

### **1.5.C.5 - Brief Assessment of Successes & Shortcomings – Public Facilities Element – Natural Groundwater Aquifer Recharge Subelement**

#### **A. Introduction & Background:**

The Natural Groundwater Aquifer Recharge Subelement contains a single Goal, which states the primary purpose of this Subelement. Goal 1 reads as follows:

“The County shall identify and protect Natural Groundwater Aquifer Recharge Areas from activities that could degrade and/or contaminate the quality of groundwater.”

In short, the purpose of this Subelement is to identify and protect aquifer recharge areas.

On April 6, 1996, Collier County adopted an Evaluation and Appraisal Report (EAR) for its local comprehensive plan. On November 14, 1997, the County adopted EAR-based amendments to its plan. On December 24, 1997, the Department of Community Affairs issued a Notice and Statement of Intent to find the County’s EAR-based amendments “not in compliance” as defined in Section 163.3184(1)(b), Florida Statutes. During the ensuing process, the Natural Groundwater Aquifer Recharge Sub-Element (NGARSE) was revised and reorganized to better reflect the remedial actions required by the Florida Administration Commission’s Final Order No. AC-99-002 on June 22, 1999. As a result, Objective 1.2 and Policies 1.2.1 through 1.2.4 of the NGARE were updated on May 9, 2000.

As currently formatted, this Subelement consists entirely of a Goal (Goal 1), Objectives and Policies. As part of the EAR-based amendments, there are recommended 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. The numbering system for Objectives and Policies would also be simplified. *Goal 2, Objective 2.1, and Policies 2.1.1 through 2.1.4 were deleted as part of a previous amendment to this Subelement.*

#### **B. Objectives Analysis:**

##### **GENERAL ANALYSIS:**

The following Objectives and Policies are implemented primarily by the Collier County Pollution Control & Prevention Department. The Objectives and Policies speak generically about groundwater protection and the identification and protection of aquifer recharge areas. However, virtually all of the Department’s work is related to County potable water wellfields. Therefore, the recommendation is that all Objectives and many of the Subelement’s policies be revised to reflect the emphasis on wellfields.

## **OBJECTIVE 1.1:**

On a biannual basis, beginning in October 1998, review and revise (as necessary) existing map delineations of recharge areas that are most sensitive to contamination from land development and other surface activities. The review and any map revisions will be based on geologic, hydrogeologic, hydrologic, and updated anthropogenic contaminant data aggregated during the previous biennium.

### Objective Achievement Analysis:

Currently, Collier County's Pollution Control and Prevention Department uses an advanced 3-dimensional computer model to calculate Wellfield Risk Management Zones around significantly sized existing and planned potable water wellfields. These Wellfield Risk Management Zones, in the form of maps, help protect potable water wellfields from pollution sources. As part of the EAR-based amendments, there should be a correction to the misspelling of the word "anthropogenic". Also, adjust the wording of this policy to reflect that the required evaluations are ongoing.

### Policy Relevance:

Policy 1.1.1 calls for continual revision of the Pollution Control Department's 3-D modeling program. Policy 1.1.2 calls for continuing revision of geologic and hydrogeologic data relative to recharge areas. Policy 1.1.3 calls for the identification of "existing land uses and land use activities" that possess the "greatest potential" for contaminating groundwater. Policy 1.1.4 requires the updating of mapping criteria for recharge areas, as new information becomes available. Policy 1.1.5 references official publications of the South Florida Water Management District (SFWMD) relative to the Surficial and Lower Tamiami Aquifers. These references should be updated, if possible, to reflect newer information (the referenced documents were published in 1995). There are no other recommended changes to these policies.

## **OBJECTIVE 1.2:**

Ground water quality shall meet all applicable Federal and State water quality standards.

