

I. INTRODUCTION

[New Language, page 1]

The Natural Groundwater Aquifer Recharge Sub-Element establishes the manner in which Collier County will identify and protect the natural groundwater aquifers that serve as the primary sources of drinking water for County residents and visitors. This Sub-Element relates only to those aquifer recharge areas located in unincorporated Collier County that serve as potable water wellfields.

The Implementation Section of this Sub-Element contains a single Goal, divided into five (5) Objectives. Beneath each Objective are the specific County implementing policies.

The water supply protection Objectives in this Sub-Element include:

- Mapping and delineation of natural aquifer recharge areas;
- Protection of groundwater quality;
- Groundwater quality monitoring;
- Public education with regard to groundwater protection issues; and,
- Protection of critical recharge areas and groundwater resources.

**Goal, Objectives and Policies
Natural Groundwater Aquifer Recharge Sub-Element**

GOAL 4:

[Number Removed, page 1]

THE COUNTY SHALL IDENTIFY AND PROTECT NATURAL GROUNDWATER AQUIFER RECHARGE AREAS FROM ACTIVITIES THAT COULD DEGRADE AND/OR CONTAMINATE THE QUALITY OF GROUNDWATER.

OBJECTIVE 4.1: (MAPPING AND DELINEATION OF RECHARGE AREAS)
[Renumbered, revised text, page 1]

The County shall continue to ~~On a biannual basis, beginning in October 1998,~~ review every two years, and revise (as necessary), existing map delineations of ~~recharge areas~~ County potable water wellfields that are most sensitive to contamination from nearby land development and other surface activities. The biennial review and any subsequent map revisions will be based on geologic, hydrogeologic, hydrologic, and updated ~~anathropogenic~~ anthropogenic contaminant data aggregated ~~during~~ since the previous ~~biennium~~ revision.

Policy 4.1.1:

The County shall ~~Continue to~~ revise and update its 3-dimensional computer models of ground water flow around public water supply wellfields, as additional data (e.g., withdrawal rates, numbers and locations of wells within wellfields, and hydrogeologic information) become available.

Policy 1.1.2: [Renumbered, revised text, page 1]

~~Continue to identify areas and revise previous identifications of areas that are especially vulnerable to contamination because of land use, drainage, geomorphic, soil, hydrogeological, and other conditions, such as the presence/absence of confining units.~~

The County shall identify those County potable water wellfields, or portions of wellfields, which are susceptible to contamination, caused by adjacent or nearby land uses, drainage patterns, geomorphic conditions, soil properties, and/or hydrogeologic factors, including the presence or absence of confining units. This information shall be revised and updated as necessary.

Policy 1.1.3: [Renumbered, revised text, page 1]

~~The County shall maintain and update data on~~ Identify existing land uses and land use activities that possess the greatest potential for ground water contamination. ~~See Policy 1.5.4.~~

Policy 1.1.4: [Renumbered, revised text, page 1]

~~The County shall maintain and~~ Update its maps of ~~criteria for determining and mapping~~ sensitive recharge areas as additional anthropogenic and hydrogeologic information becomes available.

Policy 1.1.5: [Renumbered, revised text, page 1]

This Sub-Element shall incorporate by reference ~~A~~ annual recharge amounts for the Surficial and Lower Tamiami aquifers and deeper aquifers such as the Sandstone and Hawthorne Aquifers, ~~are those as~~ described in the ~~SFWMD's~~ South Florida Water Management District's official publications dated April, 2000 (and scheduled to be published in 2006), ~~Publication WRE #327, Mapping Recharge (Infiltration/leakage) throughout the South Florida Water Management District, July/August, 1995 (Map 1 and Map 2).~~

OBJECTIVE 1.2: (PROTECTION OF GROUNDWATER QUALITY)
[Renumbered, revised text, page 1]

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

Policy 1.2.1: [Renumbered, revised text, page 1]

~~The County shall prohibit~~ Discharges to sinkholes or other karst related features that have direct hydrologic connections to the Surficial or Intermediate Aquifer Systems ~~shall be prohibited.~~

Policy 1.2.2: [Renumbered, revised text, page 2]

Non-agricultural developments requiring an ~~ERP~~ Environmental Resources ~~P~~ permit from the South Florida Water Management District (SFWMD) shall preserve groundwater

recharge characteristics as required by the SFWMD and as set forth in the SFWMD's Basis for Review, ~~as it existed on October 31, 1999,~~ dated January 2004 and as regularly updated. Ground water recharge shall also be protected through the application of the retention/detention requirements and allowable off-site discharge rates for non-agricultural developments specified in Policies ~~4-6.2~~ and ~~4-6.3~~ in the Drainage Sub-Element.

Policy ~~4-2.3~~: **[Renumbered, revised text, page 2]**

The County ~~S~~standards for protecting the quality of ground water recharge ~~to~~ within the ~~public water supply wellfields~~ wellhead protection areas identified in the Future Land Use Element (FLUE) shall be ~~are the same as~~ those provided in Policy 3.1.1 of the Conservation and Coastal Management Element.

