

1.5.C.3 - Brief Assessment of Successes & Shortcomings – Public Facilities Element – Drainage Subelement

A. Introduction & Background:

The purpose of the Drainage Subelement is defined within its single Goal (Goal 1), which reads as follows:

“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.”

Note that, in one respect, there is overlap in the intended purpose of the Drainage and Natural Groundwater Aquifer Recharge Subelements: both seek to protect aquifer recharge areas. However, the emphasis of the Drainage Subelement is on surface water protection, whereas the emphasis of the Natural Groundwater Aquifer Recharge Subelement is on groundwater protection. For an evaluation of the Natural Groundwater Aquifer Recharge Subelement, please see Section 1.5.C.5 of this report. In addition to the overlap of policies within the Drainage and Natural Groundwater Aquifer Recharge Subelements, there is also an overlap between the intended purpose of the Drainage Subelement and Goal 2 of the Conservation & Coastal Management Element (CCME, see Section 1.5.F of this report), including the Watershed Management Plans discussed under Objective 2.1 of the CCME.

As currently formatted, this Subelement consists entirely of a Goal (Goal 1), Objectives and Policies. As part of the EAR-based amendments, the County is recommending formatting changes consisting of the addition of a brief introductory statement for the Subelement and removal of the “1” from the Goal, so that it is simply the Goal of the Subelement. These changes would also include simplification of the numbering system for Objectives and Policies.

B. Objectives Analysis:

OBJECTIVE 1.1:

Via the Annual Update and Inventory Report on Public Facilities (AUIR) process, annually 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. 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 for inclusion of needed programming of operational funds in the Annual County Budget and 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 Schedule of Capital Improvements. The County has been diligent in adhering to this requirement. The current Capital Improvement Schedule (2002 – 2006) includes five (5) drainage projects.

Policy Relevance:

There are six (6) policies within this Objective. Policy 1.1.1 requires that drainage project procedures and processes be monitored to ensure that they are beneficial to natural resources. This Policy should be retained as written.

Policy 1.1.2 requires County Stormwater Management staff 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 should be retained as written.

Policy 1.1.3 requires the development of new drainage facilities to ensure protection of groundwater, with emphasis on the water table aquifer. This policy also emphasizes the needs of commercial and agricultural operations. However, it is unclear from the policy language whether the intent is to emphasize drainage for such operations or use of stormwater for irrigation. It is also unclear what the policy wording means by the term “commercial operation.” As part of the EAR-based amendments, this policy should be clarified.

Policy 1.1.4 calls for an evaluation of whether to restore historical flowways and use these flowways to control runoff to estuaries. As part of the EAR-based amendments, the County recommends revising this policy to contain specific criteria regarding the restoration of such flowways. In addition, the County recommends that this policy be revised so as to be consistent with the objectives and policies contained in Goal 2 of the CCME.

Policy 1.1.5 references three (3) detailed drainage studies, regarding schedules for completion of studies for the County’s Gordon River Extension, Belle Meade and Immokalee Drainage Basins. As part of the EAR-based amendments, staff recommends revising this policy should be revised to reflect the current status/scheduling of these three studies.

Policy 1.1.6 is similar to 1.1.5, but references three secondary basins. The date references within this Policy are significantly out-of-date. As part of the EAR-based amendments, this policy should be revised to reflect the status of the three referenced studies, and/or to reference any additional basin studies that may be necessary.

OBJECTIVE 1.2:

Maintain adopted drainage level of service standards for basins and sub-basins identified in the Water Management Master Plan.

Objective Achievement Analysis:

The purpose of this Objective and its policies is to reference the County’s adopted drainage LOS standards for its established drainage basins. 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.

