

Stormwater Management Element

GOALS - OBJECTIVES - POLICIES

Based on the analysis of stormwater management problems and solutions in this element, the following goals, objectives, and policies are adopted into the Fort Myers Beach Comprehensive Plan:

GOAL 9: To provide optimal flood protection and improved stormwater quality within the constraints imposed by location and existing land-use patterns.

OBJECTIVE 9-A CONTAMINATION — Reduce the level of contamination that occurs as rainfall flows toward tidal waters.

POLICY 9-A-1 Establish, fund, and implement a program to monitor the environmental impacts of stormwater runoff. This monitoring plan shall be designed to ensure that data collected will be useful in leading the town toward pollution-reducing strategies. If appropriate, this program may incorporate any monitoring requirements under the National Pollution Discharge Elimination System.

POLICY 9-A-2 Implement sound management practices to reduce contaminant levels in stormwater, such as:

1. storm drain stenciling to increase public understanding of the water quality impacts of careless drainage practices;
2. cooperation with Lee County in providing recycling sites for used oil, batteries, unwanted household hazardous wastes, and other recyclable bulk materials;
3. routine sweeping or vacuuming of streets and parking lots; or
4. improved litter control in public places.

POLICY 9-A-3 Seek available grant funding and other potential revenue sources to retrofit the existing drainage pattern in redevelopment areas to reduce stormwater contamination.

OBJECTIVE 9-B RECHARGE — Increase groundwater recharge rates by reducing stormwater runoff.

POLICY 9-B-1 Create land development regulations that respond to the town's situation where existing development often was not designed to attenuate stormwater runoff.

POLICY 9-B-2 These regulations shall require improved handling of stormwater when property undergoes major redevelopment through techniques such as:

1. limitations on impervious coverage to improve existing conditions (and meet standards for new development where feasible); and
2. encouragement of pervious pavement techniques through partial credits against impervious ratios (provided that ongoing maintenance will ensure its continued effectiveness).

POLICY 9-B-3 These regulations shall provide appropriate allowances where imposition of the highest level of stormwater management would hinder other important public policies such as maintaining the pedestrian character of public places or the historic character of designated districts.

OBJECTIVE 9-C EROSION — Reduce erosion caused by stormwater runoff.

POLICY 9-C-1 Reduce erosion from new discharges through techniques such as:

1. discouraging or prohibiting construction of swales that will not be vegetated;
2. establishing maximum allowable discharge velocities for design storm(s) for new construction and redevelopment; and
3. prohibiting discharge of stormwater onto beaches.

POLICY 9-C-2 Improve the management of existing conveyances through techniques such as:

1. prohibiting the use of herbicides in vegetated conveyances; and
2. re-establishing vegetation in barren conveyances.

POLICY 9-C-3 Establish the following priorities for the discharge of swimming pool water, in order to minimize erosion and protect the quality of receiving waters and sea turtle nesting habitat:

1. discharge to roadside swales;
2. discharge into the public sewer system (within any limits established by Lee County Utilities); and
3. discharge directly to tidal waters only under extreme conditions and in conformance with all federal, state, and local regulations.

OBJECTIVE 9-D LEVELS OF SERVICE — Maintain interim levels of service for flood protection.

POLICY 9-D-1 Until replaced following the evaluation described under Objective 9-F, interim levels of service are hereby established for protection from flooding to be provided by stormwater and roadway facilities:

1. During a 3-day rainfall accumulation of 13.7 inches or less (3-day, 100-year storm as defined by SFWMD), one lane of evacuation routes should remain passable (defined as less than 6 inches of standing water over the crown). Emergency shelters and essential services should not be flooded.
2. During a 3-day rainfall accumulation of 11.7 inches or less (3-day, 25-year storm as defined by SFWMD), all lanes of evacuation routes should remain passable. Emergency shelters and essential services should not be flooded.
3. During coastal flooding of up to 4.0 feet above mean sea level, all lanes of evacuation routes should remain passable. Emergency shelters should not be flooded.

POLICY 9-D-2 The town will enforce these levels of service under the concurrency requirements of Florida law by requiring one of the following before issuance of development permits:

1. development orders or building permits will be issued subject to the condition that, at the time of the issuance of a certificate of occupancy, the necessary facilities and services must be in place and available to serve the development being authorized; or
2. at the time development orders or building permits are issued, the necessary facilities and services are guaranteed to be in 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-3 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-4 Identify options to improve flood-prone emergency shelters and evacuation routes, including but not limited to:

1. raising the elevation of low-lying roads;
2. berming/diking/elevating shelter facilities; and
3. installing flap-valves on stormwater discharges where appropriate.

POLICY 9-D-5 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 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 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.