### Objective Achievement Analysis:

Collier County has implemented numerous proactive programs designed to protect Collier County's ground water quality from man-made pollution sources. In addition, Collier County has also developed programs designed to respond to pollution releases into the environment. Finally, the Collier County Pollution Control & Prevention Department has developed strong working relationships with the Florida Department of Environmental Protection, Collier County Health Department, South Florida Water Management District, Big Cypress Basin Board and the Florida Department of Agriculture and Consumer Services that enhance the County's ability to effectively coordinate efforts to meet this objective. Therefore, the Objective should be retained, except for revisions to implement the general recommendation stated above.

Policy Relevance:

There are five policies within this Objective. Policy 1.2.1 prohibits discharges to sinkholes. Policy 1.2.2 deals with protection of groundwater recharge and references the SFWMD's "Basis of Review." Recommendation is to update this policy to reference a more recent version of the referenced document (the current reference is 1999), if such is available. Policy 1.2.3 incorporates the set of wellhead protection standards contained in Policy 3.1.1 of the Conservation and Coastal Management Element (CCME). Policy 1.2.4 requires the County's Rural and Agricultural Area Assessment to consider groundwater recharge characteristics. As the Assessment has been completed and Growth Management Plan Amendments adopted, this Policy should be deleted. Policy 1.2.5 requires the County to adopt more stringent groundwater recharge standards within two years of the adoption of such standards by the Water Management District. As this policy is generic, the County recommends that it be retained as is.

**OBJECTIVE 1.3:**

Continue to collect and evaluate ground water quality data, identifying ambient water quality values and trends, comparing analyze concentrations to Florida Ground Water Guidance Concentrations, and providing information to water resources planning and management entities, and to the general public.

Objective Achievement Analysis:

The above Objective requires Collier County to collect and analyze groundwater quality data for comparison to State Standards, and to be able to provide information on analysis results to all interested parties. This Objective should be retained as worded.

Policy Relevance:

Policy 1.3.1 requires continuation of County water quality monitoring efforts.

Policy 1.3.2 requires coordination of data analysis with relevant State and Federal agencies.

Policy 1.3.3 requires that monitoring data be reviewed on an annual basis, in order to determine whether County water quality monitoring activities require expansion.

The County does not recommend any changes to these policies.

Policy 1.3.4 requires refinement of the County's three-dimensional groundwater model. This policy should be revised to reflect the ongoing nature of this activity.

Policy 1.3.5 requires the creation (by 1997) of a local interagency groundwater resources planning group. This policy should be retained with a change to the date.

**OBJECTIVE: 1.4:**

Continue current activities of providing the public with educational materials concerning ground water protection issues in Collier County via annual technical publications of ground water quality data collected, general information publications, speakers' bureau presentations, K-12 classroom presentations, and in-service teacher workshops and seminars.

Objective Achievement Analysis:

This Objective requires continuation of County public educational activities with regard to groundwater quality information. The Pollution Control & Prevention Department maintains a website, which provides information related to some of the referenced issues. This Objective should be revised to include reference to the website. The Objective and its policies should also be revised to address any new media outlets or educational venues that may have been developed, or new programs that have been created, since the Objective was adopted.

Policy Relevance:

Policy 1.4.1 requires the County to advise the public on disposal of hazardous wastes. Policy 1.4.2 requires the County to prepare readily understandable (i.e., non-technical) public information on groundwater issues. These policies should be revised to include reference to the website. The policies should also be revised to address any new media outlets or educational venues that may have been developed, or new programs that have been created, since the policies were adopted.

**OBJECTIVE: 1.5:**

The County will implement existing plans to preserve critical ground water recharge areas and ground water resources, and on a biennial schedule, beginning in October 1988, review, evaluate, and revise (if warranted) those plans and actions, based on geologic, hydrologic, hydrogeologic, and anthropogenic contaminant data aggregated during the previous biennium.

Objective Achievement Analysis:

This Objective should be revised to demonstrate that these activities are ongoing.

Policy Relevance:

There are five policies within this Objective, all of which deal with various aspects of identifying and protecting critical areas. However, Policies 1.5.4 (petroleum storage tank cleanup program) and 1.5.5 (Small Quantity Hazardous Waste Generators) reference a deadline of October 1, 1997. As the County has established these two programs, the policies should be revised to reflect that these tasks are ongoing.