

Application #: 2008-10-TEXT

*Description:* Revise Objectives 9-E and 9-F to set realistic timetables for the completion of a stormwater master plan

*Pages to be changed:* Comprehensive Plan Page 9-13 (pages 9-7—9-10 and 9-13—~~9-14~~ are attached for reference)

*Discussion in E/A Report* From Page 60—61: “B. Potential Funding Sources

*(adopted on Jan 16 '07):*

“A “stormwater utility” is a municipal entity that provides a specific service, like a utility that provides drinking water or sewer service. Rainwater should be treated through an organized drainage system of ditches and pipes that collects, treats, and disposes stormwater runoff. To remain effective, this has to be maintained. At Fort Myers Beach, some parts of the system still have to be designed and constructed.

“In most new developments, a homeowners’ association is required to maintain whatever parts of the system are built by the original developer (such as lakes). The local government typically maintains other parts of the system, such as ditches and underground pipes that run along the public road system. When this drainage system also provides drainage for the road itself, this maintenance can be paid for with gasoline taxes.

“Unfortunately, funding for all other types of stormwater maintenance and improvements has to compete with all other needed government services. The result is often neglect. Without a properly maintained drainage system, the quality of stormwater goes down, resulting in higher levels of pollution in Estero Bay. When a proper drainage system was never installed at all, as is the case with many parts of Fort Myers Beach, pollutant levels in runoff can be very high.

“As the problems created by improper stormwater management have become better known, many communities are creating a stormwater utility, a branch of municipal government whose sole purpose is stormwater management. In smaller communities this utility is typically part of the public works department. Most often its funds usually come from a separate fee that is charged to owners of developed property, based on a share of the benefit each will receive from the utility. The base fee is often around \$3-\$4 per month for a typical home. A fee of this level covers stormwater planning, routine maintenance, and minor improvements to the system. The fee is frequently listed on the monthly water or sewer bill, avoiding a large annual payment at tax bill time. Larger fees can be charged to specific areas if needed to construct entirely new drainage systems.

“Fort Myers Beach is a logical candidate for a stormwater utility because there is a broad awareness of the increasing levels of pollution in the canals and in Estero Bay, accompanied by a strong sentiment towards cleaning up pollution generally. The missing link for citizens to accept a stormwater utility fee is a

full understanding of how current practices on Estero Island contribute to that pollution and what kinds of steps can be taken to improve the quality of stormwater runoff.

“A stormwater master plan, as proposed by Objective 9-F, would be needed prior to establishing a stormwater utility. The master plan essentially creates the work plan for the utility. If a utility is not ultimately established, the work plan could be carried with other funding sources such as ad valorem taxes.

“C. Recommendations: The proposed timing for a stormwater master plan in Objective 9-F is obsolete, but the master plan is still needed. Objective 9-F should be revised to set a realistic timetable for the completion of this plan.”

*Additional Comments:* Objectives 9-E and 9-F should be modified as shown on pages 9–13 to set new target dates for completion of a stormwater master plan, which has just gotten under way. For informational purposes, the minutes from the September 12, 2008, kickoff meeting are attached.

*Action by LPA:* During a public hearing on November 18, 2008, the LPA unanimously recommended that the Town Council approve the changes as outlined in this report.

*Action by Town Council:* During a public hearing on December 15, 2008, the Town Council voted unanimously to transmit this amendment for state review.

*DCA Objection:* None

*DCA Recommendation:* None

*Response to DCA:* N/A

*Proposed Final Action:* The Town Council should adopt the transmitted amendment, as described above, as part of Ordinance 09-03.

*Final Action:* The Town Council adopted this amendment on August 17, 2009, as part of Ordinance 09-03. (Text shown in red is new or has changed since the initial transmittal of this amendment in January 2009.)

## Meeting Minutes

### Town of Fort Myers Beach Stormwater Master Plan Kickoff Meeting

**Location:** Fort Myers Beach Council Chambers

**Date and Time:** September 12, 2008 at 1:30 P.M.

**Purpose:** Discuss with the Fort Myers Beach staff the project overview, scope of services, schedule, communications, team roles, deliverables, and identify critical success factors and Town priorities.

