



Indian Hills Recreation Area Stormwater Improvements

June 2015

Revised August 2015



**Prepared By:
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Indian Hills Recreation Area Stormwater Improvements

- * Truly a “Partnership Project”
 - * The Indian Hills Recreation Area Stormwater Project has been a huge success incorporating help from multiple agencies. Those participating included:
 - * Florida Communities Trust
 - * Florida Department of Environmental Protection
 - * South Florida Water Management District
 - * St. Lucie River Issues Team
 - * Treasure Coast Resource Conservation & Development Council
 - * St. Lucie County
 - * City of Fort Pierce



Indian Hills Recreation Area Stormwater Improvements

- * This stormwater project provides treatment for a 1,242 acre watershed of urban and commercially developed land.
- * A treatment train of six different Best Management Practices (BMP's) have been joined together to improve the water quality of stormwater runoff that discharges into the Indian River Lagoon.
- * These BMP's consist of:
 1. ***Expansion of an existing 17 acre stormwater treatment lake***



Indian Hills Recreation Area Stormwater Improvements



- * The water surface area of the existing lake was increased by 6.7 acres resulting in a total excavated volume of 95,000 CY

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2. **Construction of a new outfall structure**
 - * The weir structure was relocated to increase residence time in lake.

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3. *Construction of an Alum Injection Plant*

- * Injection rate is calculated automatically based on velocity and depth of water flowing through the entrance channel

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4. *Creation of Littoral Zones*

- * Plantings consist of three distinct zones ranging from “Transitional” to “Emergent Aquatics” to “Submergent Aquatics”
- * Approximately 3 acres of littoral zones were created



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5. **Floating Aquatic Plant System**

- * Mats constructed of closed cell foam were planted with aquatic nutrient accumulators. Twelve floating “islands” were installed and anchored totaling 1 acre of growing surface



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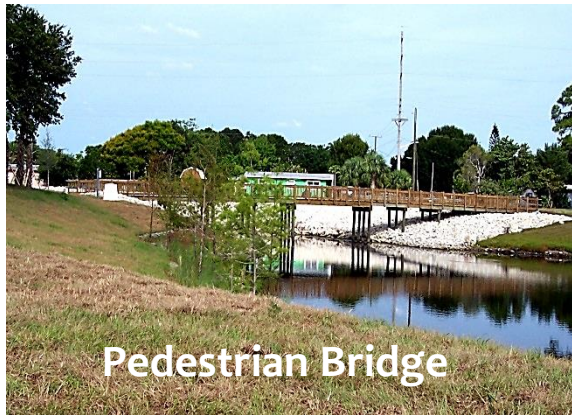
6. **Bio Swales**

- * Pre-treatment bio swales were constructed on the western property line providing treatment of runoff of the adjacent residential neighborhood prior to discharging into the stormwater lake.

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- * In addition to the stormwater improvements, recreational amenities were added allowing visitors to enjoy the improvements while being educated about the stormwater protection system and the importance of preserving our natural resources.



Indian Hills Recreation Area Stormwater Improvements

* Project Costs:

* Design	\$ 101,572
* Construction	\$2,787,588
* Materials Testing	\$ 29,900
* Inspection / Environmental Monitoring	\$ 81,000
TOTAL	\$3,000,060

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* Funding Summary:

Funding Source	Amount	Eligible Elements
TMDL Stormwater Grant - FDEP	\$900,000	Stormwater
319 Stormwater Grant - FDEP	\$510,000	Stormwater
St. Lucie River Issues Team Grant	\$370,484	Stormwater
SMU – Fort Pierce	\$1,000,000	Stormwater
Florida Communities Trust Grant	\$2,500,000	Recreational / Stormwater
TOTAL	\$5,280,484	

