project will incorporate a centrifugal water

quality inlet structure. The structure will separate floatables and solids from the runoff entering Sarasota Bay.

During 2001, the County progressed in development of a dredging program intended to improve navigation of area waterways. Most previous dredging removed sediment to improve drainage. In concert with the dredging programs, Sarasota County will continue to focus on sediment source abatement.

Source abatement activities included erosion repair, re-vegetation of disturbed areas, street sweeping, selective herbicide application, and regular maintenance on sediment removal devices such as weirs, baffle boxes, and inlet inserts. In addition, Sarasota County has successfully applied for grant funding under Chapter 319 for the installation of four more baffle-box sediment capture devices. These devices were designed to remove sediment and vegetative material from runoff, thereby reducing the amount of suspended solids and total nitrogen entering the receiving waters. Monitoring will be an conducted to measure the effectiveness of the baffle-boxes.

In 2001, four projects were completed and another project was started. Three of the five projects included attenuation, one project included vegetative planting, and one project included stabilization of canal banks at roadway crossings.

Permit Element: Flood management.
Objective: Ensure that flood control projects include pollution reduction features.
Activities: Described above.
Compliance: In compliance.
Strengths: Flooding was reduced.
Weaknesses: Funding for water quality projects was limited.
Assessment: Effective to control flooding.
Future: Integrated Water Resource Team.
Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.5 - Municipal Facilities Not Covered by a NPDES Storm Water Permit

Solid Waste Facilities - Sarasota County

The Central County Solid Waste Disposal Complex (CCSWDC) was opened in 1998 and is subject to a NPDES stormwater discharge requirements for municipal landfills. The CCSWDC will be submitting the DEP Notice of Intent (NOI) for coverage under the Multi-Sector Generic Permit (MSGP) for Stormwater Discharge Associated with Industrial Activity. The DEP Solid Waste Section also regulates the site.

CCSWDC has seven stormwater ponds. All stormwater structures are only a few years old and in good condition; they were inspected several times weekly and repairs were made as needed. When Phase 1 is closed, permanent let-down structures will be built to carry the stormwater to the proper swales and then to the holding pond before discharge. The permanent storage facility was completed and all fuels and oil were stored inside. There was no maintenance of equipment done at the site.

The Bee Ridge Landfill was closed in February 2000 and was subject to permit FLS0039306 that expired on March 31, 2000. The site is regulated by a long term care permit. A DEP NOI will be submitted for coverage under the MSGP. The DEP Solid Waste Section also regulates this site.

Runoff from the site drains to two stormwater detention ponds that are large enough to hold the first ten inches of rainfall with out a discharge off site. The site was mowed, cleaned to grade, and swales were kept cleaned and in good condition. The swales were cleared of all debris and now a vehicle can drive around all swales. The stormwater structures are only a few years old and in good condition. They were inspected several times weekly and repairs were made as needed. There was no maintenance of equipment done on the site.

The former Venice Landfill was closed in 1986 and is now subject to a DEP Long Term Care

Permit that includes stormwater issues. The existing Jackson Road Transfer Station has a leachate control system that was deactivated in October 1998. The DEP Solid Waste Section also regulates the site. This site does not have a NPDES stormwater permit. A very large pond captures stormwater on-site. The site was mowed and stormwater swales were kept cleaned and in good condition. The stormwater system was inspected several times weekly and repairs made immediately, when needed. There was no maintenance of equipment done on the site.

Solid Waste Facilities - City of Sarasota

The City of Sarasota's has an integrated collection system utilizing both City personnel and private haulers for solid wastes and recyclable materials. The City contracts with Browning Ferris of North America (BFIF) to operate three facilities: a recyclable materials processing center, a recyclable materials buy back center, and a solid waste transfer facility.

Residential solid waste was collected twice each week by City crews using 12 trucks. Residential yard waste and bulk trash were collected using BFIF loaders, then delivered to the transfer facility. Commercial solid waste was collected by City crews from one to six times per week, using a fleet of five front loaders. In 2001, the City picked up 18,498 tons of residential waste and 24,450 tons of commercial waste. Final disposal was to the CCSWDC.

Mandatory curbside recycling was performed once a week by BFIF. Materials were sorted by BFIF then stored, baled, and shipped from the recyclable materials recovery facility. Mandatory commercial recycling was handled by the private sector and was not franchised. BFIF, Waste Management, and other contractors have as many as 1,000 commercial accounts in the City.

Solid Waste Fleet and Equipment Maintenance and Storage Yards - Sarasota County

Solid Waste fleet and equipment was maintained by County Fleet Services. Fleet vehicles and equipment were stored at the CCSWDC. Both the DEP and the County inspect the CCSWDC. County staff also inspect Fleet Services. The CCSWDC will be applying for a NPDES stormwater permit. There was no maintenance of equipment done on any of the landfill sites.

Solid Waste Fleet and Equipment Maintenance and Storage Yards - City of Sarasota

Facilities were properly maintained.

Publicly Operated Wastewater Treatment Works (POTWs) - Sarasota County

None of the POTWs have NPDES stormwater permits. Some of the facilities have DEP or SWFWMD stormwater permits that require mowing of small stormwater detention ponds.

Mineral acid tanks, fuel tanks, and hazardous substance tanks over 550 gallons are regulated and inspected by the DEP. Plant personnel perform a visual inspection of these tanks daily.

Publicly Operated Wastewater Treatment Works - City of Sarasota

The POTW site was operated according to a stormwater pollution prevention plan. Diesel, acid, and caustic tanks were all within secondary containment.

Wastewater Utilities Fleet and Equipment Maintenance and Storage Yards - Sarasota County

Vehicles were stored in Utilities parking lots. Vehicles were maintained off-site by Transit and Fleet Services. County staff inspect Fleet Services.

Wastewater Utility Fleet and Equipment Maintenance and Storage Yards - City of Sarasota

Facilities were properly maintained.

Wastewater Residuals Application Sites - Sarasota County

AWQP inspects the residuals sites monthly to ensure compliance with state and local rules. The sites were also regulated by the DEP.

In 2001, Sarasota County had five ranch properties permitted and actively receiving land applications of domestic wastewater residuals. The land application site Agricultural Use Permits were issued by the DEP. Land application sites are excluded from NPDES permitting per Title 40, Code of Federal Regulations, 122.26(b)(14)(ix), but were inspected monthly to ensure that proper application rates, setbacks, and access restrictions for cattle and humans were maintained.

Wastewater Residuals Application Sites - City of Sarasota

Wastewater residuals were composted and reused as mulch; no residuals were land applied.

Permit Element: Municipal facility stormwater controls.

Objective: Reduce pollution in stormwater.

Activities: Described above.

Compliance: In compliance.

Strengths: All facilities were well regulated and inspected.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.6 - Pesticides, Herbicides, and Fertilizers

Public Education to Reduce Use of Pesticides, Herbicides, and Fertilizers

Community Services, Cooperative Extension Service - City and County

Public education programs continued to address the reduction of landscape watering, the reduced use of pesticides, herbicides, and fertilizers, and the design of landscapes to minimize stormwater runoff. The Sarasota County Cooperative Extension Service was the primary agency performing these programs. Sarasota Extension also provided advice on native plantings, xeriscaping, appropriate use of fertilizers (including slow-release), and Integrated Pest Management (emphasizing "least-toxic" approaches). Most of these services were provided through the Florida Yards & Neighborhoods program, utilizing Environmental Landscape Management principles. The dominant Sarasota Extension facility demonstrating and educating these principles is the Florida House Learning Center, which utilized many innovative materials and methods to reduce energy, wastes, and environmental impact.

In 2001, Sarasota County Cooperative Extension Service welcomed 10,220 recorded visitors to the Florida House, with another 6,500 visitors estimated to have visited the landscape alone. Another 32,928 people received landscape assistance from Extension staff in direct outreach efforts, primarily through contact with the Extension Helpdesk and Satellite Service, and there were over 480,000 hits on the office website, which featured resource conservation and Environmental Landscape Management information. There were 222 landscape and pesticide educational programs conducted, 138 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 146 in Sarasota County). There was an active outreach program to the public school system to promote the responsible use of pesticides, herbicides, and fertilizers. The new outreach program assisting condominium and homeowner associations to reduce stormwater runoff and improve stormwater quality through landscape and irrigation modifications has begun to show impressive results. Of the 45 community associations worked with in the first 6 months, 90% made positive changes such as adjusting irrigation seasonally,

calibrating irrigation, capping unnecessary irrigation heads, installing or expanding micro-irrigation, and selecting drought-tolerant plants (where appropriate) when making landscape changes. Over 3,000,000 gallons were saved on one property alone and there were reports of 30-70% less water used on average. One property reported 50% less nitrogen used and there was a general decrease in pesticide and fertilizer usage. All Sarasota Extension programs were offered and available to all County residents, including residents of the cities of Sarasota, Venice, North Port, and Longboat Key.

Health and Human Services, Mosquito Management Services

Mosquito prevention was an effective method to reduce the usage of pesticides. Promotional measures included public service announcements, newspaper articles, a web page, and brochures. In 2001, there were nine television interviews, two public service videos, and four newspaper articles about how citizens can prevent mosquitoes. A container abatement program was initiated in 2001, which reduces mosquito habitat. Preliminary work and an educational package were completed. Community education efforts were increased for 2001 and will have even greater emphasis in 2002 programs.

One method of non-pesticide mosquito control is the use of Gambusia (mosquito fish). Mosquito fish are predators of mosquito larvae and were provided to the public for new detention systems and ponds. These fish reduce the need for pesticide applications.

Permit Element: Educate the public about using less pesticide, herbicide, and fertilizer.

Objective: To minimize pesticides, herbicides, and nutrients in stormwater runoff.

Activities: Described above.

Compliance: In compliance.

Strengths: Widespread public support for IPM.

Weaknesses: Mosquito-borne diseases reduce support for IPM.

Assessment: Effective.

Future: Permanently staff and fund the FY&N Condo Outreach Horticulturist position. Continue the increase in public education efforts in schools, for home owner associations, and in other public venues. Implement the container abatement effort, and

follow-up with inspections. Assign a full-time Mosquito Management employee to public education.

Modifications: None at this time.

Training for Handlers of Pesticides, Herbicides, and Fertilizers

Community Services, Cooperative Extension Service - City and County

The Sarasota County Cooperative Extension Service provides training, testing, and certification for pesticide and herbicide applicators. In 2001, 176 pesticide tests were administered. An additional 355 people attended quarterly pesticide training seminars, Limited Landscape Maintenance Certification qualification seminars, Limited Lawn and Ornamental Training seminars, and other less formal group learning activities. All students became more educated about proper pesticide handling and application and proper landscape management. All training programs incorporated training for pesticide mixing, storage, and minimizing pesticide use.

In 2001, the Cooperative Extension Service tightened its business relationship with the Landscape Maintenance Association in order to facilitate the licensing of more landscape maintenance operators.

Health and Human Services, Mosquito Management Services

All 16 full-time employees were certified by OSHA and DACS and maintained certification records. All nine seasonal personnel were trained (not certified), but worked under direct supervision of full-time staff. Up to 15 seasonal employees will be trained in 2002. Training includes EPA labels, spill prevention and containment, and safe application.

The facilities and applicators were subject to extensive oversight, including periodic inspections by DACS Bureau of Entomology and Pest Control, an annual program review by the County IPM Advisory Board, monthly updates to the County IPM Advisory Board, and periodic review by the Steering Committee.

The Safety and Health Specialist or other certified instructors train 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.
- First Aide/CPR

Public Works, Operations, Aquatic Plant Control Section - Sarasota County

Two employees received Aquatic Weed Control certification. New employees were required to be certified within six months of employment. Certification was also required of contractors. All ten aquatic plant control applicators hold DACS Restricted Use Pesticide Licenses with aquatic and Right-of-Way endorsements attached.

Public Works, Forestry Operations

All applicators in the Forestry Division have Limited Lawn and Ornamental licenses from the state. All arborists will have CEUs and Limited Lawn and Ornamental licenses as part of their job requirements.

Environmental Services, Resource Management Services

Three staff members are recertified on a rotating basis by completing CEUs in the specific field of Government and Natural Areas Herbicide Training, as required by the State of Florida. All contractors were required by bid and contract specifications to have a certified herbicide applicator on site during all treatments on County properties.

City of Sarasota

Cary Clark of Public Works is certified by the State as a Pest Control Operator. Last year he completed 16 hours of in-house training for four employees in the Landscaping Division. Training included proper mixing, spraying, handling, and storage for the normally used chemicals, such as Roundup. Landscape foremen train all new employees in proper fertilization

practices.

Permit Element: Train handlers of pesticides, herbicides and fertilizers.

Objective: To minimize the pesticides, herbicides, and nutrients in stormwater runoff.

Activities: Described above.

Compliance: In compliance.

Strengths: Applicators were well trained about pesticides and herbicides.

Weaknesses: Fertilizer application may be a lower priority for training.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Reduced Use and Proper Storage and Mixing of Pesticides, Herbicides, and Fertilizers

Health and Human Services, Mosquito Management Services

Least toxic methods of mosquito management were used whenever practical. These methods include habitat reduction, introduction of predatory mosquito fish, public education, and the review of engineering plans to prevent construction of artificial mosquito habitats. When pesticide applications were needed, the least-toxic practical methods were used. For example, *Bacillus thuringiensis* is a least toxic larvicide that can be used to manage mosquitoes in water.

The use of mosquito adulticide was minimized by increasing larviciding. Adulticide reduction areas were established over approximately 25 square miles of the County, which decreased spraying of organophosphate adulticides by 75%. Adulticide reduction areas were mapped and records were kept of all larviciding and adulticiding. In 2001, the ratio of acres larvicided to acres adulticided was 407 to 1, which exceeded the goal by 27%. GIS was used for precision targeting of areas needing adulticide treatment. Four full-time technicians and eight seasonal staff were assigned to adulticide reduction areas.

Gambusia mosquito-predating fish were introduced into more than 400 stormwater sites to

control mosquitoes.

Another method to eliminate mosquitoes was a new habitat elimination. This new effort focused on exotic aquatic plants that provide habitat for mosquitoes. Management of these coastal habitats was coordination with DEP.

Storage of pesticides was confined to the pesticide storage facility, a 40 by 60-foot building with concrete floors and a 120-gallon impervious sump. All pesticides were stored, applied, and disposed of according to their individual EPA-registered labels. No pesticide rinsates were accumulated; all were applied at treatment sites. Pesticide drums were removed on a regular basis by a registered recycling service and containers were disposed of according to their label instructions. Container disposal records were kept. The Safety and Health Specialist inspected and inventoried the chemical storage building weekly and oversaw immediate corrective actions if any deficiencies were found. Personnel were trained to handle and apply pesticides to eliminate spills, but were also were trained how to contain and clean-up spills. The County's registered Household Hazardous Waste contractor was available to dispose of spilled materials.

Public Works, Drainage Operations - Sarasota County

A specific indoor location was designated for storage of pesticides and herbicides. Less channel slope (only the lower portion) was being herbicided, which also reduced erosion problems.

Public Works Aquatic Plant Control Section - Sarasota County

- Storage of pesticides was confined to the same 40 by 60-foot pesticide storage building used by Mosquito Management Services;
- Chemicals that were applied by Aquatic Plant Control were approved by the DEP for use in water bodies;
- Aquatic Services did scheduled maintenance on canals and drainage ditches throughout the year. Canal slopes and banks were spot treated with herbicides.

Public Works, Forestry Operations

- 10,000 Street Trees were fertilized twice, accounting for 15 tons annually.

- Herbicides were applied to 10,000 street trees 3 times per year using IPM principles.
- Herbicides and pre-emergent treatments were applied to 100,000 square feet of bedded areas using IPM principles.
- Herbicide use was reduced by 25% by using rubber mulch mats on over 2000 trees.
- More fertilizers were used on growing trees as the root zones of street trees increased.
- Fertilizers were applied during the dry times of the year to reduce nitrogen runoff.
- Annual application of polymer coated fertilizers will be used, beginning in the autumn of 2002.
- The application of herbicides will continue to decrease as the number of street trees increases.

Environmental Services, Resource Management

All pesticides were stored, applied, and disposed of according to their individual EPA-registered labels. Personnel who store and handle pesticides were state certified or worked under the supervision of a state certified applicator. Most herbicide treatment activities were contracted out because of the large scale operations on County preserves. Very little herbicide mixing was conducted by County staff.

Reduced Use and Proper Storage and Mixing of Pesticides, Herbicides, and Fertilizers - City of Sarasota

Proper methods for storage and mixing of pesticides, herbicides, and fertilizers were employed.

Permit Element: Reduce usage and properly mix, store, and apply pesticides, herbicides and fertilizers.

Objective: Minimize pesticides, herbicides, and nutrients in stormwater runoff.

Activities: Described above.

Compliance: In compliance.

Strengths: Many control methods that reduce or eliminate pesticides or herbicides.

Weaknesses: Seasonal staffing for Mosquito Management was a challenge. The subtropical climate allows bugs and weeds to thrive.

Assessment: Effective.

Future: Increased use of biological controls and habitat elimination. Research on safe alternatives to spraying. Continued increase of adulticide reduction areas, and decrease in adulticide spraying of organophosphates. Increased GIS use.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.a - Illicit Discharges & Improper Disposal: Inspection, Ordinances and Enforcement

List of Allowed Discharges to MS4 - City and County

- uncontaminated roof drains;
- water line flushing;
- landscape irrigation;
- diverted stream flows;
- rising ground waters;
- uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)) to separate storm sewers;
- uncontaminated pumped ground water;
- discharges from potable water sources;
- foundation drains;
- air conditioning condensate;
- irrigation water;
- springs;
- water from crawl space pumps;
- footing drains;
- lawn watering;
- individual residential car washing;
- flows from riparian habitats and wetlands;
- dechlorinated swimming pool discharges;
- street wash waters; and
- discharges or flows from emergency fire fighting activities.

Permit Element: List allowable discharges to MS4.

Objective: Appropriate discharge prohibitions.

Activities: Listed above.

Compliance: In compliance.

Strengths: The list continued to be appropriate.

Weaknesses: None were identified.

Assessment: Effective.

Future: Continue with the existing list.

Modifications: None at this time.

Inspections and Enforcement - City and County

Sarasota County Hazardous Waste conducted 638 inspections, responded to 52 citizen reports and participated in 24 emergency responses. To improve compliance with environmental regulations Hazardous Waste has begun development of a business training program.

AWQP implements Ordinance 96-020, which prohibits polluting discharges to all waters, including stormwater. AWQP personnel actively investigated 567 citizen complaints, inspected 86 industrial facilities, and performed proactive inspections. Polluting discharges were prohibited. Cessation of prohibited discharges was accomplished primarily by voluntary compliance, negating the need for formal enforcement. There were 50 enforcement cases in 2001 which included 25 Non-Compliance Letters, 21 Field Violation Notices, and four Warning Letters. More information is available in Appendix D.

Number of AWQP Incident Investigation Types

- Water Quality 119
- Petroleum 86
- Sewage 57
- Wash Water 40
- Algae, Bacteria, Vegetation 38
- Fish Kill 37
- Odor 26
- Stormwater 23
- Solid Waste 23
- Chemical 15
- WWTF Odor 12

- Landfill 12
- Erosion, Turbidity 11
- Grease 10
- Industrial Waste 10
- Septage 10
- Burn 9
- WWTF 7
- Hazardous Waste 5
- Noise 4
- Wildlife 4
- Pesticide 3
- Particulates 3
- Residuals 1
- Illegal Dumping 1
- Asbestos 1

Permit Element: Inspections and enforcement of discharge prohibitions.

Objective: Reduce polluting discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Investigators were highly motivated.

Weaknesses: Heavy work load for investigators.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Stormwater Ordinance - City and County

Sarasota County Ordinance 96-020 prohibits polluting discharges to all waters, including stormwater, within the territorial limits of Sarasota County. The ordinance requires that all waters, at all places, at all times, within the territorial limits of Sarasota County remain free from floating, settleable, deleterious, and toxic substances. Moreover, it prohibits any person from

spilling, dumping, or discharging any material or substance into any stormwater conveyance, other than those composed entirely of stormwater.

Permit Element: Implement an Ordinance that Prohibits Discharges to the MS4.

Objective: Reduce polluting discharges to the MS4.

Activities: Described Above.

Compliance: In compliance.

Strengths: The ordinance applies county-wide and broadly but appropriately restricts discharges.

Weaknesses: Contaminated sediments and soils are not specifically regulated.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.b - Illicit Discharges & Improper Disposal: Field Screening

Dry Weather Field Screening - City and County

County personnel conducted dry weather field screening inspections of 20 new outfalls within the County. Fifteen of these were major outfalls. No outfalls were flowing. No illicit discharges or connections were found. No contaminants were detected.

Permit Element: Dry Weather Field Screening.

Objective: To reduce polluting discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Dry weather flow is a good indicator of discharges.

Weaknesses: After many years of dry weather field screening, very few prohibited discharges were found this way.

Assessment: Very ineffective.

Future: Discontinue proactive searching for dry weather flow, but continue to be observant of such flows during all investigations.

Modifications: DWFS is reserved in the permit that replaces this one.

Outfall Inventory - City and County

AWQP maintains and updates an outfall inventory database. Updates to the outfall inventory are in Appendix E.

Permit Element: Maintain an inventory of major stormwater outfalls.

Objective: Improve knowledge of the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Maintenance of the outfall inventory increased staff familiarity with the MS4.

Weaknesses: The existing outfall inventory database is less useful than the one used by

Stormwater Planning.

Assessment: Somewhat effective.

Future: Improved communication among illicit discharge investigators and drainage personnel.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.c - Illicit Discharges & Improper Disposal: Investigations

Standard Investigative Procedures - City and County

AWQP continued to use a variety of methods to identify and eliminate prohibited discharges. Some of the techniques involved field observations, field test kits, meters, sampling and analysis, facility inspections, interaction with the public, referrals to other agencies and professional judgment.

Permit Element: Implement SOPs for investigation of illicit discharges.

Objective: Eliminate prohibited discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Sensible methods.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.d - Illicit Discharges & Improper Disposal: Spill Response

The Sarasota County Emergency Services, Fire Department Special Operations Team was responsible for emergency response to hazardous materials spills for Sarasota County. In 2001, $910,000 was spent responding to 411 emergencies.

During the last year, initiatives centering around increased customer responsiveness were completed. The two primary actions were the establishment of a Peer Driven Quality Improvement Group (SO-PDQI) and, the creation of a new incident report system designed to collect more comprehensive and accurate data about the unit's response.

As a result of the increasing potential for chemical and biological terrorism, Sarasota County Emergency Services is currently pursuing funding for additional FTEs that would be assigned to the special operations unit. In addition, the Special Operations Team was designated as a regional Weapons of Mass Destruction-capable hazardous materials response unit. With that responsibility, comes the deployment of weapons of mass destruction-specific response assets. This will include more sophisticated atmospheric monitoring equipment (i.e., IR Spectrophotometers) and the capabilities to decontaminate large numbers of contaminated victims. Both of these asset categories will have cross-applicability to the environmental protection arena.

Sarasota County Hazardous Waste participated in 24 emergency responses.

Permit Element: Respond to emergency spills of pollutants.
Objective: Minimize pollutants in MS4 while protecting the public from risk.
Activities: Described above.
Compliance: In compliance.
Strengths: Well trained professionals.
Weaknesses: None have been identified.