**Attendees:**

Name	Organization	Telephone
Jack Green	Town of Fort Myers Beach	(239) 765-0202
Jerry Murphy	Town of Fort Myers Beach	(239) 765-0202
Cathie Lewis	Town of Fort Myers Beach	(239) 765-0202
Mike Schmidt *	CDM	(904) 527-6735
Solomon Abel	CDM	(239) 938-9600
Marc Stonehouse	CDM	(239) 938-9600
Sonia Iszler	CDM	(239) 938-9600
Ankita Patel	CDM	(239) 938-9600

\* via conference call

**Handouts:**

CDM provided the following items:

1. Kickoff Meeting Agenda
2. Project Schedule
3. CDM Contact List
4. List of Information Needs
5. Exhibit A – Scope of services.

**Discussion:**

**1. Introduction**

The Fort Myers Beach (FMB) and CDM staff introduced themselves. CDM relayed the agenda and purpose of the meeting.

**2. Project Overview**

CDM provided an overview of the project scope and schedule. In general, the FMB staff was in agreement with the scope and schedule. One exception noted by FMB staff was that one of the three problem areas, identified as the area between Carolina Street and Tropical Shores Drive, needs to be replaced with a

new problem area. This is because FMB just received a FEMA grant to start a separate stormwater planning and design project to address flooding in that area. Therefore, this area will be replaced with the Sterling Avenue intersection at Falkirk Street and Lauder Street.

As for the schedule, FMB indicated that Task Number 1.9 Storm Ordinance Review is their first priority for this project. FMB stated there are no current ordinances to prevent and control the growing trend toward increasing the amount of impervious surface on properties. The Town's Local Planning Agency (LPA) plans to develop an interim ordinance to prevent significant stormwater changes during the development of the Stormwater Master Plan (SWMP). The ordinance will be recommended to the Town Council for their review and approval. FMB will coordinate a meeting with the LPA once CDM identifies which of the two October meetings they can attend. At the meeting, CDM will present potential options and language for new stormwater ordinances based on previous studies and information from similar communities. CDM mentioned that the Atlantic Beach ordinance information previously provided to FMB is one good example of how a similar community limited the amount of impervious area allowed for each lot. CDM will also check other similar ordinances as potential examples.

CDM asked FMB staff to describe their objectives and critical success factors for the SWMP. The following were identified:

- The SWMP must provide enough information to determine the feasibility of developing a new stormwater utility should the Town decide to create one. As the Town is nearly fully built out, they cannot depend on population growth to increase the tax-base. In addition, the Town policy only allows up to a maximum of 36-months for long-term debt.
- Public input to the project will be through as-needed public workshops.
- Reports and information developed as part of the project need to be based on solid engineering. Documentation must be written so that it is understandable to the general public, especially the reasons for and benefits of improvements recommended as part of the alternatives evaluation. This includes federal and state requirements, flooding improvements needed, and water quality benefits to residents and the environment. An added challenge is that many of the residents only live on the Island during the winter months and do not see the significant flooding that occurs during the wet summer season.
- Estero Boulevard is where a majority of the flooding problems exist and there is limited space to provide stormwater improvements. Estero Boulevard is a County road so the Town has limited ability to make modifications as needed. Also, there is currently no budget in the County CIP to address traffic and stormwater issues. The Town created an ordinance that will not allow stormwater discharges to the beach by April 2008. However, there is not adequate stormwater infrastructure along Estero Boulevard to accept flows re-directed from the beach.

- The SWMP should consider “out-of-the-box” alternatives and best management practices (BMPs). The Town does not have a typical stormwater drainage and conveyance system. It has limited stormwater infrastructure, limited right-of-way (ROW), and does not own much property on the Island. The overall goal is to provide new alternatives to the Town with conveyance and storage that may allow for irrigation, potable water, and aquifer recharge uses. FMB mentioned that the Town buys its potable water from Lee County. In addition, the Town does not have a reclaimed water system. The Town has 49 catch basins with skimmer boxes (type C). Otherwise there is no other stormwater treatment. The known discharge points, inlets, swales, and pipes are included in the GIS maps already provided to CDM. However, there may be cases where the pipe connectivity is incorrectly shown, and in some cases inlets and pipes may lead to dead ends.
- FMB currently does not have a flood control level of service (LOS) goal. CDM will work with FMB staff to define alternatives to provide the desired LOS for the three problem areas and to develop conceptual BMPs for stormwater outfalls. This will include potentially different LOS goals as needed to keep roads/streets free for emergencies and preventing home/business flooding. Overall, the LOS goals need to be established at levels that can be reasonably achieved.

**3. Project Team**

CDM provided the following project contact list and responsibilities. The FMB project manager for this project will be Cathie Lewis. Jack Green and Jerry Murphy will support Cathie Lewis as needed.