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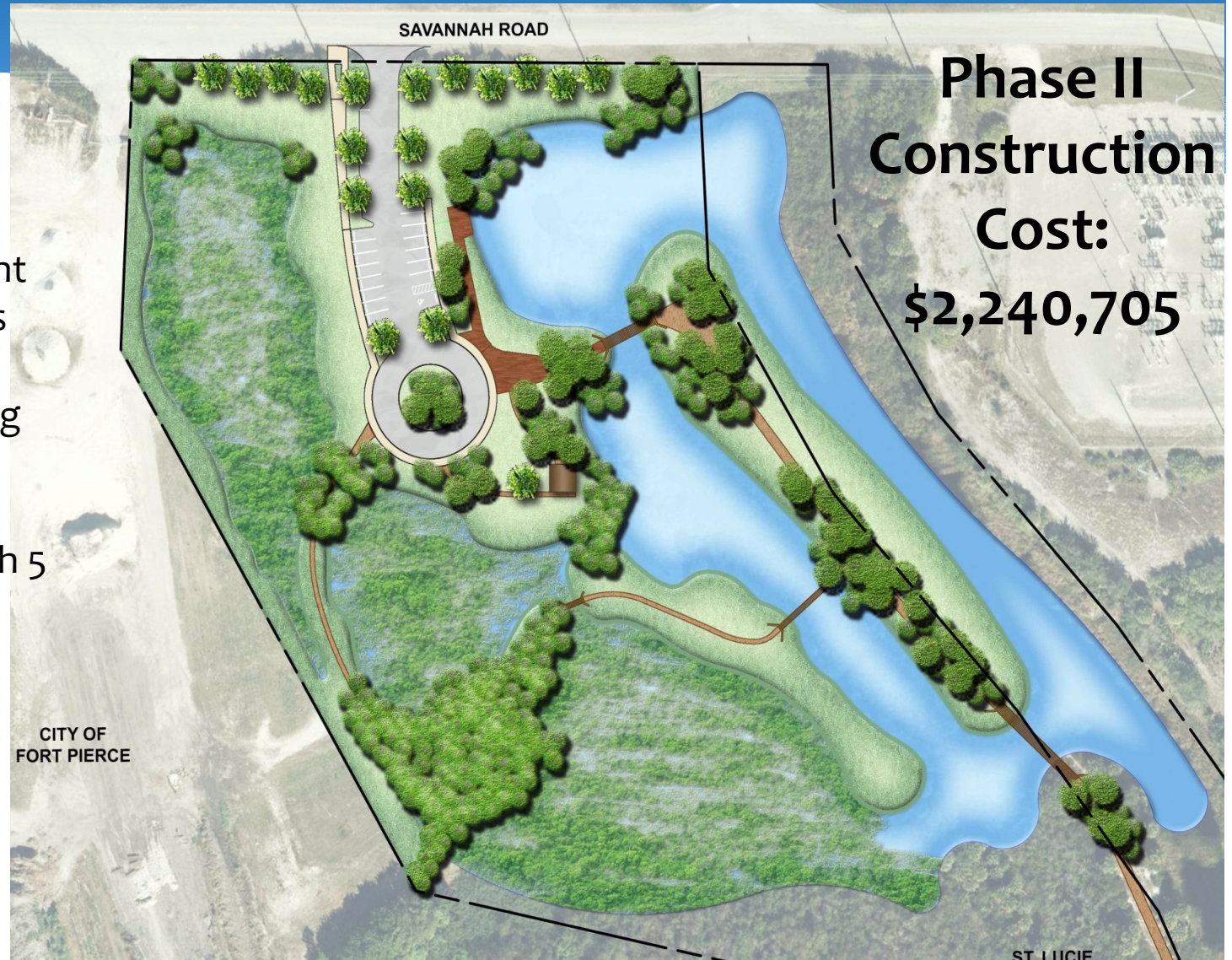


Phase II Work

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Improvements include:

- Reestablishment of the wetlands
- Canoe launching facility / docks
- Nature trail with 5 pedestrian bridges
- Pervious paver parking area
- Picnic pavilion



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<https://www.youtube.com/watch?v=TCZZu9WGiPk&feature=emJack Andrews - Re: FW: Indian Hills Stormwater Update -upload owner>