

**LEGEND****FRESHWATER MANAGEMENT AREA****SURFACE WATER CONTROL STRUCTURE**

Source: This graphic was updated and redrawn from the 1997 *Sanibel Plan*.

The principle source of the base map used in this illustration is from the Lee County Property Appraiser's Office.

Prepared by the Planning Department.



INFORMATIONAL
NON-REGULATORY
ILLUSTRATION

FRESHWATER MANAGEMENT AREA

Section 3.2.3.

Natural Groundwater Aquifer Recharge Goals, Objectives and Policies

Pursuant to Section 163.3177, Florida Statutes.

Background Discussion

The purpose of this element is to provide for maintenance of the functions of natural drainage features and groundwater recharge areas.

The data and analyses for this element of the Sanibel Plan, pursuant to Section 163.3177(6)(c), Florida Statutes is provided in this subsection.

The location of Sanibel is such that local recharge of the Florida aquifer is nonexistent. The water quantity and quality of the groundwater table aquifer is the major aquifer recharge issue for this community. The protection of wellheads is another.

The groundwater system underlying the City of Sanibel consists of the water table aquifer and the Floridan aquifer (Lower Hawthorne and Suwanee aquifers). The upper and lower Floridan aquifers lie below the water table aquifer and are separated by confining layers with relatively low permeability. A very low percentage of local average annual rainfall percolates into the Floridan aquifer. The South Florida Water Management District has not designated any areas in the City of Sanibel as a recharge area for the Floridan aquifer.

The most significant problem related to groundwater recharge in the City of Sanibel is localized contamination of the water table aquifer from wastewater disposal systems and stormwater runoff.

Penetration of confining layers of the aquifers for well installation creates the potential for interchange of water between aquifers at well sites, thereby effectively creating potential recharge sites. Consumptive use permits from the Water Management District require protection of well field areas to prevent contamination of the aquifers. However, withdrawal from the aquifers for private irrigation purposes can have an adverse impact on the quality of water in the aquifers used by Island Water Association (IWA). This degradation of the water quality of the aquifers results in costlier treatment to produce potable water and thus increases costs to IWA's customers.

The major drainage feature of the City of Sanibel is the Freshwater Management Area. The Interior Wetlands Conservation District has been established within the Freshwater Management Area to regulate development within this major drainage feature of the City. Existing regulations and programs that govern land use and development of natural drainage features, the Freshwater Management Area and the Wetlands Conservation Lands, are adequate for maintaining the functions of Sanibel's natural drainage features and groundwater recharge areas.

The Surface Water Management Plan was developed to control flooding and to enhance the water quality and quantity of this Freshwater Management Area.

Plan for Aquifer Recharge

1. The City of Sanibel's stormwater drainage programs and regulations should continue to emphasize the preservation of natural drainage features.

2. The City of Sanibel should also continue to encourage the reuse of treated effluent for irrigation as a means of increasing recharge of the water table aquifer.
3. The City and IWA should pursue some means of allowing Local regulation of shallow wells.

Goals, Objectives and Policies

Goal Statement

Protect the natural recharge of the groundwater aquifer to ensure the conservation of water resources and the maintenance of water quality.

Objective 1

The quality and quantity of Sanibel's groundwater resources will not be degraded.

Policy 1.1. Excavation that results in penetration of the aquiclude is prohibited.

Policy 1.2. Pursue means to retain local control over the use of fertilizers, pesticides and other chemicals that will result in the degradation of the quality of groundwater. Continue implementation of the program regulating use of fertilizers, pesticides and other chemicals that may result in the degradation of the quality of groundwater.