

## **CHAPTER II**

### **SURFACE WATER MANAGEMENT ELEMENT**

## TABLE OF CONTENTS

Stormwater Management Plan Implementation.....	1
Meeting Future Needs.....	5
Concurrency Management .....	6
Natural Drainage Functions .....	8

## GOALS, OBJECTIVES AND POLICIES

### **GOAL**

A SAFE, EFFICIENT, ENVIRONMENTALLY SOUND AND COMPREHENSIVE SURFACE WATER MANAGEMENT SYSTEM IN BREVARD COUNTY.

### **Stormwater Management Plan Implementation**

#### **Objective 1**

Correct existing deficiencies to ensure preservation and improvement of surface water quality, according to priorities established within the County's Stormwater Management Plans.

#### **Policy 1.1**

Brevard County shall continue to implement and update Stormwater Management Plans which establish criteria and methodologies for drainage basin analysis and Level of Service standards. Drainage basins will be prioritized and analyzed based on severity of problems and available funding. The analysis shall identify the following information, at a minimum:

##### **Criteria:**

- A. Surface water drainage basins and sub-basins.
- B. Public and private stormwater treatment facilities, including detention/retention facilities, and the entity having operations responsibility.
  - 1. For shared facilities, the proportional capacity allocated to each entity shall be identified.
  - 2. The geographic service area of each facility and the predominant types of land use served by the facility.
  - 3. The design capacity of the facility.
  - 4. The current demand on the facility.
  - 5. The impact of the drainage facility on adjacent natural resources, including water quality of receiving waters.
- C. Estimated timeframe and costs of correcting deficiencies.

### **SURFACE WATER MANAGEMENT ELEMENT**

February 2022

### **Policy 1.2**

Priorities for basin analysis and retrofitting shall be established using a matrix approach and the following criteria, at a minimum:

**Criteria:**

- A. Health and safety.
- B. Flooding potential.
- C. Impact of stormwater on the water quality of the receiving water bodies.

### **Policy 1.3**

The Natural Resources Management Department shall be the lead agency for the development and implementation of the Stormwater Management Plans and shall coordinate its efforts with the Florida Department of Environmental Protection (FDEP) and St. John's River Water Management District (SJRWMD) on the Basin Management Action Plan (BMAP), Total Maximum Daily Loads (TMDL's) and the National Pollution Discharge Elimination System (NPDES) permit schedule and requirements.

### **Policy 1.4**

Where an approved stormwater system has been altered, resulting in negative impacts to neighboring properties, Brevard County shall require property owners to return these systems to their original design or to an approved design which is a betterment, as appropriate. Any such improvements shall be consistent with the adopted Stormwater Management Criteria within the Land Development Regulations: Chapter 62, Article X, Division 6.

### **Policy 1.5**

Brevard County shall address modification of existing development which does not meet stormwater management standards within the Stormwater Management Criteria, and should use available financial mechanisms for the modification of such development.

**Criteria:**

- A. Stormwater management facilities within existing developments should be retrofit to provide for treatment of runoff (including sediment removal where appropriate) prior to release to receiving waters. The Level of Service Standards for these facilities shall be the reduction of the pollutant loading as necessary to enhance or maintain the beneficial uses of the receiving water and to meet receiving water standards per Florida Administrative Code. All facilities should be maintained at design capacity.

- B. Properties with bulkheads or seawalls should be modified so that runoff is detained prior to release to the receiving body. This may be achieved by planting native or other appropriate vegetation along the shoreline to retain silt, sediment and nutrients so that the rate of runoff is equivalent to the pre-development state.
- C. Properties with vegetated shorelines should modify the shorelines to retain silt, sediment and nutrients by planting native vegetation or other appropriate vegetation. A detention structure, swale, and/or berm may be used to allow sediments to settle and nutrient uptake to occur only if non-native vegetation is predominant. Runoff rates should be equivalent to the pre-development state.

**Policy 1.6**

Brevard County's Stormwater Utilities Program will continue to include a program for periodic, scheduled inspections of stormwater management facilities.

**Policy 1.7**

Brevard County should continue the public information program on the value of stormwater management. The County should continue to coordinate this program with Natural Resource Conservation Service (NRCS), the Indian River Lagoon National Estuary Program and other appropriate agencies.

**Policy 1.8**

Brevard County shall determine the feasibility of innovative methods of stormwater treatment. Innovative methods of stormwater treatment should be construed as any technique other than standard retention and detention basin, and shall include such alternatives as stormwater reuse and area wide stormwater management facilities.

**Policy 1.9**

Brevard County shall pursue funding from federal, state and regional sources to investigate and utilize innovative methods of stormwater treatment.

**Policy 1.10**

Funding sources for development and implementation of the Stormwater Management Plans will continue to include the stormwater utility which is also identified within the Capital Improvements Element.

**Policy 1.11**

Brevard County shall continue to implement the stormwater utility as a reliable long-term funding mechanism to correct existing deficiencies and to

**SURFACE WATER MANAGEMENT ELEMENT**

provide for future stormwater management needs. Fee structure may be related to type of development, quantity of runoff generated, impervious surface or other "user related" standard.

**Policy 1.12**

Land use decisions relating to water resources and natural drainage features should be consistent with comprehensive water basin management plans. Area wide water quality management plans should be considered during the continued development of the BMAP. All new development shall meet the established stormwater requirements. If during the time that the Stormwater Ordinance is being implemented, it becomes apparent that additional regulations are required in order to protect water quality in surface water bodies in Brevard County, the County will initiate protective regulations through the adoption or revision of land development regulations.

**Policy 1.13**

During continued development of the Stormwater Ordinance, the County shall initiate the adoption of retention and detention standards for stormwater throughout Brevard County.

**Policy 1.14**

Brevard County should support a program to retrofit large drainage canals with water control structures or rapid infiltration basins to hold canal stages high during the dry season. This would reduce irrigation demands, conserve ground water resources and reduce degradation of water quality of the Indian River Lagoon and the St. Johns River.

**Policy 1.15**

Nonstructural methods of stormwater management that reduce the generation and accumulation of potential stormwater runoff contaminants should be utilized to the maximum extent possible. Nonstructural methods of stormwater management include pesticide and herbicide control, proper fertilizer management, erosion control, proper waste disposal, etc. In addition, the use of wetlands and floodplains should be utilized whenever feasible in such a manner as to maintain the natural function and biodiversity of the system.

**Policy 1.16**

No new structures (such as dams, weirs, locks, levees or other artificial mechanisms) designed to control the stage and/or flow of waters of the State shall be constructed, except where no practical alternative exists and where such structures are necessary to protect the public safety, safeguard existing flood control structures, habitable structures and other public

investments, or restore the function of the natural water dependent ecosystem. The use of temporary structural modifications to control the stage or flow of a water body as a part of any government sanctioned program of flood control, water quality restoration, habitat restoration or exotic plant control should be designed and operated so as to minimize harm to non-target organisms or natural ecosystems.

**Policy 1.17**

The channelization, dredging or impoundment of natural waters of the State shall be prohibited, except where no practical alternative exists for those operations necessary to correct existing threats to public health or safety, allow maintenance of existing navigational waterways, or provide reasonable access to water dependent shore-based facilities. All practical steps shall be taken to minimize adverse impacts to biological attributes of the water resources and water-dependent natural systems.

**Meeting Future Needs**

**Objective 2**

Require stormwater management facilities to meet future development requirements, consistent with the County's Stormwater Ordinance.

**Policy 2.1**

Brevard County's Stormwater Management Plans shall coordinate the timing and location of stormwater management facilities to projected future needs and the Future Land Use plan. Intensity and levels of stormwater services shall be tied to the development of an area, and consistent with level of service standards.

**Policy 2.2**

The Stormwater Utilities Program shall continue to leverage alternative methods of funding for the provision of projected future stormwater management needs. These may include, but are not limited to impact fees, capacity reservation fees, or hookup fees to pay for new public facilities or improvements to existing public facilities required for new development.

**Policy 2.3**

Brevard County requires that new stormwater management facilities or techniques shall not negatively impact adjacent properties.