<b>CDM</b>	<b>Project Role</b>	<b>Phone No.</b>	<b>Email</b>
Kirk Martin	Client Manager	O: (239) 938-9600 C: (239) 218-1043	<a href="mailto:martinwk@cdm.com">martinwk@cdm.com</a>
Solomon Abel	Project Manager	O: (239) 938-9600 C: (239) 963-5932	<a href="mailto:abelsj@cdm.com">abelsj@cdm.com</a>
Mike Schmidt	Technical Advisor	O: (904) 527-6735 C: (904) 519-7090	<a href="mailto:schmidtmf@cdm.com">schmidtmf@cdm.com</a>
Marc Stonehouse	Assistant Project Manager	O: (239) 938-9600 C: (734) 904-5305	<a href="mailto:stonehousemc@cdm.com">stonehousemc@cdm.com</a>
Dan Anderson	Funding	(561) 689-3336	<a href="mailto:andersondt@cdm.com">andersondt@cdm.com</a>
Tom Nye	System Evaluation and Modeling	(305) 372-7171	<a href="mailto:nyete@cdm.com">nyete@cdm.com</a>
Jim Wittig	Technical Advisor, Alternatives Analysis	(407) 660-2552	<a href="mailto:wittigit@cdm.com">wittigit@cdm.com</a>
Ankita Patel	Project Engineer	(239) 938-9600	<a href="mailto:patelad@cdm.com">patelad@cdm.com</a>
Sonia Iszler	Project Engineer	(239) 938-9600	<a href="mailto:iszlerc@cdm.com">iszlerc@cdm.com</a>

O – office phone number  
C – cell phone number

**4. Communication and Invoices**

Cathie Lewis will be the primary project contact for CDM. Jack Green should be copied on all correspondence from CDM to FMB. Cathie Lewis and Jerry Murphy will coordinate with LPA for CDM.

It was agreed that CDM will provide a draft of any official document to FMB for internal review and comments before it is posted as an official document.

As needed, CDM will provide the Town with access to an e-room to transfer large project files through an internet connection.

CDM will submit monthly invoices with a progress report that describes the tasks accomplished during the invoice period.

**5. Work Plan and Schedule**

CDM provided a copy of the scope of services and briefly reviewed each task and its schedule. In general, any changes or additions to the scope of work will be communicated to and discussed with FMB as soon as they arrive. FMB requested that CDM inform them when doing field work. CDM may perform field work without FMB staff being present.

**6. Action Items**

The following action items were identified at this meeting:

**CDM**

- CDM will identify the best person to attend an LPA meeting and let FMB know which meeting they can attend.
- CDM will obtain and use Lee County rainfall data.

**FMB**

- FMB will coordinate with the LPA to add CDM to their agenda at the meeting CDM can attend.
- FMB will provide CDM with a list of catch basin skimmer boxes.
- FMB will provide CDM with a list of repetitive loss properties from FEMA.
- FMB will provide CDM with the future land use information/map.



Because of existing development on the island, there are limited options for large-scale water quality treatment facilities. There are however, numerous other options available to improve water quality including both structural and source controls which can be evaluated and potentially incorporated into redevelopment plans or master planning efforts. Other examples include:



- minimize or reduce use of lawn chemicals in swales and along a buffer bordering the canals;
- establishing oil recycling facility to reduce illegal dumping of used oil;
- establish a program to locate and eliminate other unwanted or illicit discharges;
- discourage or prohibit discarding of lawn clippings in canals;
- institute a routine inspection/maintenance program for any remaining septic tanks;
- institute leash laws and pet clean-up requirements,
- establish limits on impervious areas and encourage permeable alternatives to impervious surfaces (e.g., wood decks instead of concrete patios etc.);
- encourage the use of slow-release fertilizers;
- encourage natural lawn care instead of chemical control;
- sand filters / enhanced sand filters (similar in function to infiltration trenches, but shallower and with greater surface area).

The advantages and disadvantages of various structural controls are summarized in Table 9-1. (The cross-section diagrams in this element were taken from the same source as Table 9-1 or from *Controlling Urban Runoff: A Practical Manual for Planning and Designing Urban BMPs*, Metropolitan Washington Council of Governments, 1987.)

