

**RESTORE Act Ecosystem Restoration Project Proposals
for consideration in the Gulf Coast Ecosystem Restoration Council's Comprehensive Plan
2012**

Contact Information: Roland Ottolini	Date of Submittal: 1/7/2013
Name of Project: Fichter's Creek Restoration	Org and Rank:
Background: The Tidal Caloosahatchee estuary is the second largest open water estuary in the state. It is 30 miles long and seven miles wide with a total area of 270 square miles. Fichter's Creek is a tributary of the Tidal Caloosahatchee located in northeast Lee County and southern Charlotte County, much of which is located within the old Babcock Ranch. The headwaters of Fichter's Creek flow through the Caloosahatchee Regional Park, outfalling to the Caloosahatchee River to the south. The watershed has been significantly altered over the past 50 years by road construction, farming and river dredging activities. The Caloosahatchee Regional Park (CRP) is owned by the State of Florida Trustees of the Internal Improvement Trust Fund (TIITF) and is managed by Lee County. It is the intent of the County to utilize the park facilities for the primary improvements. Although the County also now owns much of the former Babcock Ranch properties within the basin, those lands are currently being managed by Kitson and Partners, are being actively farmed and are "off-limits" for this project. Fichter's Creek discharges into Tidal Caloosahatchee basin which is listed as impaired waters by Florida Department. of Environmental Protection for fecal coliform, nutrients and dissolved oxygen. Runoff from upstream portions of the watershed flows through a network of sloughs in a southwesterly direction along the north side of the CRP towards Fichter's Creek Lane (FCL), a privately-maintained roadway. At FCL, a triple 36-inch culvert conveys the water from the CRP into the downstream channelized section of Fichter's Creek. In addition, a significant portion of the northern half of the park also flows in a westerly direction towards FCL. After Tropical Storm Fay (in August, 2008), water was observed to overtop FCL north and south of the existing culvert crossing. A headloss of approximately three feet was measured across the culvert opening at the time the roadway was overtopping. At the same time, a significant amount of flow was directed down the western CRP perimeter ditch. The headloss across the existing single 36-inch culvert at CR 78 was also observed to be approximately three feet. Project Description: Subsequent computer modeling of the basin has been conducted to simulate the field conditions and to provide a basis for analyzing proposed improvements and how they will positively or negatively impact the basin and existing land uses. Proposed improvements include the following: 1. Improve FCL crossing by replacing existing triple 36-inch culvert with single 6-foot by 10-foot concrete box culvert and spillway. An easement will be required to access the culvert crossing for construction and maintenance purposes. 2. Excavate four new water detention areas in the northern part of the CRP. 3. Construct three new control structures within the new detention areas.	

4. Improve berms along western park perimeter and close gaps and breaches.
5. Convert existing perimeter ditch to constructed filter marsh with water control structure at southern end just north of CR 78.
6. Replace existing single 36-inch pipe at CR 78 perimeter ditch crossing with double 36-inch culvert.
7. Add bypass ditch at southern end of CRP perimeter ditch to provide additional conveyance capacity.

The results of the computer modeling indicate that the improvements will provide considerable benefits to (1) wetlands by enhancing the hydroperiod and recharging (2) water quality through retention and filter marsh.

Project Location: Caloosahatchee Watershed

Responsible Party: Lee County

Partners: Lee Co, SFWMD

NEP: CHNEP

Project Cost: \$1,500,000

Dollars Needed: \$1,000,000

Start: 2014

Completion: 2015

Status of Project Design and Permitting: Design/permitting complete October 7, 2011.

What Date or Year could Construction Feasibly Begin: 2014

Your Proposed Timing of Funding (given permits, phasing, staging, etc.)

FY	12/13	13/14	14/15	15/16	16/17	17/18	Total
		500,000					

Quantify Environmental Results and How to Measure Them: Improve habitat by restoring freshwater flows to the Caloosahatchee Estuary. This could be measured by water quality and oyster bed monitoring.

Economic Benefits (including ecosystem services): Improved water quality, improved fisheries and rookery habitats.

Estimated number of Jobs Created or Preserved: 16

How much Habitat will be restored and conserved?: 46 acres

Quantify pollutant reductions: 63% TN & 80% TP (based on Ten Mile Canal Filter Marsh data collection 2007-2010).

What living coastal/marine resources will be improved and by how much?: Tidal Caloosahatchee (270 square miles), San Carlos Bay, Pine Island Sound and Matlacha Pass.

How will community resilience be enhanced? Improved freshwater wetland habitat in the current landscape will prolong the period of habitability in the tributaries of the Caloosahatchee as climate change and sea level rise occur. Habitat improvements due to restored historical flows will also mitigate the current effects of degradation on fisheries and improve the period of time these fisheries can be sustained during the onset of sea level rise.

Additional Justification: Lee County has entered into a Basin Management Action Plan (BMAP) with the Florida Department of Environmental Protection in 2012. The BMAP was promulgated due to TMDLs for total nitrogen in the Tidal Caloosahatchee. The County is required to restore and protect water quality under this watershed restoration plan. In addition, the Tidal Caloosahatchee is part of a system that has been designated an Estuary of National Significance as well as discharging into State Aquatic Preserve and National Wildlife Refuges.

Add any photos or maps that explain project:



date: 8-84
 by: J. J. J. J.
 job: 123123

No.	Description

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FICHTERS CREEK RESTORATION
 AERIAL PHOTOGRAPH
 FIGURE "2"

scale: 1"=500'
 SHEET
 1 of 1

date: