

Organization: City of Sanibel Stormwater Program

Program Title: Sanibel Surface Water Management Program

Contact: Oisin Dolley, City Engineer, Public Works

Program Overview

Since its incorporation as a City in 1974, Sanibel has remained a unique natural gem that manages its community with a focus on preserving and enhancing the natural environment of the island. The island has a year round population of 6,382, which fluctuates seasonally with tourist and resident numbers reaching above 20,000 at peak times. Stormwater management is a key part of making an island with an average elevation of 3ft NAVD livable for both the human residents but is also critical for the native flora and fauna. The City of Sanibel, with cooperation from our local environmental partners, oversees the City's surface water management plan. Like many components of a small city, managing the program involves almost all aspects of the City but is predominately managed by the Public Works and Natural Resources departments. The City's budget includes stormwater specific funding annually with around \$859,464 budgeted in FY24/25 for non capital expenses in the stormwater program. This includes both maintenance to keep the system functioning as well as water quality monitoring.

Goals and Objectives

Sanibel's goals with stormwater management fit within Sanibel's overall vision statement which is to ensure "Sanibel is and shall remain a barrier island sanctuary" and places the natural environment at the top of hierarchy of values. The City manages surface water while balancing stormwater protection for development while preserving the natural hydrology of the island. The Sanibel Comprehensive Landuse Plan outlines goals and objectives that fit with the vision.

One of the keystones of Sanibel's unique environment is its interior wetland system. The main component of the City's surface water management is maintaining two river basins known as the Sanibel Slough which provide our wetlands with freshwater, an important resource on an island surrounded by salt water. Each basin is controlled by weir structures which retain freshwater through the dry season to keep wetlands properly hydrated while releasing water to the surrounding tidal waterbodies when necessary to protect developed areas. The two basins maintain the freshwater lens of the island that is integral to the island's ecology. Sanibel's goals for stormwater management focus heavily on maximizing freshwater retention utilizing natural low lying areas to minimize impacts from development.

Water quality is a major focus on Sanibel as it has impacts on both the interior wetland system and surrounding waters. Along with local environmental partners, the City's Natural Resources department, monitors water quality at 12 sites (6 sites within the Slough) and manages a lake nutrient management program which monitors water quality in 80 lakes. This information is used to identify water quality issues and plan targeted improvement projects.

Recent Water Quality and Stormwater projects

- Jordan Marsh Water Quality Treatment Park - A filter marsh providing natural treatment to the Sanibel Slough
- Donax WWTP Process Improvements - Sewer plant upgraded to advanced treatment methods to ensure reduced nutrient loading from reclaimed water
- 2025 Surface Water Management Master Plan - Update of the plan incorporating impacts of Hurricane Ian, evaluation of the Sanibel Slough control policy and long term resiliency improvement goals.
- Sanibel Slough Dredging Project – Removal of nutrient-rich sediments to improve water quality

the Comprehensive Land Use Plan of the
City of Sanibel, Florida



Extensively Revised
May 7, 2013 - Ordinance 12-010



American Planning Association
2007 National Planning Landmark Award



Goal Statement: Provide adequate stormwater drainage facilities and systems for the residents and land uses in the City of Sanibel in a manner that provides protection from flooding while preserving natural drainage features, the recharge of the groundwater aquifer, native vegetation and wildlife habitat