Policy Relevance:

There are two policies within this Objective. Policy 1.2.1 lists standards for the various identified drainage basins. It should be revised, as necessary, to reflect the current adopted list of basins and the relevant LOS standards. There is a misnumbering error with regard to the second policy within this Objective, as it is shown as Policy 1.2.3. It calls for enlarging “the scope of the Water Management Master Plan to include recommendations for changing Levels of Service together with analysis of capital requirements.” Except for renumbering, this policy should be retained as written.

OBJECTIVE 1.3:

Beginning with fiscal year 1996-97, a five-year schedule of capital improvement needs for water management facilities will be maintained and updated annually in conformance with the review process for the Capital Improvement Element of this plan.

Objective Achievement Analysis:

Like all other types of capital improvements, drainage projects are included in the County’s Annual Five-Year Schedule of Capital Improvements, and thus the County’s Annual Budget for each fiscal year. The above Objective contains an outdated year reference, but the wording is otherwise acceptable. As part of the EAR-based amendments, the Objective should be reworded to remove the year reference and simply refer to the five-year schedule of capital improvements.

Policy Relevance:

There are four policies within this Objective. Policy 1.3.1 calls for the development of procedures to regularly update demand and capacity information. Policy 1.3.2 requires the preparation of periodic summaries of the information developed for Policy 1.3.1. Policy 1.3.3 requires drainage projects to be ranked according to the ranking criteria contained within the Capital Improvement Element. Policy 1.3.4 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 should be retained as written.

OBJECTIVE 1.4:

Beginning with fiscal year 1996-97, develop policies and programs to correct existing deficiencies and provide for future facility needs for those projects which have been outlined in the adopted Water Management Master Plan and any future individual basin studies.

Objective Achievement Analysis:

This Objective calls for the establishment of an annual drainage work program, but references an outdated fiscal year. As part of the EAR-based amendments, the Objective should be reworded to remove the year reference and simply refer to the annual work program.

Policy Relevance:

There are three policies within this Objective. Policy 1.4.1 requires water management projects to be undertaken in accordance with the procedures outlined within the County’s 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 should be retained as written.

Policy 1.4.2 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 should be revised to clarify its intent.

Policy 1.4.3 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 should be revised to reference the website and other ongoing public awareness activities undertaken by the County.

OBJECTIVE 1.5:

Continue to regulate land use and development to protect the functions of natural drainage features and natural groundwater aquifer recharge areas through the adopted Land Development Code (Ordinance 91-102 as amended).

Objective Achievement Analysis:

The wording within this Objective is acceptable, but it references an outdated edition of the County’s Land Development Code (LDC). The EAR-based amendments should include a revision to this Objective to either update the LDC reference or remove the reference altogether. Additionally, as per Objective 1.2, 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.

Policy Relevance:

There are two policies within this Objective. Policy 1.5.1 requires an annual review of water management ordinances and regulations with regard to their effectiveness. The EAR-based amendments should include a revision to this policy to refer to a “periodic review” instead of an “annual review.”

Policy 1.5.2 requires that the annual review, reflected in Policy 1.5.1, lead to the development of new regulations or ordinances. Once again, the EAR-based amendments should include a revision to this policy to refer to a “periodic review” instead of an “annual review.”

OBJECTIVE 1.6:

The functions of natural drainage features shall be protected through the application of standards that address the quality and quantity of discharge from stormwater management systems. This objective is made measurable through the following policies:

1.5.C.3.4

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 1.2 and 1.5, 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.

Policy Relevance:

There are three policies within this Objective. Policy 1.6.1 requires offsite drainage discharges to meet State Water Quality Standards. However, the Policy references an outdated Florida Administrative Code (F.A.C.) Citation, and should be updated as part of the EAR-based amendments. Policy 1.6.2 references the retention/detention requirements of the South Florida Water Management District's Basis of Review. However, the policy also references a date of August 31, 1999. This policy should be updated or reworded so as to simply refer to the District Basis of Review in general, without a date reference and without reference to a specific section of the Basis of Review. Policy 1.6.3 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 certain basins. This policy should be updated with regard to the stated discharge rates, as necessary.