## **DESIRABLE COURSES OF ACTION**

One task which should be completed by the Town of Fort Myers Beach in the near future is mapping the existing drainage facilities within the town. The mapping should include a description of relic systems (for example, filled swales) that are no longer structurally intact or functioning. The cost of this effort could be reduced greatly with the assistance of knowledgeable volunteers to locate and map the structures and facilities. Professional surveyors would then determine the exact height and capacity of the system.

From the data gathered, an evaluation of the stormwater system's response to a design storm (either SFWMD or a locally derived standard) should be completed under existing conditions and under conditions of a fully maintained and operational system. Depending on the results, a limited-area stormwater master plan should be considered to evaluate options available to achieve the desired level of service for stormwater.

Through the master planning process, the feasibility of drainage options can be evaluated, and the potential for increasing groundwater recharge can be evaluated. For example, it may be that increasing pipe size will have little or no effect because there is insufficient slope in certain areas, and pumps may be the only alternative for improvements.

The stormwater planning process could be phased to priority areas of the island since such an effort is expensive. A complete master plan for the northern third of the island alone might cost \$100,000 to \$200,000.

Planning for water quality improvements is cost-effectively completed at the same time as the master planning process, although many aspects of source control can be implemented in the absence of the master plan. For example, street sweeping, minimizing herbicide/pesticide use near canals, and establish-

**Table 9-1  
Comparison of Stormwater Best Management Practices**

URBAN BMP OPTIONS	Reliability for Pollutant Removal	Longevity*	Applicability to Most Developments	Regional Concerns	Environmental Concerns	Comparative Costs	Special Considerations
<b>Extended Dry Detention Ponds</b>	Moderate, but not always reliable	20+ years, but frequent clogging and short detention common	Widely applicable	Very few	Possible stream warming and habitat destruction	Lowest cost alternative in size range.	Recommended with design improvements and with the use of micropools and wet-
<b>Wet Detention Ponds</b>	Moderate to High	20+ years	Widely applicable	Arid and high ET regions	Possible stream warming, trophic shifts, habitat destruction, safety	Moderate to high compared to conventional stormwater detention	Recommended, with careful site evaluation
<b>Stormwater Wetlands</b>	Moderate to High	20+ years	Space may be limiting	Arid and high ET regions; short growing season	Stream warming, natural wetland alteration	Marginally higher than wet ponds	Recommended
<b>Multiple Pond Systems</b>	Moderate to High; Redundancy increases reliability	20+ years	Many pond options	Arid regions	Selection of appropriate pond option minimizes overall environmental	Most expensive pond option	Recommended
<b>Infiltration Trenches</b>	Presumed moderate	50% failure rate in 5 years	Highly restricted (soils, groundwater, slope, area, sediment input)	Arid and cold regions; sole-source aquifers	Slight risk of groundwater contamination.	Cost-effective on smaller. Rehab costs can be considerable.	Recommended with pretreatment and geotechnical evaluation.
<b>Infiltration Basins</b>	Presumed moderate if working	60-100% failure in 5 years	Highly restricted (see infiltration trench)	Arid and cold regions; sole-source aquifers	Slight risk of groundwater contamination.	Construction cost moderate, but rehab costs high.	Not widely recommended until longevity is improved.
<b>Porous Pavement</b>	High (if working)	75% failure in 5 years	Extremely restricted (traffic, soils, groundwater, slope, area, area,	Cold climate; wind erosion; sole--source aquifers.	Possible ground water impacts; uncontrolled runoff.	Cost-effective compared to conventional asphalt when working properly	Recommended in highly restricted applications with careful construction and effective
<b>Sand Filters</b>	Moderate to High	20+ years	Applicable (for smaller developments)	Few restrictions	Minor.	Comparatively high construction costs and frequent maintenance.	Recommended, with local demonstration
<b>Grassed Swales</b>	Low to Moderate, but unreliable	20+ years	Low density development and roads	Arid and cold regions	Minor.	Low compared to curb and gutter.	Recommended, with checkdams, as one element of a BMP
<b>Vegetated Filter Strips</b>	Unreliable in Urban Setting	Unknown, but may be limited	Restricted to low density areas	Arid and cold regions	Minor.	Low.	Recommended as one element of a BMP system.
<b>Water Quality Inlets</b>	Presumed low	20+ years	small (<2 acres), highly impervious catchments	Few	Resuspension of hydrocarbon loadings. Disposal of hydrocarbon and toxic	High, compared to trenches and sand filters.	Not currently recommended as a primary BMP option.

\* Based on current designs and prevailing maintenance practices.