**Policy 2.4**

Brevard County should develop a schedule for maintenance of all existing County maintained stormwater management facilities.

**Policy 2.5**

The provision of stormwater management facilities by the County shall be coordinated and consistent with the provision of other facilities, as directed by this Comprehensive Plan, including the Future Land Use, Conservation, Coastal Management, Transportation and Capital Improvements Elements.

**Policy 2.6**

The development and use of stormwater management facilities by Brevard County shall be undertaken to maximize the overall public benefit, while minimizing construction, operation and maintenance costs.

**Concurrency Management**

**Objective 3**

Require new development to adequately manage stormwater generated by the development.

**Policy 3.1**

The Brevard County Land Development Regulations shall require all new development being site planned or subdivided to provide for stormwater management, which meets the following Level of Service Standards, at a minimum:

**Criteria:**

- A. Retention and detention requirements shall at a minimum meet SJRWMD Criteria.
- B. Retention of the first inch of runoff.
- C. Post-development rate of discharge shall not exceed pre-development rate of discharge for a 25 year - 24 hour storm event.
- D. Stormwater discharge facilities shall be designed so as to not lower receiving water quality or degrade the receiving water body below the minimum conditions necessary to assure the suitability of water for the designated use of its classification as established in Chapter 62-302 FAC.



### **Policy 3.2**

Brevard County shall maintain Land Development Regulations consistent with the following minimum criteria:

**Criteria:**

- A. Land Development Regulations shall be consistent with Brevard County Subdivision and Site Plan Regulations and subsequent amendments or any subsequent stormwater land development regulation, whichever is more stringent.
- B. Land Development Regulations shall require any other design standards as may be required, including the flexibility for the use of the 2-pond retention/detention system or other innovative method of stormwater management approved by the Natural Resources Management Department.
- C. Land Development Regulations shall require performance bonds, annual operating fee or other fee structure for the maintenance of private systems which are accepted by the County for maintenance but not for ownership.
- D. If it becomes apparent that additional regulations are required in order to protect water quality in surface water bodies ~~in Brevard County~~, the Brevard County will initiate protective regulations through the adoption or revision of Land Development Regulations.
- E. A plan amendment will be required to change or alter the level of service standards adopted for drainage facilities.

### **Policy 3.3**

Brevard County shall require stormwater management systems to employ the most efficient and cost-effective control techniques available, including Best Management Practices to control siltation and prevent erosion.

### **Policy 3.4**

Brevard County shall continue record keeping on stormwater management practices and monitoring of selected facilities. This information will provide a database for state, regional and local programs.

### **Policy 3.5**

Brevard County shall provide stormwater treatment facilities for all roadways, which it constructs or improves for the purpose of increasing traffic

flow. These facilities shall be designed, constructed, operated and maintained consistent with County and state standards.

**Policy 3.6**

Brevard County should investigate the delegation of stormwater permitting from the SJRWMD or the FDEP, as appropriate. If Brevard County accepts delegation, this program shall be properly funded and adequately staffed.

**Policy 3.7**

The Natural Resources Management Department shall review and comment on the impact of new development on stormwater conveyance systems. If the conveyance system is determined to be deficient, the developer shall be required to retain additional runoff on site, or make improvements to the conveyance system equal to the impact of the new development.

**Natural Drainage Functions**

**Objective 4**

Maintain the function of natural drainage features within Brevard County by reducing loss of flood storage capacity, protecting the functional value of wetlands and by reducing the interbasin diversion of waters from the St. Johns River basin into the Indian River Lagoon. Quality of waters which are diverted into the Lagoon system shall be improved.

**Policy 4.1**

Surface water interbasin diversions for new development shall be prohibited. The reduction or elimination of existing interbasin diversions to re-establish the historic St. Johns River drainage basin shall be encouraged.

**Policy 4.2**

Brevard County shall review and provide comments on all state and federal proposals for controlling or retrofitting the existing interbasin canals for consistency with this Comprehensive Plan. The County shall request compliance and consistency with this Comprehensive Plan.