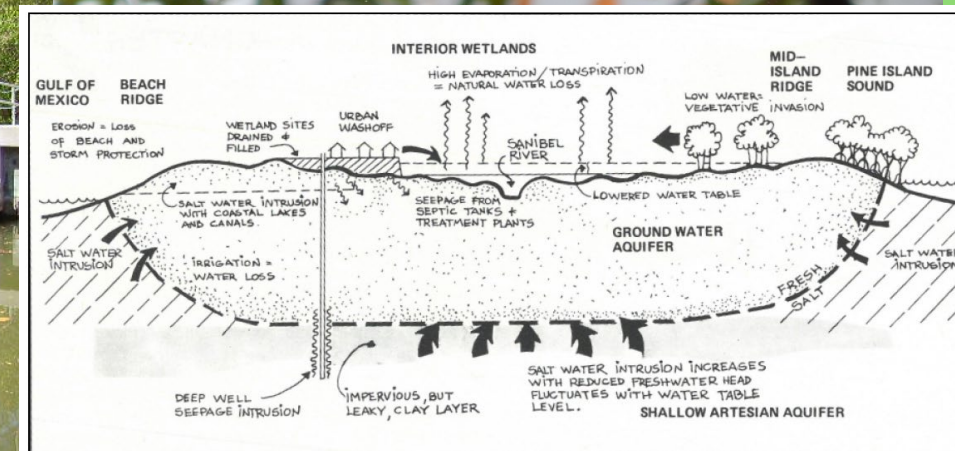
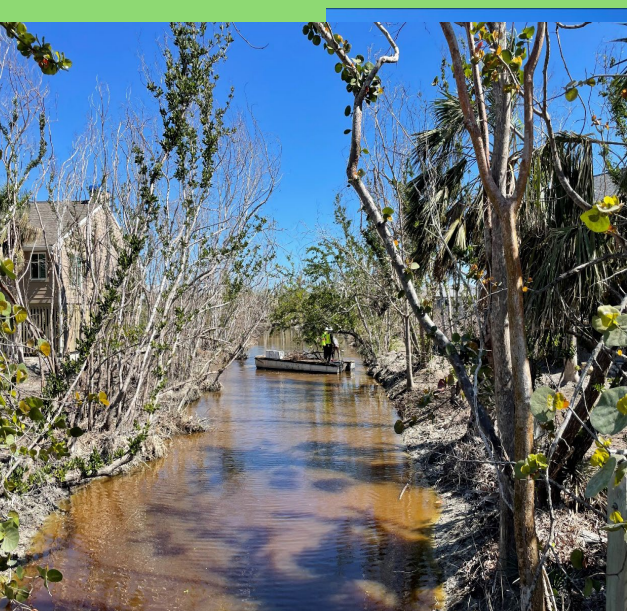
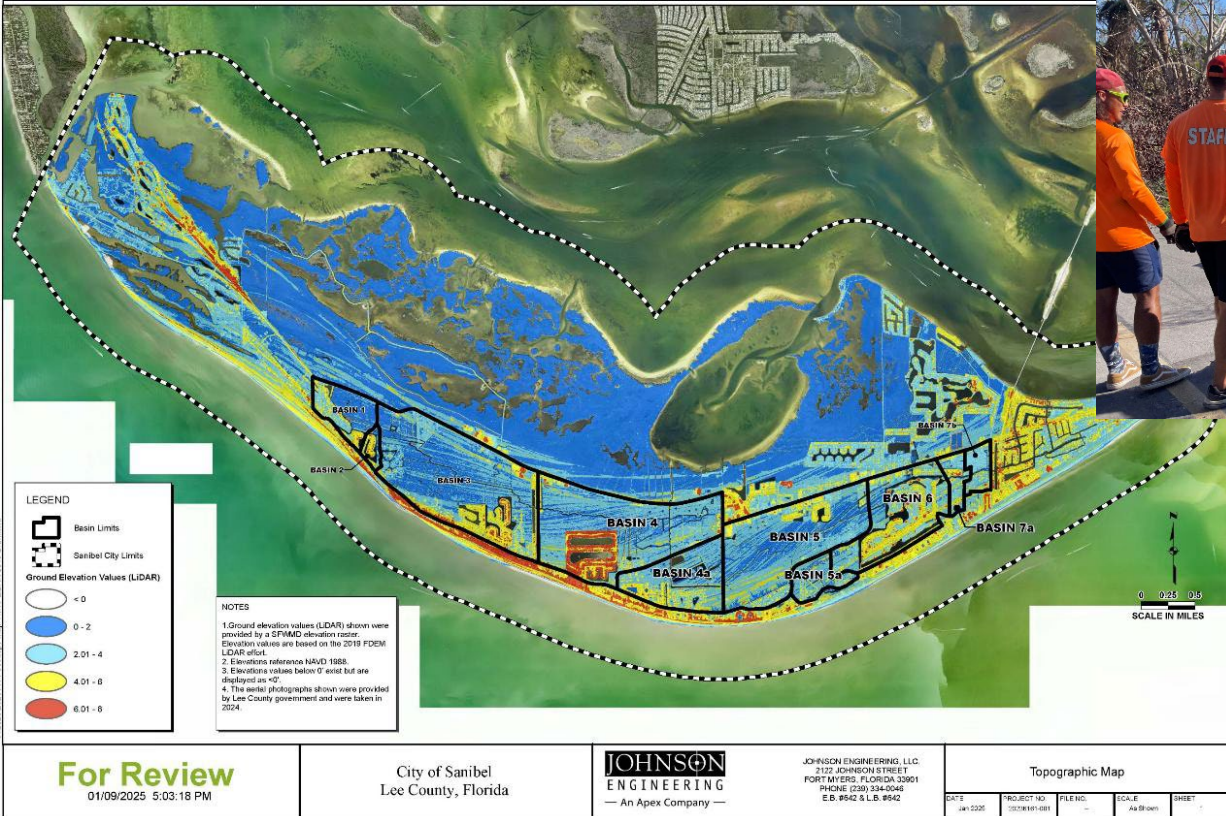


Figure 1. Graphical representation of the water budget of the freshwater basins on Sanibel, taken from The Sanibel Report (1976).



Objective 1

Require stormwater drainage facilities and systems to be designed to the established level of service standard in order to provide protection from flooding for life and property within the City of Sanibel.

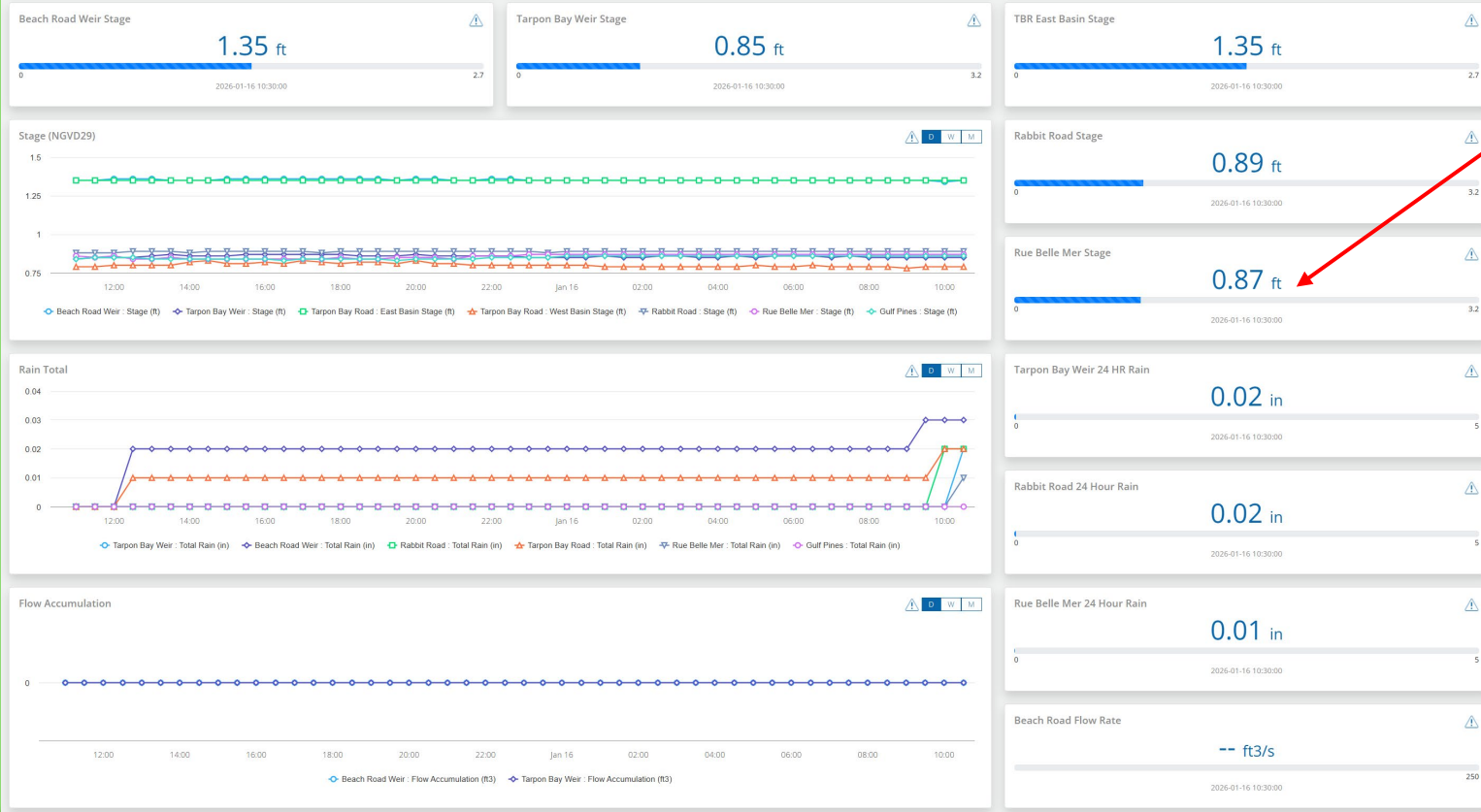
Policy 1.1. Preserve, maintain and upgrade existing stormwater drainage facilities and systems by scheduling the needed work as a part of the City annual work program.

Policy 1.2. Provide stormwater drainage systems that retain the rates, volumes and direction of flow of stormwater runoff consistent with predevelopment conditions. At a minimum, stormwater drainage facilities and systems will be provided in accordance with the appropriate level of service standards:

Policy 1.3. Improvements for replacement, expansion or increase in capacity of stormwater drainage facilities Section 3.3.6. 129 and systems will be consistent with maintaining the level of service standard for stormwater drainage systems.

Policy 1.4. Stormwater management facilities will be coordinated with adjoining facilities when such coordination will help or enhance maintenance of the Island's natural drainage system.

Policy 1.5. The City will continue to monitor local water quality and take appropriate actions to meet State and Federal standards.



Objective 3

Implement the Surface Water Management Plan for the Freshwater Management Area of the Sanibel River.

Policy 3.1. Implement the surface water management program and wetlands enhancement features recommended in this Plan.

Policy 3.2. The Tarpon Bay and Beach Roads weirs will be maintained so that the elevation of the weir crest of the Beach Road weir and the Tarpon Bay weir is consistent with the SWMP.

Policy 3.3. Stormwater drainage facility and system improvements warranted by the SWMP are to be included in the City's Capital Improvements Program.

Surface Water Management
Master Plan Update
Following Hurricane Ian (2022)

Prepared For:



November 2024

Prepared By:


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1. The drainage facilities shown on each map are for informational purposes only. They are not intended to be used for any other purpose.

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An aerial map of Sanibel Island showing various drainage facilities. A legend in the bottom left corner explains the symbols used on the map:

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A map of Sanibel Island showing various water quality monitoring locations. The map includes labels for locations such as Bowman's Beach, Sanibel Island, Sanibel Historical Museum and Village, and Sanibel Bay. A legend in the top right corner explains the symbols used on the map:

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