Assessment: Effective.

Future: Expand into response to terrorist attacks.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.e - Illicit Discharges & Improper Disposal: Public Notification

Promote Public Reporting - City and County

Air and Water Quality continued to educate the public about water quality issues, proper disposal, and pollution prevention techniques. Some of the public education forums included:

- The Alliance for Environmental Education Solutions annual "Teach the Teacher" program;
- Pollution Prevention Month included displays at two local libraries;
- Earth Day;
- Promotion of the Clean Marina Program;
- Reading Fair;
- Aquarian Water Festival;
- Presentations to Sarasota High School, Incarnation School, and Pine View School;
- The Annual Domestic Waste Workshop;
- Ongoing education of citizens, business owners, and employees during incident investigations; and
- The Environmental Services newsletter.

Permit Element: Promote Reporting of Pollution by the Public.

Objective: Reduce polluting discharges.

Activities: Described above.

Compliance: In compliance.

Strengths: Numerous investigations provide one-on-one discussions of water quality.

Weaknesses: Little use of mass media.

Assessment: Moderately effective.

Future: Expand educational methods to include radio, television, and newspapers.

Modifications: None at this time.

Log Citizen Reports - City & County

Air and Water Quality Protection continued to respond to the 24-hour on-call hotline which enables citizens to report pollution incidents 24-hours a day, seven days per week. A database of citizen complaints was maintained; a summary is included in Appendix D.

In 2001, there were 567 pollution reports related to water quality. All were investigated, and 170 ordinance violations were identified. Voluntary compliance was adequate for 140 of the violations. Enforcement documents included 20 Field Violation Notices, three Notices of Violation, one Affidavit of Violation, and two Non-Compliance Letters. Four incidents were referred to other authorities for enforcement.

Sarasota County Hazardous Waste responded to 52 citizen reports.

Permit Element: Investigate reports of pollution and keep records of activities.

Objective: Reduce polluting discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: This is a very powerful method to identify and stop illicit discharges. Important discharges were found; large penalties were paid.

Weaknesses: No significant weaknesses have been identified.

Assessment: Highly effective.

Future: Continue the existing program. Additional motivated investigators could have strong impacts on reducing polluting discharges.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.f - Illicit Discharges & Improper Disposal: Oil, Toxics and Household Hazardous Waste

Waste Collection and Recycling - City and County

Special waste collection programs were being expanded in order to capture and divert more chemical waste from improper disposal.

- 3,516 Residential participants.
- 212 Business participants.
- 472,002 pounds of waste collected.
- A mobile chemical collection program was initiated.
- An electronics collection program was initiated.
- Construction of a new household chemical collection facility has begun.
- The business waste collection program was expanded.

Permit Element: Support and promote oil and household hazardous waste collection.

Objective: Prevent improper waste disposal into the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Long standing program with extensive public participation.

Weaknesses: None have been identified.

Assessment: Highly effective.

Future: Continue and expand the existing program.

Modifications: None at this time.

Storm Drain Placarding - City & County

Several groups participated in storm drain marking in 2001 however participation was less than the previous year. As a result of leadership and organizational changes, the annual Storm Drain Marking Day was not held.

The Storm Drain Marking Program was administered by Keep Sarasota Beautiful in 2001. Due

to the expense and time necessary to administer the program, Keep Sarasota Beautiful decided to discontinue it. The Sarasota County Public Works, Neighborhood Response Team and Environmental Services, Air and Water Quality Protection will assume responsibility for the program.

Permit Element: Mark storm drains with warnings messages against dumping.

Objective: Reduce polluting discharges to the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: Widespread visibility to the public.

Weaknesses: None have been identified.

Assessment: Probably effective, but hard to measure.

Future: The Neighborhood Response Team, and Air and Water Quality Protection will manage the program. Volunteers will be recruited actively all year long rather than just once a year preceding the annual Storm Drain Marking Day. To save money, storm drains will stenciled rather than placarded.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.7.g - Illicit Discharges & Improper Disposal: Sanitary Sewer

Limit Sewage Entering MS4 - Sarasota County

In 2001, two smaller plants were taken out of service and their flow was diverted to existing larger plants, thus reducing the potential for spills. Sarasota County Utilities continues to operate the following seven wastewater treatment plants:

- Bee Ridge Water Reclamation Facility (WRF) FLA013372
- Central County WRF FLA013455
- Meadowood WRF FLA013385
- Venice Gardens WRF FLA0434940
- Atlantic/Brentwood WRF FLA134333
- Plantation WRF FLA013365
- Proctor Road WWTF FLA013447

Sanitary sewer seepage occurs from three main sources: gravity sewer lines (including manholes), sewer force mains, and lift stations. A concerted effort by Utilities to eliminate and minimize such spills is described below.

- Treatment facilities were inspected at least twice a day, during which the operator looked for evidence of leaking pipes and malfunctioning equipment. Two checklists were completed daily. The treatment facility was inspected at least once a day for the items on the pretreatment, biological nutrient reduction, chlorination equipment, and effluent checklists. The equipment running hours checklist was filled out daily, as a check on potential equipment problems.
- Most of the effluent was reused for irrigation of golf courses and residences. Most golf courses had an effluent storage pond from which irrigation water was drawn. These ponds were regulated by the DEP and SWFWMD.
- A vacuum/flush truck was used to flush gravity sewer lines. Flushing prevented the development of obstructions in the pipes that cause sewage backups and overflows.

- A SCADA telemetry system provided a radio connection between the treatment plants and lift stations. Malfunctions were identified faster and responses were faster, resulting in fewer spills. The SCADA system installation is nearly complete.
- Sarasota County Utilities spent $2,760,000 on lift station maintenance and rehabilitation.
- The ongoing Sanitary Sewer Evaluation Study (SSES) evaluated the integrity of gravity sewer lines and manholes, and helped prioritize replacement and repair projects. The purpose of the project was to prevent groundwater or stormwater from inflowing or infiltrating (I&I) into the collection system, but also reduced the potential for leakage during periods of low groundwater. The SSES findings resulted in the expenditure of $860,000 for relining of gravity sewer lines and rehabilitation of manholes.
- The manhole insert program was continued. Diaphragm-type units were inserted into the top of manholes to prevent stormwater inflow at a cost of $9,000.
- All lift stations were fenced to reduce vandalism.
- Utilities followed an in-house protocol for spill response: "Spill Response Standard Operations Procedures." Appropriate clean up, disinfection, and sampling procedures were followed.
- Treatment plant service commitments were reviewed annually after each plant reached 50% of its capacity. Treatment plants expansion was planned to prevent hydraulic overload conditions that could lead to wastewater spills or substandard effluent.
- Sarasota County produces Class B sludge. Requests for Proposals will be advertised in 2002 for the design, construction, and operation of a sludge treatment facility that will improve the quality of sludge that is land applied.
- Greater participation in EPA's Capacity, Management, Operation and Maintenance (CMOM) program is planned. CMOM training has already begun.

Limit Sewage Entering MS4 - City of Sarasota

The program to control inflow and infiltration with capital improvements and maintenance was continued. Some program activities include cleaning, televising and inspection of sewer lines,

slipline repairs, manhole rehabilitation, and mainline replacement.

A contract was issued and construction began on Phase II of the pilot project to replace privately-owned building sewers. As many as 500 defective private sewers will be replaced, using no-dig technology. The resulting reduction in infiltration will be monitored in a follow-up phase. The Phase II work, valued at $680,000, will be complete in the fall of 2002.

All wastewater residuals were composted and sold in bulk for use as a soil amendment. No sludge was land applied. Approximately 1,500 dry tons of sewage sludge were reused this way.

The Stormwater Pollution Prevention Plan for the WWTP continued to serve as the controlling document for the management of vehicle maintenance and storage facilities at the plant.