Source: *A Current Assessment of Urban Best Management Practices, Techniques for Reducing Non-Point Source Pollution in the Coastal Zone.* Metropolitan Washington Council of Governments, 1992.

ing a recycling facility on the island do not impact drainage and can be done independently of a drainage master plan. However, if water quality inlets are used as a means to improve stormwater quality, the flow catchment areas must be incorporated into the placement of the inlets. In most cases, this will be more easily evaluated during a master planning process. As in the case of the drainage goals, all water quality goals should acknowledge the existing constraints to large-scale or regional solutions.

The town should begin to develop a strategy for water quality monitoring in accordance with the commitments made in the NPDES Part 2 application. Although most NPDES requirements should be met through joint programs with Lee County, the town could address its special problems by testing the metal content in canal bottom sediments. This is a cost-effective way to screen for pollutant sources, particularly contaminated urban runoff. The monitoring program would also incorporate visual inspections of exposed outfalls during dry weather when flow is not anticipated. Inexpensive field test kits can be used to assess whether the unexpected flow (if found) is likely to be a wastewater or commercial/industrial source. The results, when coupled with the drainage facilities mapping, can be used to isolate potential sources. Periodic re-testing should be considered (e.g., 3-5 years). A history of sediment results could be used to assess the success of other water quality management strategies.

Grant funds are often available for innovative projects to improve stormwater quality. The town has begun to seek funding for retrofit projects such as installing porous paving in parking lots that are being redeveloped. A request for a \$120,000 federal grant is pending before the South Florida Ecosystem Restoration Task Force. Such grants often require a 50% match; this match could be satisfied by the town's stormwater mapping or water quality monitoring programs as described above, or might be met by those initiating the redevelopment activity, or might be met by receiving credit for

the previous replacement of asphalt by pervious pavement at Times Square.

Some drainage problems can be addressed through regulatory means. For instance, swimming pools are sometimes emptied directly onto the beach. This can damage sea turtle nests (violating Chapter 370.12, *F.S.*) or cause serious erosion, and may even violate a general prohibition against the discharge of toxic substances contained in Chapter 17-302.500 of the *Florida Administrative Code* because of high levels of chlorine and other chemicals in pool water. At the federal level, the discharge of swimming pool water is recognized as a potential problem in the NPDES permitting process; the presence of chlorine in a stormwater discharge is considered an indicator of an "illicit connection" to the drainage system.

If environmental agencies will not require such discharges to be eliminated, the town could do so itself by ordinance. In those locations where roadside swales have the capacity to accept swimming pool water, it could be discharged there instead of onto the beach. Alternatively, it could be discharged directly into the sewer system, which has ample treatment capacity (although some limits might be required during the peak season).

Funding for master planning, capital improvement projects, or maintenance of existing stormwater facilities can be from general revenue, or gas taxes in some cases, or through a dedicated source such as a stormwater utility as discussed in the next section.

## ***STORMWATER UTILITY***

The establishment of the new town government provides certain opportunities that are available to all independent municipalities. One such entity that the town may create is called a "stormwater utility," which provides a specific service, in some ways like a utility that provides drinking water or sewer service. Most of the

rain that falls should be treated through an organized drainage system of ditches and pipes that collects, treats, and disposes stormwater runoff. To remain effective, this stormwater system has to be maintained by someone.

In most new developments, a homeowners' association is required to maintain whatever parts of the system are built by the original developer (such as the lakes or shallow "detention" areas). The local government typically maintains other parts of the system, such as ditches and underground pipes that run along the public road system.

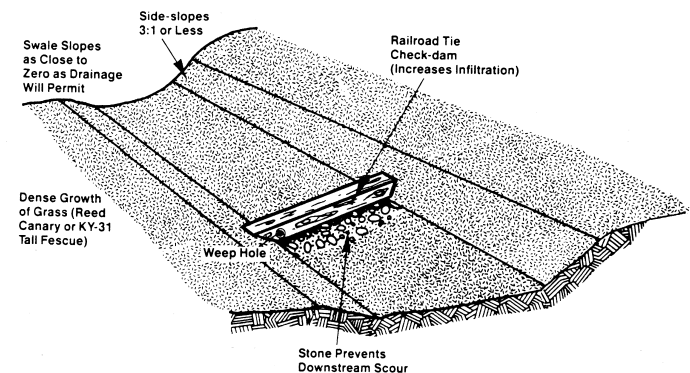
When this drainage system also provides drainage for the road itself, this maintenance can be paid for with gasoline taxes. Unfortunately, funding for all other types of stormwater maintenance and improvements has to compete with all other needed government services. The unfortunate result is often neglect. Without a properly maintained drainage system, the quality of stormwater goes down, resulting in higher levels of pollution in the "receiving waters" such as Estero Bay. When a proper drainage system was never installed at all, as is the case with many parts of Fort Myers Beach, pollutant levels in runoff can be very high. Many communities allow such conditions to continue, either through lack of knowledge or a shortage of funds to analyze and improve their situation.