**Policy 4.3**

Brevard County should support the development of a program by the SJRWMD to coordinate surface water management data. Information should be collected, reviewed and placed on a computer model to determine cumulative effects of new development on discharge rates and volumes.

**Policy 4.4**

Brevard County should continue to coordinate-stormwater management plans-within the County-with municipalities and State and Federal land holders.

**Policy 4.5**

Development within areas prone to flooding due to localized soil conditions or hydrology shall not negatively impact adjacent properties or receiving surface water body quality.

**Policy 4.6**

Brevard County shall fulfill the intent of the Conservation and Coastal Management elements of this Comprehensive Plan for the protection of the County's natural drainage features.

**Policy 4.7**

Public facilities should not be located within the 100-year floodplain or wetland areas unless the following apply:

**Criteria:**

- A. The facilities are water-dependent, such as boat ramps, docks, mosquito control facilities excluding their chemical storage areas, or other uses described as water-dependent in the glossary of this Comprehensive Plan ; or,
- B. The facilities are water-related, or surface water management facilities or other uses described as water-related in the glossary of this Comprehensive Plan ; or,
- C. The facilities are not adversely affected by periodic flooding or standing water, such as highway bridges and some recreational facilities; or,
- D. The building structures are flood proofed and located above the 100-year flood elevation or removed from the floodplain by appropriately constructed dikes or levees; or,
- E. The facilities are found to be in the public interest and there is no feasible alternative.

**Policy 4.8**

Brevard County shall continue its implementation of a mosquito impoundment management plan which should address the following criteria, at a minimum:

**SURFACE WATER MANAGEMENT ELEMENT**

**Criteria:**

- A. Acquisition of impoundments for maintenance and operation.
- B. Appropriate water management system shall be utilized.
- C. Impoundments shall be restored or reconnected with the Indian River Lagoon when a public benefit can be demonstrated.
- D. Proposed alteration of an impoundment should be reviewed by Mosquito Control. Brevard County should compensate property owners for mosquito impoundments when this use precludes all use by the owner or when no alteration would be acceptable to Mosquito Control.
- E. Non-permitted alteration of an impoundment shall be enforced by Brevard County.
- F. All mosquito impoundments should be evaluated and those found to be breached or non-functional should be repaired by the appropriate Mosquito Control District.
- G. Those fully functioning impoundments determined to be needed by the Mosquito Control District, should be placed under a rotational impoundment management plan as approved by the Florida Coordinating Council on Mosquito Control.
- H. Any other "source reduction" mosquito control activities that also reduce the natural habitat required by freshwater or marine organisms should be prohibited.
- I. Mosquito control impoundments shall be managed in a manner that avoids adverse impacts to the water quality of receiving water bodies.
- J. The primary use of mosquito control impoundments shall be to protect human health through the control of mosquito populations. Secondary uses may include stormwater management, habitat improvement, wildlife management, and other uses as appropriate. Brevard County shall encourage multiple uses of mosquito control impoundments.

**SURFACE WATER MANAGEMENT ELEMENT**

- K. Brevard County should develop a program to acquire right-of-way or easements for drainage systems and mosquito control systems which the County maintains, if not already acquired.

**Policy 4.9**

Brevard County shall continue a water and sediment quality monitoring program within the Indian River Lagoon system, and shall coordinate such a program with other federal, state and local agencies. Specific methods of coordination include making data available to other agencies, and coordinating possible management strategies. A water and sediment monitoring program will be evaluated at least every 5 years to determine deficiencies or other necessary changes.

**Policy 4.10**

Brevard County will continue to identify and map point and non-point sources of pollution within the Indian River Lagoon and St. Johns River watersheds to reduce pollutant loading sources. This program shall be coordinated with other federal, state and local agencies.

**Policy 4.11**

Where illegal or accidental discharges of materials, or violations of water quality standards are observed, such violations will be reported to the appropriate federal, state and local regulatory agencies for further action and enforcement.

**Policy 4.12**

Brevard County shall continue to participate in the development and implementation, as appropriate, of the BMAP, as developed in coordination with the FDEP and SJRWMD.