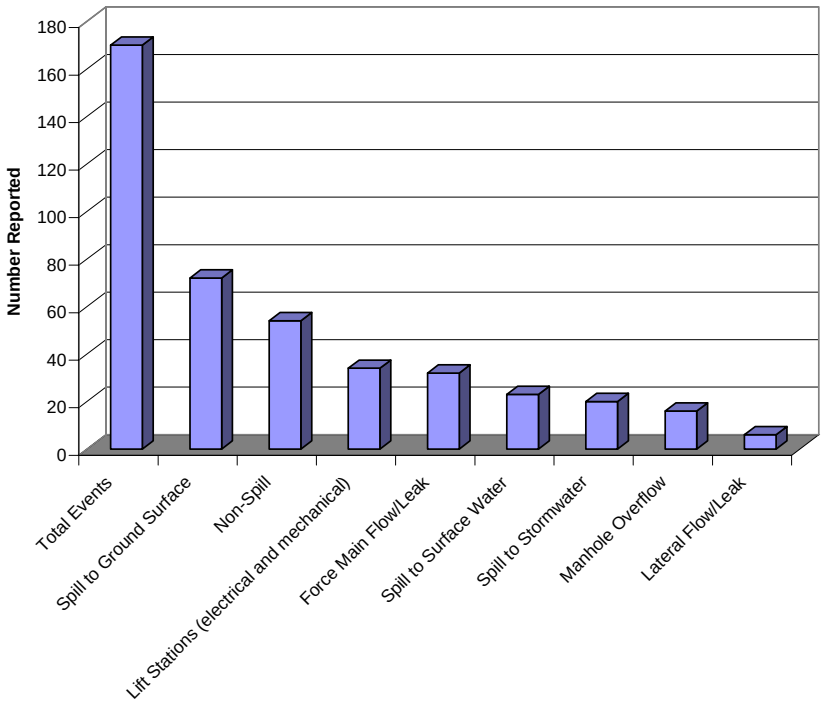
Effluent was monitored for priority pollutants and permit-required parameters.

Permit Element: Reduce sewage spills into the MS4.
Objective: Minimize the amount of wastewater entering the MS4.
Activities: Described above.
Compliance: In compliance.
Strengths: Focus on collection system.
Weaknesses: Collection system improvements are expensive.
Assessment: Effective.
Future: Continue the existing program.
Modifications: None at this time.

Report to Utility When Sewage Detected in Stormwater - City & County

All citizen reports of discharges from sanitary sewers were promptly reported to the appropriate utility. AWQP investigated 29 citizen reports related to wastewater treatment facilities, odor, or septage. Not all wastewater treatment facility abnormal events were reported, but the following 170 were reported to AWQP in 2001:

2001 Wastewater Treatment Facility Abnormal Events



Identify Septic Service Areas. - City & County

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). The Department of Health also maintains a database of addresses that were issued septic system permits.

Report to Regulator When Septage Detected in Stormwater - City & County

All reports of septic system discharges were promptly referred to the Sarasota County Department of Health.

Permit Element: Report to authorities when sewage detected in MS4.

Objective: Reduce the amount of sewage entering the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: The long-standing program was effective.

Weaknesses: Utilities are sometimes reluctant to report abnormal events.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.8 - High Risk Industrial Facilities

Inventory Facilities Discharging to MS4 - City and County

AWQP maintains and updates an inventory of facilities discharging to the MS4. It is in Appendix E.

Permit Element: Maintain an Inventory of dischargers.

Objective: Ensure permitted discharges stay within legal limits.

Activities: Described above.

Compliance: In compliance.

Strengths: Investigators are more aware of watershed and facilities.

Weaknesses: None have been identified.

Assessment: Adequate.

Future: Continue the existing program.

Modifications: None at this time.

Inspect Facilities - City and County

In 2001, AWQP inspected 86 facilities, including 14 within the City of Sarasota. The high risk facility inventory was used to prioritize staff inspections, but AWQP also performs proactive inspections based on citizen reports and staff observations. All inspections were used as an opportunity to educate the public about water quality issues. As part of the inspection, the facility standard industrial classification code was verified and the business was evaluated to see if it may require a DEP MSGP.

Hazardous Waste inspectors conducted 638 business inspections. For each of these inspections, they also completed a NPDES stormwater screening form and forwarded it to AWQP.

Permit Element: Inspect facilities that have potential to contaminate the MS4.

Objective: Ensure that polluted runoff is minimized.

Activities: Described above.

Compliance: In compliance.

Strengths: Awareness of stormwater BMPs was raised in the business community.

Weaknesses: Very few prohibited discharges were identified.

Assessment: Moderately effective.

Future: Inspectors may become more focused on discharges.

Modifications: None at this time.

Monitoring of Facilities - City and County

No facility monitoring was conducted by AWQP. Facilities that were inspected by AWQP were assessed for use of BMPs and compliance with any permit requirements. The inspectors also evaluate whether the facilities were subject to MSGPs, which may include monitoring.

Permit Element: Sample and analyze discharges from facilities.

Objective: Ensure that discharges were within legal limits.

Activities: Described above.

Compliance: In compliance.

Strengths: None identified in relation to this monitoring program.

Weaknesses: BMPs are needed, not monitoring.

Assessment: Modest effectiveness.

Future: Monitoring will be reserved in the permit that replaces this one.

Modifications: Monitoring will be reserved in the permit that replaces this one.

Narrative Reports for SWMP Activities
Section 4.9.a - Construction: Site Planning

Require Erosion Controls - Sarasota County

Require construction proposals reviewed by Land Development Regulations to depict erosion control measures on the development plans, to provide pertinent details for the proposed controls, and to provide maintenance notes for proposed controls. AWQP provides standard approval stipulations regarding reporting water quality violations.

Require Erosion Controls - City of Sarasota

Chapter 29.5 of Code of the City of Sarasota created the Engineering Design Criteria Manual (1989) which requires an Erosion/Sedimentation Control Plan (signed and sealed by the Engineer of Record), a permit, including a pre-construction meeting to implement erosion and sedimentation BMP's as a condition of issuance of a building permit. The process was very effective in compelling construction site operators to practice erosion and sedimentation control measures. This code requirement and process were in effect since prior to issuance of the initial NPDES MS4 permit.

Permit Element: Require erosion and sedimentation controls.

Objective: Minimize the amount of sediment entering the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: All plans clearly identify the initial erosion controls to be implemented.

Weaknesses: Ensuring that contractors follow the BMPs outlined in the plans and notify when violations occur.

Assessment: Effective.

Future: AWQP is considering proactive inspections.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.9.b - Construction: Inspections and Enforcement

Inspector Training - Sarasota County

All LDS inspectors were state certified in stormwater management and receive training on a regular basis. During the regular training sessions, ongoing and upcoming projects are discussed. Two AWQP inspectors completed the Erosion and Sedimentation certification through the Suncoast Public Works Academy.

The DEP Stormwater, Erosion, and Sedimentation Control Inspectors' Training Program was provided to area municipal employees at the Suncoast Public Works Academy. The training is offered at least twice each year and consists of three half-days of classroom instruction and one half-day for the certification exam. Course facilitators are employed by local governments and are DEP qualified trainers.

The training sessions offered to inspectors were successful over the past two years. Since March of 2000, 51 individuals have completed the course. Attendees include municipal employees, and employees of area consulting engineering firms.

Inspector Training - City of Sarasota

Inspectors were trained by the American Public Works Academy in DEP's Erosion and Sedimentation Inspector's Certification. The City has four individuals certified as Erosion and Sedimentation Control Inspectors. They were all involved in various stages of construction site design and inspection.

Permit Element: Train inspectors in erosion control.

Objective: Improve erosion control at construction sites.

Activities: Described above.

Compliance: In compliance.

Strengths: A standard curriculum is an advantage, especially when the same information is being offered to the contractors.

Weaknesses: Participants vary in their ability to understand the material being taught.

Assessment: Highly effective. Regulation of erosion control is improving.

Future: Continue to offer the training on the current schedule. Curriculum will be updated as needed.

