

RESTORING THE INDIAN RIVER LAGOON

The City of Titusville's Efforts to Save Our Lagoon



City of Titusville
Gateway to Nature & Space

RESTORING THE INDIAN RIVER LAGOON

The City of Titusville is fortunate to sit on the banks of one of North America's most biologically diverse estuaries — the internationally renowned Indian River Lagoon (IRL). Not only is the lagoon home to thousands of plant and animal species, it is also a world-class recreational and commercial fishing destination, and an economic driver to the 38 cities and five counties which sit on its 156 miles of shoreline. Every year, the IRL brings \$7.6 Billion to the regional economy, providing for 71,918 lagoon-related jobs, and supporting recreational opportunities for 1.6 million local residents and 7.4 million visitors.

The lagoon is in danger, however, and recent algal “superblooms” are contributing to the loss of 47,000 acres of sea grasses, as well as hundreds of manatees, dolphins, and other wildlife. The decline of the lagoon can potentially endanger the local economy and negatively impact the quality of life for the community. To that end, residents, businesses, and government agencies are seeking solutions to help restore the estuary to a healthy and vibrant condition.



The City of Titusville has been very successful working on many projects that will help restore our precious Indian River Lagoon. Here is an update on our projects and the associated funding:



Osprey Water Reclamation Facility Nutrient Removal Upgrade

Funding: \$8,000,000 in grants from Brevard County Save Our Lagoon Fund.

Project Status: The projected nutrient removal for this project is 22,988 lbs. of nitrogen per year. To date we have selected a design engineer for the project and have finalized the scope of services for design.

Project Details: The reclaimed water currently produced at the facility has nutrients (nitrogen) in excess of what typical lawns and grasses can absorb. This project will improve the removal of nutrients from the reclaimed water by the facility to levels that lawns and grasses can absorb. When lawns are irrigated and especially over irrigated, which is common when using reclaimed water, the nutrients can pass through the soils and into the ground water. This ground water then flows to the Lagoon adding additional nutrients to the system. The additional nutrients can encourage algal blooms which in turn reduce water clarity, reduce available oxygen, and discourage the growth of sea grasses which are essential to a healthy lagoon.

Septic Systems Conversion to City Sewer

Funding: \$660,000 in grants funding from Brevard County Save our Lagoon Fund.

Project Status: To date we have identified 18 septic sites that are feasible for conversion to city sewer, and divided them into two main areas. We have secured new continuing engineering consultants to assist with design, permitting, extension, and connection of sewer service to those sites.



Project Details: The Save Our Lagoon Project Plan developed by Brevard County recommended conversion of 33 septic systems to sewer for properties located on the Indian River Lagoon. A preliminary engineering study of the 33 septic conversion sites estimated by Brevard County revealed a number have already been converted to sewer and some are not feasible for conversion.



Draa Field Stormwater Park

Funding: \$1,554,825 in grants from the Florida Department of Environmental Protection, St Johns River Water Management District, and Florida State Legislature.

FDEP 319 Grant	\$388,825
SJRWMD Cost Share Grant	\$366,000
FY15-16 General Appropriations Grant	\$800,000
City of Titusville	\$255,000

Project Status: Pond completed in 2016; littoral zone restoration planting also completed. Water quality testing occurs on a regular basis, as required by grant funding.

Project Details: The Stormwater Pond (completed Sept. 2016) treats 105 acres. The effectiveness of the pond is checked by testing the amount of pollutants in the water as it enters the pond, and then again as it exits the pond. This testing will occur after rainfall events for at least a year after the pond is completed.

Littoral Zone Vegetation Planting

Funding: \$60,000 in grants funding from the Florida Department of Environmental Protection.

Project Status: Installation complete, plant monitoring is underway.



Project Details: Shoreline plantings provide an important buffer between upland landscapes and waterbodies by taking up excess phosphorus and nitrogen originating from fertilizers, pet waste, and yard debris, as well as other pollutants carried by stormwater runoff.

Location: City owned ponds located at Royal Oak Dr & Saunders Pl and the north Brevard Senior Center

More Info: www.titusville.com/Page.asp?NavID=2230



Living Shoreline Plan & Demonstration Site

Funding: \$40,600

Project Status: Coordinated with UCF to receive grant funding from the Indian River Lagoon National Estuary Program Living Shoreline Plan is complete, unfortunately our demonstration site did not survive hurricane Irma. University of Central Florida and the Marine Resources Council replanted the site on March 10, 2018.

Project Details: As part of collaboration between the City of Titusville, the University of Central Florida, the Indian River Lagoon National Estuary Program, and the St. Johns River Water Management District, a living shoreline plan was developed. This plan shows what kind of living shorelines should be implemented in Titusville and how you can install one on your property.

View the Plan: www.titusville.com/Page.asp?NavID=2399

Living Shoreline Outreach Program

Funding: \$12,000 in grant funding from the Indian River Lagoon National Estuary Program.

Project Status: Informational Materials were mailed in February 2018 and a workshop was held on 2/15/18.



Project Details: Creation, printing and mailing of educational outreach materials. Copies of materials created are located online at www.titusville.com/Page.asp?NavID=2399



Nutrient Separating Baffle Boxes

Funding: Multiple (see chart next page).

Project Status: At the present time, there are six baffle boxes in varying stages of production to be installed at the following locations:

Main Street Basin • South Street Basin • Sycamore Basin
St. Teresa Basin • La Paloma Basin • Knox McRae Basin

Project Details: Second-generation Nutrient Separating Baffle Boxes are a structural Best Management Practice used for stormwater quality treatment. These devices remove leaves, trash, sand and their associated contents of nitrogen and phosphorus from receiving waters. The 2nd-generation box is designed to capture and store debris in a dry state to minimize nutrient leaching, allowing for easier maintenance. The addition of the nutrient removal media helps further reduce nitrogen and phosphorus levels in the stormwater.

