

## FY 2010-11 Local Government Funding Request

**Project Name :** Bonita Beach Nourishment

**Project Description:** The project consists of a continuation of ongoing post-project construction monitoring, preparation of plans, specifications and contract documents, and renourishment of the northernmost 4,100 feet of Little Hickory Island (Bonita Beach) located immediately south of Big Hickory Pass. The Bonita Beach Restoration Project, which was comprised of two terminal groins and 217,000 cubic yards of beach fill, was completed in November 1995. The first nourishment cycle, consisting of placing an estimated 150,000 cubic yards, was completed in June 2004. The entire project area has been designated as critically eroded by the Florida Department of Environmental Protection (DEP). The DEP recently (June 2005) reduced the critical erosion area's southern limits by 400 feet. The critical erosion area now extends from R-226 to R-230.

**Use of Requested Program Funds:** Funds requested for FY10/11 will be used for design and permitting. It is expected the prominent task will be to define a suitable borrow source.

### **Local Government Support**

Does this sponsor have dedicated support staff whose sole priority is to manage beach erosion control activities? Yes

Name	Title	Email	Percent Commitment
Robert Neal	Coastal Engineer	<a href="mailto:rneal@leegov.com">rneal@leegov.com</a>	100%
<b>Address 1:</b>	1500 Monroe St.	<b>Phone:</b>	239.533.8566
<b>Address 2:</b>	Ft. Myers, Fl 33907	<b>Fax:</b>	239.485.8408

### **Quarterly Report Compliance:**

2008-2009	End Date	Report Sent	Compliant
Qtr 1	Sept. 30	Nov. 3	Yes
Qtr 2	Dec. 31	Feb. 2	Yes
Qtr 3	Mar. 31	May 8	Yes
Qtr4	June 30	Aug 6	Yes

**Revenue for the local cost share will be provided by:** Local funding for the project will be obtained from the City of Bonita Springs and the Lee County Tourist Development Council (TDC). The TDC provides a dedicated long term funding source through a 'bed tax'. The tax allocates 1.65% of all revenue generated from short term or seasonal rentals (less than 6 months) for beach and shoreline improvements.

Lee County  
Long Range Budget Plan  
FY 10/11 Bonita Beach Nourishment

**Is the funding from a dedicated long term source for this project?** Yes

In order to acquire funding, a resolution from the local governmental entity must be provided by the application deadline which declares:

- Support from the Sponsor for the Proposed Project
- Willingness to serve as the Local Sponsor
- Ability to provide the full Local Cost Share
- Funding Source

**Has the local sponsor resolution been attached to the application fulfilling all of these requirements?** Yes

**Previous State cost-share for a feasibility or design/permitting phase of this project:**

The Department previously entered into a cost-share agreement for funding of the initial restoration in 1994/96 and subsequent nourishment in 2004. The project is recommended in the Strategic Beach Management Plan and located in an area that has been designated as critically eroded shoreline by the Department.

**Previous State Cost Share percentage** 33.905 %

**10-Year Project Schedule and 5-Year Estimated Budget**

**Does this project have Congressional Authorization?** No

**Does this project have a Federal Project Cooperative Agreement?** No

**What is the end date of the Federal Authorization?** N/A

**Federal cost share available for this erosion control project:** N/A

**Schedule and Budget (Include estimated phases for 10 years and estimated project costs for 5 years.):**

Year	Proposed Method	Description	Total Estimated Cost	Federal Cost Share	State Cost Share	Local Cost Share
2009 / 2010 <b>(Revalidation)</b>	-	-	\$0	\$0	\$0	\$0
2010/ 2011	Design & Permitting	JCP COE	\$200,000	\$0	\$67,810	\$132,190
2011/ 2012	Construction	Nourishment	\$2,626,000	\$0	\$890,345	\$1,735,655
	Monitoring	Phys, Turtle	\$40,000	\$0	\$13,562	\$26,438
2012/ 2013	Monitoring	Phys, Turtle	\$40,000	\$0	\$13,562	\$26,438
2013/ 2014	Monitoring	Phys, Turtle	\$40,000	\$0	\$13,562	\$26,438
2014/ 2015	-					
2015/ 2016	Monitoring	Phys, Turtle				
2016/ 2017	-					
2017/ 2018	Monitoring / Design & Permitting	Phys, Turtle				
		JCP COE				
2018/ 2019	Construction	Nourishment				
2019/ 2020	Monitoring	Phys, Turtle				

**Mapping- Maps are provided as attachments.**

Maps should be to scale at a minimum of 1"=200'

Mapping elements include:

- Project Boundary with Critically Eroded Shoreline
- Range Monuments
- Beach Access and Parking- Primary and Secondary, including access widths.
- Public Lodging Establishments- locations and length of property boundaries along project Shoreline.
- Comprehensive Plan designations of Commercial and Recreational Facilities and associated property boundaries along the project shoreline.