Modifications: None at this time.

Inspection & Enforcement - Sarasota County

LDS inspected over 200 construction sites and required compliance from the developers. Inspectors were very active with daily inspections, and ensured that the contractors maintained the BMPs. Twelve Stop Work Orders were issued for noncompliance with BMPs, such as silt fences around lakes, swales, wetlands, and any drainage structures. There was marked improvement in site maintenance resulting from the inspections. Ongoing projects were in compliance.

Inspection & Enforcement - City of Sarasota

Chapter 29.5 of Code of the City of Sarasota creates the Engineering Design Criteria Manual (EDCM) which requires an Erosion and Sedimentation Control Plan (signed and sealed by the Engineer of Record), a permit, and a pre-construction meeting to implement the erosion and sedimentation BMP's as a condition of issuance of a building permit. A pre-construction meeting at the site and subsequent inspections are required by the EDCM.

Permit Element: Inspect construction sites for erosion controls and require compliance.

Objective: Reduce sedimentation into the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: The inspectors were on site frequently.

Weaknesses: Developers are better at installing BMPs than maintaining them.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.9.c - Construction: Site Operator Training

Construction Site Operator Training - Sarasota County

Water quality issues were discussed with design professionals during plan review and during on-site inspections. Inspector and contractor training was offered through the Suncoast Public Works Academy.

Site Operator Training - City of Sarasota

Contractor training was provided through the American Public Works Academy and in cooperation with Sarasota County.

Permit Element: Train developers in erosion control.
Objective: Reduce erosion from construction sites.
Activities: Described above.
Compliance: In compliance.
Strengths: Contacts during site review and construction were effective.
Weaknesses: Contractors have limited interest in attending classes.
Assessment: Moderately Effective.
Future: Continue the existing program.
Modifications: None at this time.

Notify Building Permit Applicants about NPDES - Sarasota County

Notification of NPDES regulations was provided to developers at the time of development review, prior to the issuance of permits.

If the project area disturbs greater than 5 acres, a completed copy of an EPA Notice of Intent for Storm Water Discharges Associated with Industrial Activity Under the NPDES General Permit and a DEP NOI must also be submitted to LDS prior to Construction Authorization.

Notify Building Permit Applicants about NPDES - City of Sarasota

Notification of NPDES regulations was provided to developers at the time of development review, prior to the issuance of permits.

Permit Element: Notify building permit applicants about NPDES regulations.

Objective: Reduce erosion into the MS4.

Activities: Described above.

Compliance: In compliance.

Strengths: None have been identified.

Weaknesses: None have been identified.

Assessment: Effective.

Future: Continue the existing program.

Modifications: None at this time.

Narrative Reports for SWMP Activities
Section 4.10 - 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 ambient water quality sampling from several bays and the 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 stormwater 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 Completed Monitoring

Station Locations	Sample Type	Parameters	Frequency	Completed	Comments
Seasonal loading and event mean concentration (Part V.A.1.).	Water	BOD, COD, TSS, TDS, TKN, NO2+NO3, TP, O&G, Cd, Cr, Cu, Pb, Zn, and dissolved P.	Once.	Yes. Completed in 1998-99.	Pollutant loads increasing, as reported in report submitted on October 14, 1999, subsequent to the Annual Report for Year Four (1998).
Richardson Road / 1 station. (Part V.A.2.)	Storm Water	Bis(2-ethylhexyl)phthalate.	Once.	Yes. Completed in 1999.	No pollutant sources identified, as reported in the annual report for Permit Year Five (1999).
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.	No pollutant sources identified, as reported in the annual report for Permit Year Five (1999).
Several bays and Myakka River / 40 stations. (Part V.B.1.a.)	Water	Temperature, pH, DO, salinity, specific conductance, BOD, color, turbidity, TSS, dissolved NO2, dissolved NO3, NO2+NO3-N, dissolved and total ammonia, dissolved inorganic nitrogen, TKN, TN, orthophosphate, TP, chlorophyll, and secchi depth.	Ongoing Monthly.	Yes. Completed from 1995 to present.	Minor modifications in 2001: Early morning meter readings discontinued, but sampling expanded to include Big Sarasota Pass and northern Sarasota Bay. Descriptive charts in Appendix K. All data available on request.
Several bays and Myakka River / 40 stations. (Part V.B.1.a.)	Water	In-situ: water temperature, pH, dissolved oxygen, salinity, and specific conductance.	Ongoing. One early morning per month.	Partial. Completed from 1995 to 2001.	Early morning meter readings were discontinued in 2001, but were replaced by expanded coverage in Sarasota Bay and Big Sarasota Pass. Midday meter readings were continued. Descriptive charts in Appendix K. All data available on request.
Several bays 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.	Ongoing. Two per month.	Yes. Completed from 1995 to present.	Descriptive charts in Appendix K. All data available on request.
Phillippi Creek, Hudson Bayou, and Big Slough / 6 stations. (Part V.B.2.)	Water	COD, BOD, NO2+NO3-N, TKN, total and dissolved P, TDS, TSS, oil & grease, cadmium, chromium, copper, lead, zinc, temperature, pH, DO and specific conductance.	Ongoing. Twice annually in wet season and dry season.	Yes. Continued through 2001.	Discussion in Section 5.3 and descriptive charts in Appendix I. All data available on request.
Phillippi Creek, Hudson Bayou, and Big Slough / 6 stations. (Part V.B.2.)	Biological	Analysis of Biological Community.	Ongoing. Twice annually in wet season and dry season.	Yes. Continued through 2001.	Discussion in Section 5.3 and descriptive charts in Appendix J. All data is available on request.
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.	Ongoing. Annually in December.	Yes. Continued through 2001.	Discussion in Section 5.3 and descriptive charts in Appendix H. All data is available on request.
Hudson Bayou / 12 Stations. (Part V.B.3.)	Sediment	Grain size, aluminum, lead, copper, zinc, chromium, total nitrogen, total phosphorus, and total organic carbon.	One time.	Yes. Completed in 1999.	Very elevated levels of lead contaminated sediments found throughout Hudson Bayou. Data was reported in the annual report for Permit Year Five (1999).
Hudson Bayou / 5 stations. (Parts V.B.4.)	Storm Water	Cadmium, lead, copper, zinc, and chromium.	Four times.	Yes. Completed in 1999 and 2000.	Metals found in stormwater, but not greatly elevated, and no point or area sources indicated. The data was provided in the Annual Report for Year Five (1999).

Monitoring Program Report
Section 5.3 - Monitoring Conclusions

V.A.1. Seasonal Loading and Event Mean Concentration

Monitoring of event mean concentrations (EMCs) was required for the NPDES MS4 permit application in 1993. This local EMC data was input into a pollutant loading model to submit seasonal loading estimates that were also required for the permit application. Other model inputs included land use, rainfall, baseflow, and runoff coefficients. In 1999, the model was updated and run to produce seasonal loading estimates required by the permit. The 1999 report concluded that total pollutant loads increased slightly because of increased urbanization, despite the addition of stormwater control structures. EMCs were found to be approximately the same in both seasons. For every basin, the wet season had a higher pollutant load than the dry season, which was attributed to more rainfall.

V.A.2. Stormwater Investigation on Richardson Road and East Avenue

Low concentrations of common pollutants were detected during the permit application process. The sub-basins were investigated and resampled, but no significant pollution sources were found. It was concluded that stormwater inherently contains low levels of pollutants, in roughly equivalent amounts as detected during the permit application process.

V.B.1.a. Ambient Water Quality of Bays and River

This monitoring was conducted since January 1995 in most of the coastal estuaries and the southern portion of the Myakka River. The program divided the water bodies into segments with five sub-divisions (called stations) in each. Every station was sampled once per month. Appendix K contains a map and charts of the data.