As the problems created by improper stormwater management have become better known, many communities are creating a stormwater utility, a branch of city or county government whose sole purpose is stormwater management. Its funds usually come from a separate fee that is charged to owners of developed property, based on a share of the benefit each will receive from the utility. These fees cannot be used for any other purposes. The base fee is often around \$3 per month for a typical home. A fee of this level covers stormwater planning, routine maintenance, and minor improvements to the system. The fee is frequently listed on the water and sewer bill (which

is obviously more difficult at Fort Myers Beach since the town doesn't bill for either service).

Monthly billing avoids a large annual payment at tax bill time, and ensures the prompt and regular payments that the public gives to utility companies as a result of their blunt enforcement method—the service shut-off. (Other enforcement methods such as liens can also be used, but their administrative costs are very high relative to the small billing amount.)

The decision to create a stormwater utility can be made at any time, but most often just after certain events have taken place. These include the community accepting that all water pollution cannot be blamed on outsiders, and beginning to understand the nature of their own sources of pollution and the range of potential solutions. Fort Myers Beach is a logical candidate for a stormwater utility because there is a broad awareness of the increasing levels of pollution in the canals and in Estero Bay, along with a strong sentiment towards cleaning up pollution generally. The missing link for citizens to accept a stormwater utility fee is a full understanding of how current practices on Estero Island are contributing to a share of that pollution and what kinds of steps can be taken to improve the quality of stormwater runoff.



**Figure 4**, Enhanced grassed swale



place and available to serve the development at the time of issuance of a certificate of occupancy through an enforceable development agreement pursuant to Section 163.3220, *Florida Statutes*, or through an agreement or development order pursuant to Chapter 380, *Florida Statutes*.

- POLICY 9-D- 1 Identify by 1999 any emergency shelters and portions of evacuation routes subject to flooding during coastal flooding of 4.0, 5.0, and 6.0 feet above mean sea level.
- POLICY 9-D- 2 Identify options to improve flood-prone emergency shelters and evacuation routes, including but not limited to:
- i. raising the elevation of low-lying roads;
  - ii. berming/diking/elevating shelter facilities; and
  - iii. installing flap-valves on stormwater discharges where appropriate.
- POLICY 9-D- 3 The quality of water to be discharged from new surface water management systems is and shall remain subject to state and regional permitting programs that determine compliance with state water quality standards. Stormwater management systems in new private and public developments (excluding improvements to existing roads) shall be designed to SFWMD standards (to detain or retain excess stormwater to match the predevelopment discharge rate for the 25-year, 3-day storm). Stormwater discharges from development must meet relevant water quality and surface water management standards as set forth in Chapters 17-3, 17-40, and 17-302, and

rule 40E-4, *F.A.C.* New developments shall be designed to avoid increased flooding of surrounding areas.

**OBJECTIVE 9-E PRELIMINARY DRAINAGE STUDY — Identify by 2009 ~~1999~~ all existing drainage facilities and poorly drained areas.**

- POLICY 9-E-1 Undertake a thorough effort to map all existing drainage facilities, including modern stormwater management systems, roadside swales, and remnants of systems that may no longer function. Use citizen volunteers to reduce the cost of this effort.
- POLICY 9-E-2 Identify significant existing drainage problem areas through logs of citizen complaints and a public outreach effort.
- POLICY 9-E-3 Identify any existing facilities that need immediate repair or replacement.
- POLICY 9-E-4 Identify any partially submerged stormwater outfalls that could be retrofitted with grates to prevent manatees from entering the drainage system.

**OBJECTIVE 9-F STORMWATER MASTER PLAN — Evaluate by 2010 ~~2000~~ the need to improve public stormwater management facilities.**

- POLICY 9-F-1 This evaluation shall determine the nature of potential improvements to the existing stormwater system to improve drainage and to reduce the level of contaminants running off into tidal waters.
- POLICY 9-F-2 This evaluation shall include studies and/or models as needed to determine the capacity of existing facilities if they were fully maintained.