More Info: Learn more details of the specific baffle box projects using the chart and map on the next page.

Area II Stormwater Treatment Trains Main St. & Sycamore Basins

Funding: Received \$352,752 in grant funding from the Florida Department of Environmental Protection.

Project Status: Sycamore Baffle Box installation complete; Main St. Baffle Box construction is 50% complete. Water quality testing to commence after construction.

Knox McRae Basin Baffle Box

Funding: \$105,000 in grant funding from the Florida State Legislature.

Project Status: Construction began October 23, 2017.

South Street Basin Baffle Box

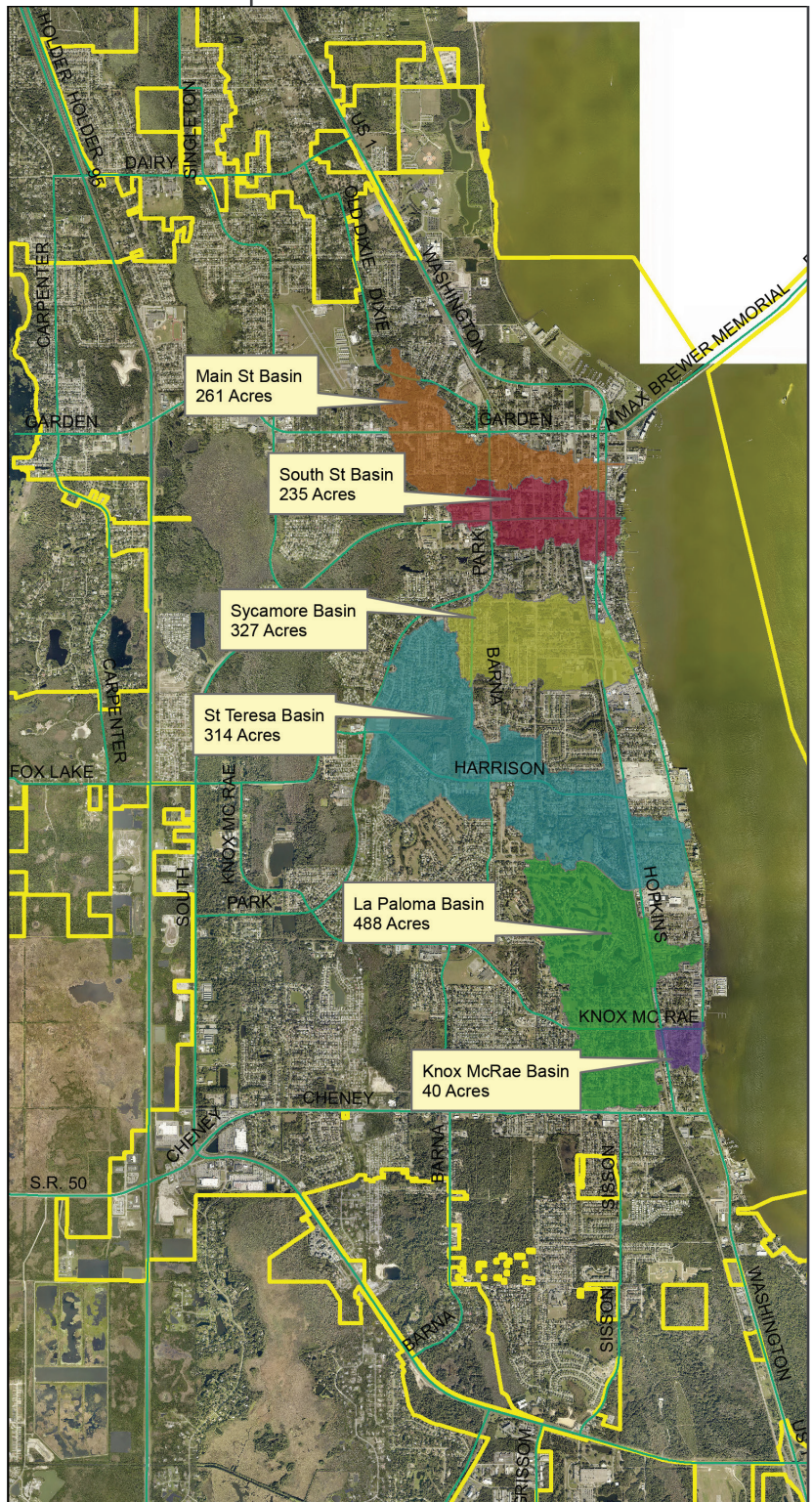
Funding: \$110,000 in grant funding from the St Johns River Water Management District, \$240,000 from the State Legislature and \$86,856 from the Brevard County Save our Lagoon Fund.

Project Status: In design.

La Paloma Basin & St. Teresa Basin Baffle Boxes

Funding: Received \$160,000 in grant funding from the Florida State Legislature and \$481,096 from the Brevard County Save our Lagoon Fund.

Project Status: In design.



Titusville City Council is considering adoption of the Shoreline Protection Ordinance, in order to regulate development along the water's edge and better protect water quality of the Indian River Lagoon, as well as the shoreline and upland structures. This ordinance would accomplish the following:

Amends regulations applicable to bulkheads and seawalls; proposes alternative shoreline stabilization structures; sets forth standards for waterfront setbacks for septic systems and onsite sewage treatment systems; minimizes automobile-related runoff near the water's edge; and sets a limit on the amount of impervious surface allowed within a building setback from the water.

You can go to these websites for more information on the Indian River Lagoon and the efforts underway to protect it:

- www.helpthelagoon.org/education/history-indian-river-lagoon/
- www.irlcouncil.com/
- www.mrcirl.org/