The charts show parameter concentrations averaged for the five monthly stations plotted against time. A linear trend line was added to the charts, but should not be considered a statistically valid trend. Monitoring concentrations were compared to two standards: Florida's Surface

Water Quality Standards, Chapter 62-302, F.A.C., and percentile values for Florida streams published in the DEP 2000 Florida Water Quality Assessment Report (305b). The following indications may been seen on the charts:

- Rainfall has been unseasonable at times, and included El Nino and drought episodes.
- BOD is declining everywhere except the Myakka River.
- Chlorophyll levels are low, but increasing.
- Sarasota Bay is less colored than the other bays, but all areas are increasing.
- Specific conductance is increasing.
- All areas have episodes of dissolved oxygen below Florida standards. All areas except Sarasota Bay have declining levels.
- Light attenuation is increasing in the Myakka only.
- Total nitrogen is decreasing everywhere except the Myakka.
- pH is increasing only in the Myakka.
- Total phosphorus is high and increasing in the estuaries, but declining in the Myakka.
- Secchi depth is declining everywhere.
- Total suspended solids are declining in the bays.
- The trophic state index is stable in the bays, but rising in the Myakka.
- The water quality index is rising in the Myakka.
- Turbidity is low, but increasing.

This valuable data set will be used to generate statistically valid trend analysis at every opportunity. In 2002, the Charlotte Harbor National Estuary Program funded a trend analysis for the areas in their study area, and included this data set for the Myakka River and Lemon Bay portions.

V.B.2. Ambient Water Quality of MS4

Ambient water quality monitoring has been conducted from 1998 to the present at six locations, in three watersheds. Two locations each from Hudson Bayou, Phillippi Creek, and Hudson Bayou were sampled during wet and dry seasons. Hudson Bayou is a marine waterbody that receives stormwater directly from the urban City of Sarasota and some suburban areas. Much of the stormwater flows directly to the bayou, without any detention, infiltration or treatment. Phillippi Creek is a freshwater stream, but has tidal influence high into the flat watershed (above Bahia Vista). It drains a large urban and suburban area containing a mix of directly connected impervious surfaces (DCIA) and areas served by BMPs. Septic systems are known to have a polluting influence in Phillippi Creek. Myakkahatchee Creek is a drinking water source for the City of North Port. The City is extensively ditched, is rural and suburban, and has rapid development in progress. Myakkahatchee Creek has a natural appearance.

The MS4 water quality monitoring data has not generated obvious conclusions yet. Monitoring concentrations were compared to two standards: Florida's Surface Water Quality Standards, Chapter 62-302, F.A.C., and median values for Florida streams published in the DEP 2000 Florida Water Quality Assessment Report (305b). Charts and tables in Appendix I suggest the following:

- The variation in the sample concentrations is high, even for replicates.
- The water quality differences between wet and dry seasons are not profound.
- Hudson Bayou (HB) and Myakkahatchee Creek (MH) have exceeded standards for cadmium.
- Dissolved metals have low concentrations.
- HB has exceeded standards for copper, more so in the dry season.
- HB has exceeded standards for lead, only in the dry season. MH and Phillippi Creek (PC) rarely exceed, and in dry season only.
- Total nitrogen may be higher in the wet season, but is consistent with Florida medians.

- Total phosphorus may be higher in the wet season.
- Total phosphorus in MH and PC are often higher than Florida medians.
- Dissolved oxygen (DO) concentrations vary greatly.
- DO may be lower in the wet season.
- DO does not meet standards sometimes.
- Chemical oxygen demand may increase in MH in the wet season.
- Specific conductance is lower during the wet season, but is higher than Florida medians.

V.B.2. Ambient Biological Quality of MS4

Since 1998, dip net samples were taken from the freshwater locations in Myakkahatchee Creek and Phillippi Creek. Petite ponar samples were taken of bottom dwellers in the Hudson Bayou estuary. In addition, a DEP freshwater benthic habitat survey was done at most of the locations. Myakkahatchee Creek at the North Port water plant appears to be the healthiest of the sites, followed by the Myakkahatchee at Interstate 75, then Phillippi Creek. Hudson Bayou, being a marine environment, is not comparable. Tables of the data are presented in Appendix J.

V.B.2. Ambient Sediment Quality of MS4

The metals present in the sediment samples have shown high variability, even from replicate samples. Nevertheless, the data clearly shows Hudson Bayou to have the highest concentrations of the three watersheds. Hudson Bayou is an urbanized watershed with a high level of directly connected impervious surfaces and few stormwater BMPs in place. Phillippi Creek at Coburn Road also shows elevated levels. Charts are in Appendix H.

The sediments were compared to three references. Native Florida soils were defined in Background Concentrations of Trace Metals in Florida Surface Soils; April 1997; Lena Ma; Florida Center for Solid Waste and Hazardous Waste Management. Although most of the

sediments were not sampled from a marine environment, DEP guidelines for marine sediments were also used as a reference. Florida is developing freshwater guidelines, but they are still in a draft form. DEP published the Approach to the Assessment of Sediment Quality in Florida Coastal Waters in 1974, This document contains two levels of contaminant concentration relating to negative impacts on marine organisms.

V.B.3. Hudson Bayou Sediment Quality and

V.B.4. Hudson Bayou Stormwater Quality

Monitoring of Hudson Bayou was very informative, as described in the Annual Report for Year Five (1999). The Bayou contains lead contaminated sediments, but does not currently receive correspondingly high amounts of lead from stormwater or other discharges. Concentrations of lead in the water column were intermittently elevated, probably related to weather conditions that stir up contaminated sediments. An interagency investigation of the situation has expanded far beyond the permit required monitoring. No source of the contamination was identified.

Monitoring Program Report
Section 5.4 - Monitoring Compliance

All monitoring was completed.

Monitoring Program Report
Section 5.5 - Monitoring Program Revisions

Sarasota County's original MS4 permit was renewed on April 1, 2002, and requires a monitoring plan to be proposed to DEP by October 1, 2002. There is an interagency discussion underway to determine which monitoring will best serve the community in the long run. Refer to Section 6.2 of this report for Monitoring Program Modifications.

Monitoring Program Report
Section 5.6 - Inventory of Major Outfalls

An updated inventory of all outfalls in both unincorporated Sarasota County and the City of Sarasota was included in the Annual Report for Year Five (1999). The outfall inventory continues to be updated.

Permit Modifications
Section 6.1 - SWMP Modifications

Transfer of Ownership - Sarasota County

One hundred fourteen parcels were annexed by the City of Venice from Sarasota County in 2001. One parcel accounted for 124 acres of the 208 total acres annexed. Many of the parcels were unincorporated enclaves within areas already owned by the City of Venice. The complete parcel list is in Appendix L.

Transfer of Ownership - City of Sarasota

No property was annexed or vacated by the City of Sarasota in 2001.

Permit Modifications
Section 6.2 - Monitoring Program Modifications

The long-term, monthly ambient water quality sampling from bays and river was modified in 2001. The early morning meter readings were no longer collected. New segments were added to fill data gaps in northern Sarasota Bay and near Big Sarasota Pass.

Pursuant to the permit that replaces this permit, Sarasota County will submit a monitoring proposal to DEP within six months of April 1, 2002, the date of permit issuance.

Permit Modifications
Section 6.3 - Other Permit Modifications

No other permit modifications are suggested at this time.