Policy ~~1-2.4~~ **[Deleted text, page 2]**

~~The Collier County Rural and Agricultural Area Assessment shall consider the ground water recharge characteristics in the County's rural area including the information contained in SFWMD publication WRE #327.~~

Policy ~~4-2.54~~: **[Renumbered, revised text, page 2]**

Collier County shall evaluate the necessity for adopting more stringent ground water recharge standards for High or Prime Recharge areas within 2 years of the SFWMD Governing Board's adoption of such areas.

OBJECTIVE ~~4-3~~: (GROUNDWATER QUALITY MONITORING) **[Renumbered, revised text, page 2]**

The County shall ~~C~~ontinue to collect and evaluate ground water quality data, identifying ambient water quality values and trends, comparing analyzed concentrations to Florida Ground Water Guidance Concentrations, and providing information to water resources planning and management entities, and to the general public.

Policy ~~4-3.1~~: **[Renumbered, revised text, page 2]**

The County shall ~~C~~ontinue ~~the~~ its existing water quality monitoring program to provide base-line data, evaluate long-term trends, identify water quality problems, and evaluate the effectiveness of the County's ground water protection program.

Policy ~~4-3.2~~: **[Renumbered, revised text, page 2]**

The County shall ~~C~~oordinate data gathering activities with State and Federal agencies to minimize duplication of efforts and enhance the quality of information gathered.

Policy 1.3.3: [Renumbered, revised text, page 2]

The County will annually Assess the its groundwater quality monitoring data annually to determine whether monitoring activities and County Ordinances require expansion, modification or reduction.

Policy 1.3.4: [Renumbered, revised text, page 2]

The County shall continually Gather and use evaluate appropriate data to for the purpose of refining and improveing the data-base groundwater quality monitoring database used in the County's 3-dimensional ground water model.

Policy 1.3.5: [Renumbered, revised text, page 3]

By 1 October 1997 Collier County shall continue to conduct establish a water resources planning group composed of with appropriate County, City of Naples, and SFWMD staff to provide guidance for ground water resource development, utilization, and conservation.

OBJECTIVE: 1.4: (PUBLIC EDUCATION WITH REGARD TO GROUNDWATER PROTECTION ISSUES) [Renumbered, revised text, page 3]

The County shall Continue current activities of providing the public with educational materials concerning ground water protection issues in Collier County, via These may include, but shall not be limited to, the preparation of annual technical publications of ground water quality data eollected, an informational website for groundwater quality issues, general information publications, establishment of a speakers' bureau presentations, K-12 classroom presentations, and in-service teacher workshops and seminars.

Policy 1.4.1: [Renumbered, revised text, page 3]

The County shall continue to Advise the public on the appropriate disposal methods for hazardous wastes, for the purpose of reducing or avoiding the potential for groundwater contamination. In performing this task, the County may utilize the public educational measures listed within Objective 4 of this Sub-Element, or any other measures, which may be appropriate.

Policy 1.4.2: [Renumbered, revised text, page 3]

The County shall continue to Provide information in a manner that can be understood by the general public on regarding Collier County's groundwater system, its vulnerability to contamination and measures needed to protect it from contamination. In performing this task, the County may utilize the public educational measures listed within Objective 4 of this Sub-Element, or any other measures, which may be appropriate.

OBJECTIVE: 1.5: (PROTECTION OF CRITICAL RECHARGE AREAS AND GROUNDWATER RESOURCES) [Renumbered, revised text, page 3]

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

Policy 1.5.1: [Renumbered, revised text, page 3]

The County shall ~~D~~develop, and continually update, technical criteria for determining those recharge areas, which areas are critical to the County's ~~longterm~~ long-term ground water needs.

Policy 1.5.2: [Renumbered, revised text, page 3]

The County shall continue to ~~I~~identify the critical recharge areas and appropriate protective mechanisms.

Policy 1.5.3: [Renumbered, revised text, page 3]

The County shall continue to ~~I~~identify costs, funding mechanisms and private property rights issues associated with the protection of critical recharge areas.

Policy 1.5.4: [Renumbered, revised text, page 3]

~~By 1 October 1997,~~ The County shall continue to operate the ~~implement~~ Collier County's ~~a local~~ petroleum storage tank ~~cleanup~~ inspection program, especially in identified wellfield protection zones, operating within available State funding.

Policy 1.5.5: [Renumbered, revised text, page 3]

~~By 1 October, 1997, increase household and Conditionally Exempt Small Quantity Generator (CESQG) hazardous waste collection.~~

Collier County shall continue to operate and maintain a hazardous waste collection facility. The facility shall operate five (5) days per week and will accept household and small business hazardous wastes. Additionally, the County shall continue to hold its hazardous waste collection day at least twice per year targeting residential households but also allowing small businesses to participate.

GOAL 2, and OBJECTIVE 2.1, and Policies 2.1.1–2.1.4 [deleted] [Deleted text, page 3]