**Length of Project Boundary in Feet:** 22,495 feet

**Length of commercial or recreational property fronting the project shoreline:**  
377 feet

**Percentage of project shoreline designated as commercial or recreational property**  
8%

**Eligibility: Access Points and Public Lodging Establishments:**

Location/Name	Address	R- Mon	Type of Access	Width of Access/ Frontage	Total units or parking spaces	No. Public	Eligible shoreline
Access 10		R228.5	Secondary	277	85	68	2,378
Access 9		R229.5	Secondary	50	3	3	208
Access 8		R230.5	Secondary	0	5	5	264

**Additional Ranking Criteria**

**Will this project enhance or increase the longevity of a previously-constructed project?** Yes  
**Will this project nourish a previously restored shoreline?** Yes  
**Rate of Erosion as determined by the Bureau based on long term data (ft/yr)** 2.5 ft/yr

**Severity of erosion:** The entire project area has been designated as critically eroded by FDEP. Pre-project erosion rates were measured at up to 2.5 feet per year. Within the project limits, approximately 3,150 feet of Hickory Boulevard (County Road 865) lies seaward of the Coastal Construction Control Line. This road serves as the hurricane evacuation route for Little Hickory Island.

Shoreline development within the project area consists of approximately 3,590 linear feet (88%) multifamily development, 202 feet (5%) of hotel property, and 327 linear feet (8%) of public park which provides public rest rooms, dune walkovers, and parking for 40 standard automobiles. An additional two spaces were provided to comply with ADA requirements.

**Project Benefits:** The initial beach restoration provided a protective berm on a shoreline that had been eroded back to the seawall. The project area uplands have experienced no storm related damage since construction. Rehabilitation of the south terminal groin (damaged by the passage of Tropical Storm Gabrielle in 2001) was completed in summer 2003. The project area shoreline between R-227 and R-230 is 100 percent publicly accessible. In 1996, Lee County built a public park (Lee County Beach Access #10) with 42 parking spaces on a 250-foot gulf-front parcel approximately 250 feet south of R-228 to enhance public access to the project beach. The City of Bonita Springs recently constructed two (2) new parking facilities to compliment the Access 10 parking. One facility has 22 parking spots and is located opposite Access 10 across Hickory Blvd. The other facility is located on the Broadway Channel bridge south landing area and has 21 parking spaces. The City also made 15 spaces at Access 10 available to the local residents at no cost.

**Use of Innovative Applications of existing technologies:** The nourishment project is expected to be completed with conventional hydraulic dredging technology. No new innovative applications of existing technologies are anticipated.

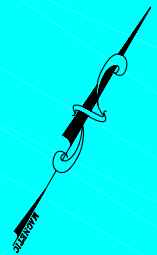
**Nourishment Interval (years):**

7

**Project Performance:** Sand placement for the nourishment cycle was completed in June 2004, nine years after the restoration. Approximately 133,437 cubic yards were placed within the design template. The project area was impacted by 4 major storm events in August and September of 2004. An estimated 28,320 cubic yards was lost from the shoreline. FEMA reimbursement for the lost material is anticipated for the next nourishment cycle.

Project monitoring includes an assessment of Big Hickory Pass, which appears to be showing signs of shoaling. Other areas include southern Estero Island and Lovers Key. These areas are in the shadow of Bonita's borrow area. DEP permit requirements stipulate erosion on these islands must be monitored as a contingency to the Bonita and Lovers Key (described elsewhere in this submittal) projects.

- NOTES:  
 1. SHORELINE LENGTH MEASURED ALONG CCCL.  
 2. CCCL AND PLAT INFORMATION PROVIDED BY LEE COUNTY PROPERTY APPRAISER'S OFFICE.  
 3. DNR MONUMENT LOCATIONS PROVIDED BY FDEP.  
 4. REF. ATTACHED SHT. FOR ELIGIBILITY CALCULATION.



CRITICALLY ERODING SHORELINE  
 R-226 TO R-230

PROJECT NON-ELIGIBLE SHORELINE  
 (1,130 LF)

PROJECT ELIGIBLE SHORELINE  
 (2,850 LF)

SECONDARY ACCESS  
 277 LF

SECONDARY ACCESS  
 50 LF

BIG HICKORY PASS

BROADWAY CHANNEL

HOGUE CHANNEL

R226

R227

R228

R229

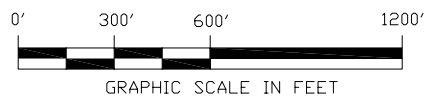
R230

HICKORY BLVD.

CR 865

HICKORY BLVD. (CR 865)

- LEGEND
- HOTEL/MOTEL (4%)
  - MULTI-FAMILY (83%)
  - COMMERCIAL (0%)
  - SINGLE FAMILY (0%)
  - UNDEVELOPED/VACANT (4%)
  - RECREATIONAL (9%)
  - PUBLIC PARKING SPACES
  - PUBLIC RESTROOM FACILITY
  - DEP REFERENCE MONUMENTS
  - CCCL



TITLE: LONG RANGE BUDGET PLAN  
 2010 / 11 SUBMITTAL  
 BONITA BEACH  
 BEACH NOURISHMENT

NATURAL RESOURCES DIV  
 1500 Monroe St. Fort Myers, Florida 33901  
 Ph. (239) 533-8109/10 Fax. (239) 485-8408

LEE COUNTY  
 SOUTH WEST FLORIDA

FILE: S:\NATRES\MARINE\BEACHMANAGEMENT\DEP\_LONG\_RANGE\_PLAN\09\_SUBMITTAL\DRAWINGS\BONITA.dwg  
 DESIGN:  
 DRAWN:  
 APPROVED:

SCALE:  
 1"=600'  
 SHEET:  
 01 OF 01