POLICY 9-F-3 This evaluation shall also be based on the initial results of the monitoring program, the inventory of existing facilities, the potential for improving drainage and water

quality, the potential effects of future development, and the potential cost of the improvements.

POLICY 9-F-4 This evaluation shall determine what kind of improvements might better protect life and property against flooding from extreme tides and tropical storms.

POLICY 9-F-5 The interim levels of service shall be re-examined if any instances occur where they cannot be maintained.

POLICY 9-F-6 The Town Council shall establish a funding source within two additional years to begin carrying out the selected stormwater improvements. This funding source may include revenue from gas taxes, ad valorem collections, stormwater utility fees, or other recurring sources.

***STORMWATER MANAGEMENT APPENDIX
FEDERAL, STATE, REGIONAL
& LOCAL OBJECTIVES***

Federal - The major objectives for EPA related to stormwater are included in the 1987 amendments to the Clean Water Act, and promulgated as regulations in the November 16, 1990, Federal Register. EPA has issued a National Pollutant Discharge Elimination System (NPDES) permit to Lee County and its co-applicants, with common and separate requirements for each municipality. The major objectives of the stormwater NPDES program pertinent to the Town of Fort Myers Beach are:

- eliminate non-stormwater discharges to the storm sewer system; and
- reduce pollutants discharged from municipal separate storm sewer systems (MS4s) to the maximum extent practicable (MEP).

Non-stormwater discharges, referred to as illicit connections or illegal dumping, are expressly prohibited from discharging to the storm sewer system, and a condition of the stormwater permit addresses the detection and removal of illicit connections.

Reducing pollutants to the MEP standards is not defined in the regulations. The permit conditions, which incorporate parts of the original application, completely define MEP. These conditions require the implementation of many different pollution reduction programs rather than impose numeric discharge limitations. Program elements that have been identified for municipalities include some or all of the following:

- Ordinances
- Construction
- Toxic Materials Handling
- Public Education
- Maintenance
- Stenciling Inlets
- Litter Control
- Solid Waste Programs
- Monitoring
- Illicit Connection Removal
- Intergov. Agreements
- Stormwater Planning
- Street Sweeping
- Road Repair

One of the program elements which is required as a permit condition is some form of water quality monitoring. The purposes of the monitoring are varied: to provide more detailed seasonal information for the estimation of pollutant loading from stormwater outfalls; to provide ambient sampling to show water quality improvements resulting from the implementation of the permit programs; and to provide information on the performance of best management practices.

State - Although there are many state regulatory agencies, the objectives of the State Water Resource Implementation Rule (Rule 62-40, *F.A.C.*) are the most pertinent because of the linkage to the development of local comprehensive plans. The State Water Policy is provided for the stated purpose of the management of the waters of the state “to conserve and protect the natural resources and scenic beauty” and to “realize the full beneficial use” of these resources. The intent of the Rule is to clarify the policies of Chapters 187, 373 and 403, FS,

and to provide guidance to the Department of Environmental Protection and water management districts in the development of programs, rules, and plans.

First, §62-40.110, Declaration and Intent, requires that local governments consider the State Water Resource Implementation Rule in the development of comprehensive plans. This means that in the preparation of goals, objectives, and policies for the protection or enhancement of surface water quality, the provisions of the State Water Resource Implementation Rule must be considered. §62-40.432 provides specific surface water protection and management goals and guidelines. The first subsection defines five goals for surface water management:

- protect, preserve and restore the quality, quantity and environmental values of water resources;
- maintain the pre-development characteristics of a site; reduce channel erosion, pollution, siltation, sedimentation and flooding; reduce stormwater pollutant loadings to preserve/restore beneficial uses; to reduce freshwater losses by encouraging reuse; to improve stormwater recharge; to maintain estuarine salinity; and to address stormwater management on a watershed basis;
- eliminate the discharge of stormwater that has not been adequately treated and to minimize adverse impacts of such stormwater;
- reduce unacceptable pollutant loadings from older stormwater management systems (constructed before 1982); and
- develop comprehensive watershed management plans to prevent flooding and water quality problems as well as to improve existing conditions.

§62-40-432(3) describes the roles of the state, water management district, and local government in relationship to the State Comprehensive Plan, the Local Government Comprehensive Planning and Land Development Act, and the SWIM (Surface Water Improvement and Management) program. Issues which are to be considered for the issuance of surface water permits are identified in §62-40.432(4), and minimum stormwater treatment performance standards are identified in §62-40.432(5). Of particular interest regarding performance standards, the rule states that stormwater

management systems must be designed to achieve at least 95 percent reduction of the average annual load of pollutants in Outstanding Florida Waters such as Estero Bay. These minimum standards may be modified based upon a basin-specific plan to achieve pollution loading reduction goals set by the water management districts.