Section 7 - Fiscal Analysis

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

Table 7.1. Financial Survey for Year Seven (2001):

Program Activity	Previous Year (FY 2000)	Current Year (FY 2001)	Future Year (FY 2002)	Funding Source/Comments
1. Maintain Structural Controls: Inspect, Maintain & Assess - City & County	$191,000	$2,536,492	$2,536,492	Stormwater Fees
1. Maintain Structural Controls: Private Stormwater Systems - City and County	Not Available as a Line Item Cost			Stormwater Service Assessments
1. Maintain Structural Controls: FW&PCOA Training - City and County	Drainage: $2,500	Drainage: $12,589	Drainage: $8,000	Stormwater Fees
2. Development Planning: Stormwater Treatment Ordinances - County	Not Available			
2. Development Planning: Stormwater Treatment Ordinances - City	Not Available			
2. Development Planning: Basin Planning - City and County	$1,815,000	$1,598,000	$1,649,000	Stormwater Service Assessments
2. Development Planning: LDRs to Reduce Impervious Surfaces - County	Not Available as a Line Item Cost			
2. Development Planning: LDRs to Reduce Impervious Surfaces - City	Not Available as a Line Item Cost			
3. Roadway Maintenance: Litter Control - County	$136,214	$244,009	$245,000	Transportation General Funds & Stormwater Fees
3. Roadway Maintenance: Litter Control - City	$200,000	$200,000	$200,000	Landscaping & Solid Waste Budgets
3. Roadway Maintenance: Street Sweeping - County	$204,063	$175,994	$212,000	General Funds
3. Roadway Maintenance: Street Sweeping - City	$400,000	$436,518	$400,000	Gas Tax
3. Roadway Maintenance: Maintain Stormwater Structures - City & County	$900,392	$48,310	$50,000	Stormwater Fees

Program Activity	Previous Year (FY 2000)	Current Year (FY 2001)	Future Year (FY 2002)	Funding Source/Comments
3. Roadway Maintenance: Road Repair & Facility BMPs - County	Road Program: $2,500,000	Road Program: $2,500,000 Drainage Operations: $56,322	Road Program: $2,500,000 Drainage Operations: $50,000	Infrastructure surtax, road impact fees, telecommunications tax, gas tax, ad valorem tax, SWFWMD grants, Army Corps of Engineer grants, DEP grants, drainage basin assessments, Stormwater fees.
3. Roadway Maintenance: Road Repair & Facility BMPs - City	Not Available			
4. Flood Management: Project List & Schedule - City & County	$7,352,000	$5,568,000	$6,017,000	Stormwater Capital Improvement Assessments
5. Municipal Facilities: Solid Waste, POTW, Residuals, and Fleet Facilities - County	Solid Waste: $434,048	Solid Waste: $348,310	Solid Waste: $392,289	Utilities Fees & Tipping Fees, Interest Earnings
5. Municipal Facilities: Solid Waste, POTW, Residuals, and Fleet Facilities - City	POTW: $3,600	POTW: $3,600	POTW: $3,600	Utility User Fees
6. Pesticides, Herbicides & Fertilizers: Public Education - City & County	Coop. Ext: $43,767 Mosquito: $1754	Coop. Ext: $78,376 Mosquito: $15,100	Coop. Ext: $80,000 Mosquito: $16,200	University of Florida IFAS, Sarasota County Utilities & Stormwater, DACS Grant, Ad Valorem taxes.
6. Pesticides, Herbicides & Fertilizers: Employee Training - County	Extension: $1,271 Mosquito: $5,371 Drainage: $1,320 Forestry: $500	Extension: $581 Mosquito: $5,500 Drainage: $1,320 Forestry: $500	Extension: $1000 Mosquito: $8,750 Drainage: $1,320 Forestry: $700	University of Florida IFAS, Stormwater Fees, NRM/ESBC Transportation Trust Fund, DACS Grant, Ad Valorem taxes.
6. Pesticides, Herbicides & Fertilizers: Employee Training - City	$2000	$2000	$2000	Landscape Operations
6. Pesticides, Herbicides & Fertilizers: Minimize Use: Mix & Store Properly - County	Drainage: $10,000 Mosquito: $16,200 Forestry: $20,000	Drainage: $8,000 Mosquito: $16,900 Forestry: $18,000	Drainage: $10,000 Mosquito: $17,200 Forestry: $25,000	Stormwater Fees, Transportation Trust Fund, DACS Grant, Ad Valorem taxes.
6. Pesticides, Herbicides & Fertilizers: Minimize Use: Mix & Store Properly - City	Not Available			
7a. Illicit Discharges & Disposal: List of Allowed Discharges - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7a. Illicit Discharges & Disposal; Inspections, Ordinances & Enforcement - City & County	$426,019	$463,057	$465,000	Unincorporated Area Services Funds, Surcharge on Solid Waste Tipping Fees.
7b. Illicit Discharges & Disposal: Dry Weather Field Screening - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7b. Illicit Discharges & Disposal: Outfall Inventory - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7c. Illicit Discharges & Disposal: Standard Investigative Procedures - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7d. Illicit Discharges & Disposal: Spill Response - City & County	$910,000	$910,000	$910,000	Landfill Fee Surcharges & Fire Department General Funds

Program Activity	Previous Year (FY 2000)	Current Year (FY 2001)	Future Year (FY 2002)	Funding Source/Comments
7e. Illicit Discharges & Disposal: Promote Public Reporting - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7e. Illicit Discharges & Disposal: Log Citizen Reports - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7f. Illicit Discharges & Disposal; Oils, Toxics & Household Hazardous Waste - City & County	$157,572	$287,000	$350,000	Landfill Fee Surcharge
7f. Illicit Discharges & Disposal: Storm Drain Placarding - City & County	Not Available			Costs Included in Litter Control
7g. Illicit Discharges & Disposal: Limit Sewage Entering MS4 - County	$3,000,000	$3,600,000	$3,000,000	Utilities Fees
7g. Illicit Discharges & Disposal: Limit Sewage Entering MS4 - City	O&M: $1,732,267 CIP: $2,058,460	O&M: $1,714,599 CIP: $1,786,935	O&M: $1,970,962 CIP: $3,551,625	Utility User Fees
7g. Illicit Discharges & Disposal: Notify When Sewage found in MS4 - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
7g. Illicit Discharges & Disposal: Notify When Septage found in MS4 - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
8a. High Risk Industrial Facilities: List of Dischargers to MS4 - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
8a. High Risk Industrial Facilities: Facility Inspections - City & County	Not Available as a Line Item Cost			Included in Cost of Inspections, Ordinances & Enforcement
8b. High Risk Industrial Facilities: Monitoring - City & County	Not Available			Included in Cost of Inspections, Ordinances & Enforcement
9a. Construction: Site Planning: Require Erosion Controls & Track Projects - County	$10,000	$10,000	$10,000	Unincorporated Area Services Fund
9a. Construction: Site Planning: Require Erosion Controls & Track Projects - City	Not Available as a Line Item Cost			
9b. Construction: Inspector Training - County	Not Available			Transportation General Funds & Stormwater Service Assessments
9b. Construction: Inspector Training - City	$550	$800	$800	General Fund
9b. Construction: Inspection & Enforcement - County	Not Available			
9b. Construction: Inspection & Enforcement - City	$5250	$5250	$5250	

Program Activity	Previous Year (FY 2000)	Current Year (FY 2001)	Future Year (FY 2002)	Funding Source/Comments
9c. Construction: Site Operator Training - County	Not Available			
9c. Construction: Site Operator Training - City	Not Available			
9c. Construction: Notify Applicants about NPDES - County	Not Available as a Line Item Cost			
9c. Construction: Notify Applicants about NPDES - City	Not Available			
V.A.1. Seasonal Loadings and Event Mean Concentrations - City & County	$0	$0	$0	Stormwater Fees
V.A.2. Investigation of Organic Pollutants - City & County	$0	$0	$0	Stormwater Fees
V.B.1. Existing Monthly Bay and Stream Runs - City & County	$119,941	$131,232	$131,232	Unincorporated Area Services Funds
V.B.2. Monitoring in Big Slough, Hudson Bayou & Phillippi Creek Basins - City & County	$28,684	$31,964	$31,964	Stormwater Fees
V.B.3. Heavy Metals Monitoring Program in Hudson Bayou, Phase I - City & County	$0	$0	$0	Stormwater Fees
V.B.4. Heavy Metals Monitoring in Hudson Bayou, Phase II - City & County	$7,529	$30,000	$0	Stormwater Fees
NPDES MS4 Permit Fees - Sarasota County	$2,224	$11,628	$11,628	Stormwater Fees
Totals	$20,905,169	$21,351,752	$213,378,825	City and County