

**SUMMARY OF RECOMMENDED CHANGES  
2011 EVALUATION & APPRAISAL REPORT (EAR)**

**Public Facilities Element – Drainage Sub-Element**

**Goals, Objective and Policies:** The entire Sub-Element will be revised to reflect the proper formatting for all Goals, Objectives and Policies, as defined below:

**Goal:** General statement defining what the plan will ultimately achieve, typically beginning with “TO” followed by a transitive verb, such as, TO PROTECT or TO ENSURE.

**Objective:** A more specific statement than the stated Goal; describing actions that will help achieve the goal(s), typically beginning with the active verb providing the general direction, such as, “Implement”, “Promote” or “Protect”. Objectives use the term “will” and allow Policies to specifically require an activity with “shall”.

**Policies:** Specific statements that provide directives on how to achieve the objectives and ultimately the Sub-Element’s goals, typically beginning with phrases like, “The County shall promote...”, “The County shall continue to...” or “The District shall expand...” or similar phrases. Policies use the terms “may” or “shall” to provide specific direction.

**Goals, Objective and Policies:** The entire Sub-Element should be revised to reflect Department name changes, designee changes, renumbering due to objective and/or policy additions and/or deletions, and grammatical changes.

To be renamed, including Sub-Element, Goal and throughout Objectives and Policies

Goal – revisions to reflect all that stormwater management entails, and its interdependence with provisions found in other Elements and Sub-Elements; reformatting

Objective 1 – minor revision to reflect GIS use; reformatting

Objective 2 – reformatting

Policy 2.1 – part of revision affecting multiple Elements to eliminate redundancy

Objective 3 – reformatting

Objective 4 – reformatting

Objective 5 – reformatting

Objective 6 – reformatting

Policy 6.2 – minor revision to update document cite

Policy 6.3 – minor revision to update document cite

**Assessment of the Successes & Shortcomings  
and Recommendations  
for the Public Facilities Element – Drainage Sub-Element**

**A. Introduction & Background:**

The purpose of the Drainage Sub-Element is defined within its single Goal, which reads as follows:

**COLLIER COUNTY SHALL PROVIDE DRAINAGE AND FLOOD PROTECTION FOR EXISTING AND FUTURE DEVELOPMENT, MINIMIZE THE DEGRADATION OF QUALITY OF RECEIVING WATERS AND SURROUNDING NATURAL AREAS AND PROTECT THE FUNCTIONS OF NATURAL GROUNDWATER AQUIFER RECHARGE AREAS.**

The intent of the Drainage Sub-Element is to assure the provision of drainage and flood protection facilities and services that would enable the citizens of Collier County to meet their needs for stormwater management while also assuring public health and safety in accordance with the criteria set forth in Rule 9J-5, F.A.C., and Chapter 163, Florida Statutes.

The annual update and amendment to the Capital Improvement Element, adopted January 28, 2008 included the initial step toward re-naming of this Sub-Element from the "Drainage" Sub-Element to the "**Stormwater Management**" Sub-Element. The new name should be used in all titles, headings and text within this Sub-Element, and in all references to this Sub-Element found throughout the Growth Management Plan.

Note that, in one respect, there is overlap in the intended purpose of the Drainage and Natural Groundwater Aquifer Recharge Sub-Elements: both seek to protect aquifer recharge areas. However, the emphasis of the Drainage Sub-Element is on surface water protection, whereas the emphasis of the Natural Groundwater Aquifer Recharge Sub-Element is on groundwater protection. For an evaluation of the Natural Groundwater Aquifer Recharge Sub-Element, refer to that Section of this Report. In addition to the overlap of policies within the Drainage and Natural Groundwater Aquifer Recharge Sub-Elements, there is also an overlap between the intended purpose of the Drainage Sub-Element and Goal 2 of the Conservation & Coastal Management Element (refer to the CCME Section of this Report), including the Watershed Management Plans discussed under Objective 2.1 of the CCME. EAR-based amendments made to those sections should be reflected in this Sub-Element, as necessary.

As currently formatted, this Sub-Element consists entirely of a single Goal, and its supporting Objectives and Policies.

The provision of public facilities and services for stormwater management, floodplain management and flood protection, potable water supply and, aquifer recharge area protection and watershed management are planned in correlation with future land use projections. This Goal should be expanded to fully capture the County's goals in these areas and ensure collaboration in implementing Objectives and applying Policies. These interdepartmental collaborations should also be recognized, and strengthened if necessary, in the Conservation & Coastal Management Element (CCME) and Intergovernmental Coordination Element (ICE) of this Growth Management Plan.

This Goal should be rephrased to improve its formatting as a "goal".

## B. Objectives Analysis:

### OBJECTIVE 1:

The County shall utilize the Annual Update and Inventory Report on Public Facilities (AUIR) process to update the Drainage Atlas Maps and Channel/Structure Inventory components of the adopted Water Management Master Plan to verify the existing watershed basin boundaries within Collier County. The County will also verify the design storm capacity of the drainage facilities within each basin, and determine the costs necessary to maintain the facility capacities to selected design storm standards. This information shall be used to program operational funds in the Annual County Budget and to identify necessary capital projects and basin studies in the Annual Capital Improvement Element Update and Amendment.

#### Objective Achievement Analysis:

The above Objective requires drainage projects to be included in the County's Annual Update and Inventory Report (AUIR), and thus the annual Capital Improvement Element and Schedule of Capital Improvements update. The County has been diligent in adhering to this requirement. Each year the County provides its latest AUIR to the Florida Department of Community Affairs along with its submittal of its latest adopted Capital Improvement Element.

All mapping for the stormwater management system is now done in the GIS, and "Drainage Atlas Maps" are no longer utilized. This reference should be changed to identify the GIS and update its connection with the AUIR process.

Based on the above, this Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an "objective".

*[Public Comment from January 25, 2010 EAR Public Meeting – Suggesting the County should re-evaluate monitoring and maintenance procedures for nutrient loads/pollution/water quality.]*

#### Policy Relevance:

There are five (5) policies within this Objective.

##### **Policy 1.1:**

**The County shall update and revise stormwater management maintenance procedures and capital projects based on continual facilities performance monitoring activities. Consideration will be given to natural systems as identified in Policy 2.1.4 of the Conservation and Coastal Management Element, existing developments and proposed developments.**

This Policy requires that drainage project procedures and processes be monitored to ensure that they are beneficial to natural resources. This Policy remains relevant and should be retained as written.

*[Public Comment from March 15, 2010 EAR Public Meeting – Questioning the status of and responsibility for monitoring and maintaining our water resources.]*

**Policy 1.2:**

**County drainage system capital facility planning shall be designed to implement procedures and projects in a manner to ensure that adequate stormwater management facility capacity is available at the time a development permit is issued, or that such capacity will be available when needed to serve the development.**

This Policy requires the County to implement projects and procedures in such manner as to ensure that adequate drainage capacity exists at the time such capacity is needed for new development. This Policy remains relevant and should be retained as written.

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting that watershed management and water resource management should take a more holistic approach.]*

**Policy 1.3:**

**The County shall continue to develop public drainage facilities, which maintain the groundwater table as a source of recharge for the County's potable water aquifers, provide a source of irrigation water for agricultural, horticultural and golf course operations and provide water to native vegetation.**

This Policy requires the County to develop drainage facilities for certain land uses designed to maintain the groundwater table. This Policy remains relevant and should be retained as written.

**Policy 1.4:**

**The County shall continue to evaluate structural and non-structural measures for restoring historical hydroperiods in impacted watersheds where possible and for reducing the impacts of canal and stormwater discharges to estuaries. Selected measures will be implemented through the watershed management planning process identified within Goal 2 of the Conservation and Coastal Management Element of the Growth Management Plan.**

This Policy requires the County to pursue the restoration of impacted watersheds with historical hydroperiods and reducing discharges into estuaries. This Policy remains relevant and should be retained as written.

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting that watershed management and water resource management should take a more holistic approach.]*

**Policy 1.5:**

**Watershed Management Plans will be undertaken as set forth in Objective 2.1 of the Conservation and Coastal Management Element (CCME). After each plan is completed, the results will be made available to the property owners located within the basin's boundaries for their use in petitioning the Board of County Commissioners to create a taxing/assessment unit to fund the proposed implementation of the plan's recommendations. Until the Watershed Management Plans are completed, the County shall apply the interim standards for development as contained in CCME Objective 2.1.**

This Policy directs watershed management planning efforts to the CCME where planning provisions are found, and provides for interim standards until they are completed. These plans are not yet completed. This Policy remains relevant and should be retained as written.

The "interim standards" referenced above appear in CCME Objective 2.1 and *require* the County – as a Policy requirement would – to prepare watershed management plans under the Goal of protecting

surface and estuarine water resources. This CCME Objective contains the same adherence to the SFWMD "Basis of Review" required by Policy 6.2 Policy 6.3 below. Revisions made to the CCME and this Sub-Element should be verified for internal consistency.

*[Public Comment from January 25, 2010 EAR Public Meeting – Suggesting the County improve public participation outreach and involvement for watershed management planning.]*

*[Public Comment from March 15, 2010 EAR Public Meeting – Questioning the status of and adherence to the Comprehensive Watershed Management Plan and the Comprehensive Water Resource Management Plan; another, suggesting that the County establish a Stormwater Utility fee to address needed improvements and to address EPA's implementation of the Numeric Nutrient Criteria (NNC).]*

## **OBJECTIVE 2:**

**The County shall maintain adopted drainage level of service standards for basins and sub-basins identified in the Water Management Master Plan. Maintenance of the drainage level of service (LOS) identified for each basin will be implemented through the watershed management planning process identified within Goal 2 of the Conservation and Coastal Management Element of this Growth Management Plan.**

### Objective Achievement Analysis:

The purpose of this Objective and its policies is to maintain and implement the County's adopted drainage LOS standards for its established drainage basins. Implementation provisions are based in the CCME. Based on the above, this Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an "objective".

### Policy Relevance:

There are two (2) policies within this Objective.

#### **Policy 2.1:**

**The following levels of service for drainage are hereby adopted for the purpose of issuing development permits. Upon completion of each associated Watershed Management Plan, the level of service will be modified, if warranted.**

- A. Future "private" developments - water quantity and quality standards as specified in Collier County Ordinance Numbers 74-50, 90-10 and 2001-27, and Land Development Code Ordinance Number 2004-41, as amended.**
- B. Existing "private" developments and existing or future public drainage facilities - those existing Levels of Service identified (by design storm return frequency event) by the completed Water Management Master Plan as follows:**

**LEVELS OF SERVICE ATTAINED BY BASINS**

**BASIN**

**LEVEL OF SERVICE**

**MAIN GOLDEN GATE SYSTEM**

Main Golden Gate Canal Basin	D
Cypress Canal Basin	D
Harvey Canal Basin	D
I-75 Canal Basin	D
Green Canal Basin	C
Airport Road Canal South Basin	D
Corkscrew Canal Basin	D
Orange Tree Canal Basin	D
951 Canal Central Basin	C

**DISTRICT NO. 6 SYSTEM**

Rock Creek Basin	D
C-4 Canal Basin	C
Lely Main Canal Basin	D
Lely Canal Branch Basin	D
Lely Manor Canal Basin	D
Haldeman Creek Basin	D
Winter Park Outlet Basin	D

**COCOCHATCHEE RIVER SYSTEM**

Cocohatchee River Basin	D
Pine Ridge Canal Basin	C
Palm River Canal Basin	D
West Branch Cocohatchee River Basin	C
East Branch Cocohatchee River Basin	D
Airport Road Canal North Basin	D
951 Canal North Basin	D

**GORDON RIVER EXTENSION**

Gordon River Extension Basin	D
Goodlette-Frank Road Ditch Basin	D

**HENDERSON CREEK BASIN**

Henderson Creek Basin	D
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**LEVELS OF SERVICE ATTAINED BY BASINS**

**BASIN**

**LEVEL OF SERVICE**

**FAKA-UNION SYSTEM**

Faka-Union Canal Basin	D
Miller Canal Basin	D
Merritt Canal Basin	C
Prairie Canal Basin	C

**SOUTHERN COASTAL BASIN**

US-41 Outfall Swale No. 1 Basin	D
US-41 Outfall Swale No. 2 Basin	D
Seminole Park Outlet Basin	C

**BARRON RIVER SYSTEM**

Okaloacoochee Slough Basin	D
Barron River Canal North Basin	C
Urban Immokalee Basin	C

**MISCELLANEOUS INTERIOR WETLAND SYSTEMS**

Corkscrew Slough Basin	D
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This Policy lists standards for the various identified drainage basins.

The LOSS for stormwater management systems appearing in Policy 2.1 above is one of two locations within this GMP where these standards are shown. The other location is Policy 1.5; subsection "C" in the Capital Improvement Element. This dualism may be a simple matter of unnecessary redundancy, except that the two Policies are not the same. These differences should be reconciled and a single location selected for these LOSS to appear. If it is decided to show the LOSS in both locations, then the CIE could be formatted to provide the LOS Standards, while the Sub-Element entries could elaborate on the figures. This Policy will remain relevant in its reconciled format.

**Policy 2.2:**

**The County's Water Management Master Plan shall include recommendations for changing Levels of Service together with an analysis of capital requirements.**

This Policy requires the County to implement projects and procedures in such manner as to ensure that adequate drainage capacity exists at the time such capacity is needed for new development. This Policy remains relevant and should be retained as written.

**OBJECTIVE 3:**

**The County shall maintain and annually update a five-year schedule of capital improvements for water management facilities in conformance with the annual review process described within the Capital Improvement Element of the Growth Management Plan.**

Objective Achievement Analysis:

Like other types of capital improvements, drainage projects are included in annual updates to the Five-Year Schedule of Capital Improvements, and thus the County's Annual Budget for each fiscal year. This Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an "objective".

Policy Relevance:

There are four policies within this Objective.

**Policy 3.1:**

**The County shall develop and maintain procedures to annually update water management facility demand and capacity information.**

This Policy calls for the development of procedures to regularly update demand and capacity information. These procedures are found in the subsequent Policies under Objective 3. Policy 3.2 requires the preparation of periodic summaries of the information developed for Policy 3.1. Policy 3.3 requires drainage projects to be ranked according to the ranking criteria contained within the Capital Improvement Element. Policy 3.4 requires that the County give major emphasis to drainage improvements in the Estates and Urban Areas, as opposed to other portions of the County. All of these Policies remain relevant and should be retained as written.

**Policy 3.2:**

**The County shall prepare annual summaries of capacity and demand information for each water management facility and service area.**

This Policy requires the preparation of periodic summaries of the information developed for Policy 3.1. They are included in the County's Annual Update and Inventory Report (AUIR). This Policy remains relevant and should be retained as written.

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting that watershed management and water resource management should take a more holistic approach.]*

**Policy 3.3:**

**Collier County shall evaluate and rank water management capital improvement projects in accordance with the priorities stated in the Capital Improvement Element of this Plan.**

This Policy requires drainage projects to be ranked according to the ranking criteria contained within the Capital Improvement Element. These rankings are considered in the County's Annual Update and Inventory Report (AUIR). This Policy remains relevant and should be retained as written.

**Policy 3.4:**

**County improvements to, and maintenance of, existing drainage facilities shall be a priority over new construction projects in the urban and estates designated areas (exclusive of Southern Golden Gate Estates).**

This Policy requires that the County give major emphasis to drainage improvements in the Estates and Urban Areas, as opposed to other portions of the County. This emphasis toward these improvements is considered in the County's Annual Update and Inventory Report (AUIR). This Policy remains relevant and should be retained as written.

**OBJECTIVE 4:**

**The County shall develop and maintain policies and programs to correct existing deficiencies and to provide for future facility needs in accordance with the annual work program referenced in the adopted Water Management Master Plan.**

Objective Achievement Analysis:

This Objective requires the County maintain its drainage work program to correct deficiencies and provide for future need. Based on the above, this Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an "objective" such as, **Develop and maintain policies and programs to correct existing deficiencies and to provide for future facility needs in accordance with the annual work program referenced in the adopted Water Management Master Plan.**

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting that watershed management and water resource management should take a more holistic approach.]*

Policy Relevance:

There are three (3) policies within this Objective.



**Policy 4.1:**

**Water management projects shall be undertaken in accordance with the schedule provided in the Capital Improvements Element of this Plan. These projects shall be undertaken in coordination with the Big Cypress Basin/South Florida Water Management District 5 Year Plan**

This Policy requires water management projects to be undertaken in accordance with the procedures outlined within the Capital Improvements Element, and that such projects be coordinated with the Big Cypress Basin Board and the South Florida Water Management District. (It is worth noting here that, in Collier County the Big Cypress Basin Board, an arm of the South Florida Water Management District, maintains the major drainageways while Collier County maintains the tributary systems.) This Policy remains relevant and should be retained as written.

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting a number of these ‘other regulatory agencies’ be identified, including the Federal Emergency Management Agency (FEMA), Department of Environmental Protection (DEP), and the U.S. Army Corps of Engineers (USACOE), as those among whom water resource management is coordinated – including surface water, stormwater, and water supplies for municipal services.]*

**Policy 4.2:**

**Collier County shall correct existing deficiencies and provide for future water management facility needs through the formulation and implementation of an annual work programs. In order to implement the annual work program, the County shall encourage the use of innovative funding mechanisms including, but not limited to special taxing or assessment districts.**

This Policy calls for the establishment of annual work programs to “correct existing deficiencies and provide for future facility needs.” The Policy also seeks to encourage the use of innovative funding mechanisms for such projects, including the creation of special taxing districts. The purpose of this Policy is to provide the ability for the County to establish a stormwater utility system. This Policy remains relevant and should be retained as written.

**Policy 4.3:**

**The County shall develop and maintain a stormwater management public awareness program, which will include, but not necessarily be limited to, a Collier County Stormwater Management website. The primary purpose of this program shall be to provide information regarding the County’s stormwater management programs to the general public including, but not limited to, the environmental enhancements that will result from the use of total water management concepts within the existing drainage network.**

This Policy requires the development of a public awareness program relative to stormwater management issues. The County Stormwater Management Department maintains a very sophisticated website that provides both general information on stormwater issues and specific information about County projects and activities. This Policy remains relevant and should be retained as written.

*[Public Comment from January 25, 2010 EAR Public Meeting – Suggesting the County needs better outreach and education, with user-friendly terminology and illustrations.]*

## **OBJECTIVE 5:**

**The County shall continue to regulate land use and development in a manner that protects the functions of natural drainage features and natural groundwater aquifer recharge areas. Implementation of this Objective will be consistent with the Watershed Management Planning process identified within Goal 2 of the Conservation and Coastal Management Element of the Growth Management Plan, and with relevant provisions contained within the adopted Land Development Code (Ordinance Number 2004-41, as amended).**

### Objective Achievement Analysis:

This Objective provides for the protection of natural drainage features and natural groundwater aquifer recharge areas. This Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an “objective”.

### Policy Relevance:

There are two (2) policies within this Objective.

#### **Policy 5.1:**

**Collier County shall periodically review all appropriate Water Management Ordinances and regulations to determine their effectiveness in protecting the functions of natural drainage features and natural groundwater aquifer recharge areas.**

This Policy requires periodic reviews of water management ordinances and regulations with regard to their effectiveness. This Policy remains relevant and should be retained as written.

#### **Policy 5.2:**

**Based upon the periodic review described in Policy 5.1, the County shall develop any appropriate new ordinances and regulations that are necessary to ensure protection of the functions of natural drainage features and natural groundwater aquifer recharge areas.**

This Policy requires that the reviews, reflected in Policy 5.1, lead to the development of new regulations or ordinances. This Policy remains relevant and should be retained as written.

## **OBJECTIVE 6:**

**The County shall protect the functions of natural drainage features through the application of standards that address the quality and quantity of discharge from stormwater management systems. Implementation of this Objective will be consistent with the watershed management planning process identified within Goal 2 and Objective 2.1 of the Conservation and Coastal Management Element of the Growth Management Plan. This objective is made measurable through the following policies:**

### Objective Achievement Analysis:

This Objective seeks to protect natural drainage features through the imposition of stormwater discharge quantity and quality standards. The Objective relies on its subject policies for the definition of standards. As per Objectives 2 and 5, this Objective should be revised to reference (in general) the objectives and policies contained in Goal 2 of the CCME, and the Watershed Management Plans described under Objective 2.1 of the CCME, and to acknowledge that these portions of the CCME

provide guidance for protecting the functions of the County's natural drainage features. Based on the above, this Objective is being achieved and should be retained, essentially as written. This Objective should be rephrased to improve its formatting as an "objective".

*[Public Comment from January 25, 2010 EAR Public Meeting – Suggesting that watershed management planning needs to be about more than just water – planning should take a more holistic approach.]*

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting that watershed management and water resource management should take a more holistic approach.]*

Policy Relevance:

There are three (3) policies within this Objective.

**Policy 6.1:**

**Projects shall be designed and operated so that off-site discharges will meet State water quality standards, as set forth in Chapter 62-302.300, F.A.C., as it existed at the date of project approval.**

This Policy identifies a specific resource to address stormwater discharges to natural drainage features and requires the County to meet State water quality standards. This Policy remains relevant and should be retained as written.

**Policy 6.2:**

**Collier County's retention and detention requirements shall be the same as those provided in the South Florida Water Management District's Basis of Review, as it existed at the time of project approval.**

This Policy identifies stormwater retention/detention requirements of the appropriate Water Management District, with this document reference appearing to be out of date. This Policy also mirrors other provisions found in another Public Facilities Element Sub-Element. The Pollution Control Department implements this Policy. This Policy remains relevant and should be revised to replace "Basis for Review, dated January 2004" with "**Environmental Resource Permit Information Manual, Volume IV, 2009**".

It is also noted that the County does not adhere to the same retention and detention requirements as those found in the resource identified. The interim watershed management regulations exceed the SFWMD retention and detention requirements by requiring 150% of SFWMD criteria for all developments. The SFWMD typically only requires that for projects discharging into designated Outstanding Florida Water (OFW) sources. This Policy remains relevant and should accordingly be further revised to reflect the increase in water quality treatment.

*This Policy conflicts with CCME Objective 2.1.a. which requires 150% of the SFWMD water quality treatment requirement. This is part of the Interim Watershed Standards.*

**Policy 6.3:**

**Allowable off-site discharge rates shall be computed using a storm event of 3 day duration and 25 year return frequency. The allowable off-site discharge rates are as follows:**

- |   |                |
|---|----------------|
| a. Airport Road North Sub-Basin<br>(North of Vanderbilt Beach Road) | 0.04 cfs/acre  |
| b. Airport Road South Sub-basin<br>(South of Vanderbilt Beach Road) | 0.06 cfs/acre  |
| c. Cocohatchee Canal Basin  | 0.04 cfs/acre  |
| d. Lely Canal Basin   | 0.06 cfs/acre  |
| e. Harvey Basin   | 0.055 cfs/acre |
| f. Wiggins Pass Basin   | 0.13 cfs/acre  |
| g. All other areas  | 0.15 cfs/acre  |

**The County may exempt projects from these allowable off-site discharge rates if any of the following applies:**

- 1. The project is exempt from allowable off-site discharge limitations pursuant to Section 40E-400.315, FAC.**
- 2. The project is part of an existing SFWMD permit, which allows discharge rates different than those listed above.**
- 3. It can be documented that the project currently discharges off-site at a rate higher than those listed above. The documentation required for this purpose shall be prepared by a registered professional engineer, and will consist of an engineering study which utilizes the applicable criteria in the "SFWMD Basis of Review for Environmental Resource Permit Applications". The study shall be subject to review and approval by the County and SFWMD staff. The study shall include the following site-specific information:**
  - a. Topography**
  - b. Soil types and soil storage volume**
  - c. Vegetation types**
  - d. Antecedent conditions**
  - e. Design rainfall hydrograph**
  - f. Depression storage capacity**
  - g. Receiving water hydrograph, and**
  - h. Other relevant hydrologic and hydraulic data.**

**Using the above information, a hydrologic and hydraulic model shall be developed which demonstrates the higher off-site discharge rate.**

This Policy commits the County to using the 3-day, 25-year storm event as a discharge rate standard. The Policy also contains a list of calculated discharge rates for identified basins and sub-basins. This Policy references discharge requirements of the appropriate Water Management District, with this document reference appearing to be out of date. This Policy also mirrors other provisions found in another Public Facilities Element Sub-Element. The Pollution Control Department implements this Policy. This Policy remains relevant and should be revised to replace “Basis for Review for Environmental Resource Permit Applications” with “**Environmental Resource Permit Information Manual, Volume IV, 2009**”.

## **INTRODUCE A NEW OBJECTIVE AND POLICY FOLLOWING FROM THE 2009 ADOPTIONS OF HB 697 AND COUNTY ENERGY AUDIT.**

### OBJECTIVE DSE:

Reduce Greenhouse Gas (GHG) emissions by developing programs to reduce energy use at County drainage and watershed management facilities and by County drainage and watershed management operations, and through community oriented programs helping residents reduce their energy use.

### Policy DSE.1:

The County will strive to meet the recommendations of the Energy Audit and Greenhouse Gas Inventory for Collier County governmental facilities and operations, prepared by Twentyfifty, LLC and adopted by the Board of Commissioners in July 2009.

THE ABOVE ENTIRE MAY NOT BE NEEDED IN THIS SUB-ELEMENT – Since stormwater management facilities are, for the most part, gravity-operated structures, this proposed language is not going to have any substantial impact on any proposed GHG emission reduction. Of the four pump stations operated by the County, the majority of the pumping is by electrical motor driven pumps. The Victoria Park pump station has a propane gas fired internal combustion engine for the large backup pump when the capacity of the electrical pump is exceeded or when the electrical service is interrupted such as during a major storm event. From a carbon-footprint perspective, that is very small and since Victoria Park relies entirely on pumpage to remove the stormwater runoff from the front half of the development, we cannot afford to rely solely on electrical power.

*[Public Comment from March 15, 2010 EAR Public Meeting – Suggesting the County should study ideas to target GHG sources – beside transportation, to address a lack of energy efficient plans, to address the need to plan for sea level rise.]*