

# Lake Panasoffkee Restoration Council

*Report to the Legislature*



Southwest Florida  
Water Management District

**November 25, 2004**



**LAKE PANASOFFKEE RESTORATION COUNCIL'S  
2004 REPORT TO THE LEGISLATURE**

**TABLE OF CONTENTS**

<b>INTRODUCTION</b> .....	<b>1</b>
<b>BACKGROUND</b> .....	<b>1</b>
Lake Panasoffkee .....	1
Lake Panasoffkee Restoration Council.....	2
Lake Panasoffkee Restoration Plan.....	2
<b>PROGRESS REPORT</b> .....	<b>5</b>
Funding and Project Costs .....	5
Project Implementation .....	5
<b>RECOMMENDATIONS</b> .....	<b>7</b>

## INTRODUCTION

The Lake Panasoffkee Restoration Council (Council) is extremely pleased to submit its 2004 Report to the Legislature documenting the significant progress made towards implementation of the adopted restoration plan. The Council achieved all of its recommended milestones for 2004 which included the completion of the 450 acre upland spoil disposal facility in June 2004, and most importantly, the initiation of lake dredging which began in July 2004.

The Council has continued its conservative pragmatic review and approval progress in the development of the final lake restoration plan, its implementation, and most importantly in the close oversight of expenditures. The total project cost based on actual incurred costs and contractual obligations is \$25,051,227. We are pleased to report that funding commitments are now in place to fully fund the project. The funding partners and their contributions are as follows: State of Florida, \$19,070,000, Federal Government, \$1,098,000, Southwest Florida Water Management District, \$3,014,884, and the Florida Fish and Wildlife Conservation Commission (FFWCC), \$2,000,000. Without this much needed support, the Council could not have carried out the Legislative objective.

Previous Reports to the Legislature, beginning in 1998, identified management issues, strategies and goals for Lake Panasoffkee, and the 2003 Report outlined the Council's final restoration plan for the lake. Since we are in the implementation phase of the project, the format of this year's Report to the Legislature differs from previous reports in that it does not include discussions on management issues and strategies, and the goals of the restoration plan. This year's Report focuses instead on implementation of the critical in-lake components of the Council's recommended restoration plan, the dredging of Steps 2 and 3.

## BACKGROUND

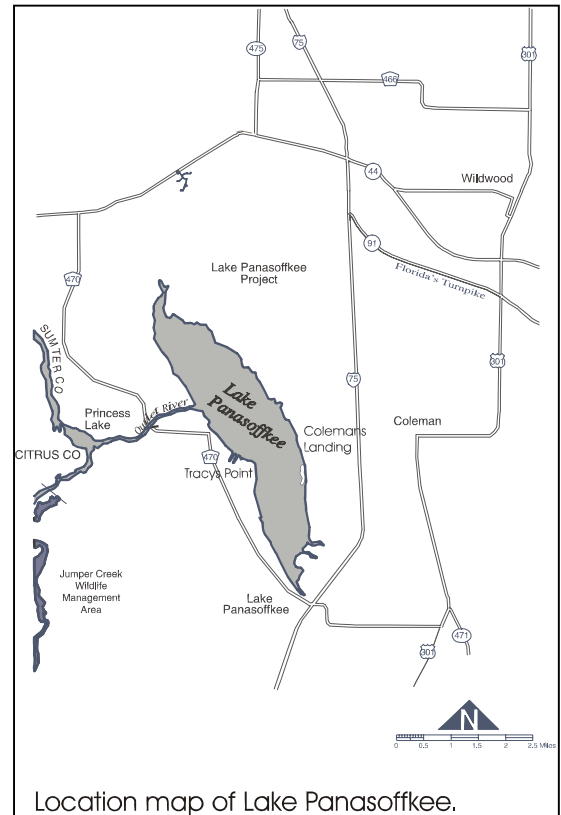
### ***Lake Panasoffkee***

Lake Panasoffkee in Sumter County is designated by the Florida Department of Environmental Protection (FDEP) as an Outstanding Florida Water and is the third largest of the approximately 1,800 lakes in west central Florida. Additionally, the lake is included on the District's Surface Water Improvement and Management (SWIM) Priority Water Body List. Lake Panasoffkee has a national reputation, especially for its redear sunfish fishery, and this makes the lake an important contributor to the local and regional economy. Although, fishing remains popular at Panasoffkee, the lake's future as an important recreational resource is threatened. The fisheries there have declined considerably during the last 30 to 40 years. In the mid-1950s, when the lake's fishery was first being studied, at least 15 fish camps operated there. In 1998 when the Council's first Report to the Legislature was submitted only three remained. Today there are five operating fish camps on the lake.

## **Lake Panasoffkee Restoration Council**

In an effort to protect and restore the environmental and economic importance of Lake Panasoffkee, the 1998 Florida Legislature created the Lake Panasoffkee Restoration Council within the Southwest Florida Water Management District (District). The enabling legislation (Chapter 98-69, Laws of Florida) established the membership and outlined the responsibilities of the Council and the Advisory Group.

Through the enabling legislation, the Legislature directed the Council to develop a restoration plan for Lake Panasoffkee. During its first year, the Council and Advisory Group prioritized the management issues and developed strategies for restoring the lake. The Council also recommended additional studies to evaluate the lake's fishery and identified additional information needed to implement the restoration plan. The culmination of this effort was discussed in detail in the first *Lake Panasoffkee Restoration Council Report to the Legislature*, dated November 25, 1998.



Pursuant to its Legislative directive, the Council has reported to the Legislature every year since 1998 to provide progress reports and recommendations for the next fiscal year.

## **Lake Panasoffkee Restoration Plan**

The final restoration plan documented in the 2003 Report to the Legislature is comprised of four distinct steps. Step 1 of the plan, the Coleman Landing Pilot Project, was completed in December 2000. The primary focus now is on the implementation of Steps 2 and 3 of the restoration plan which constitutes the full-scale in-lake restoration effort, and consists of the dredging of approximately 1,977 acres of lake bottom. Steps 2 and 3 are crucial to achieving the Council's goals to restore fisheries habitat and historic shoreline conditions, and improve navigation. The four steps comprising the Council's final restoration plan are described below in order of priority.

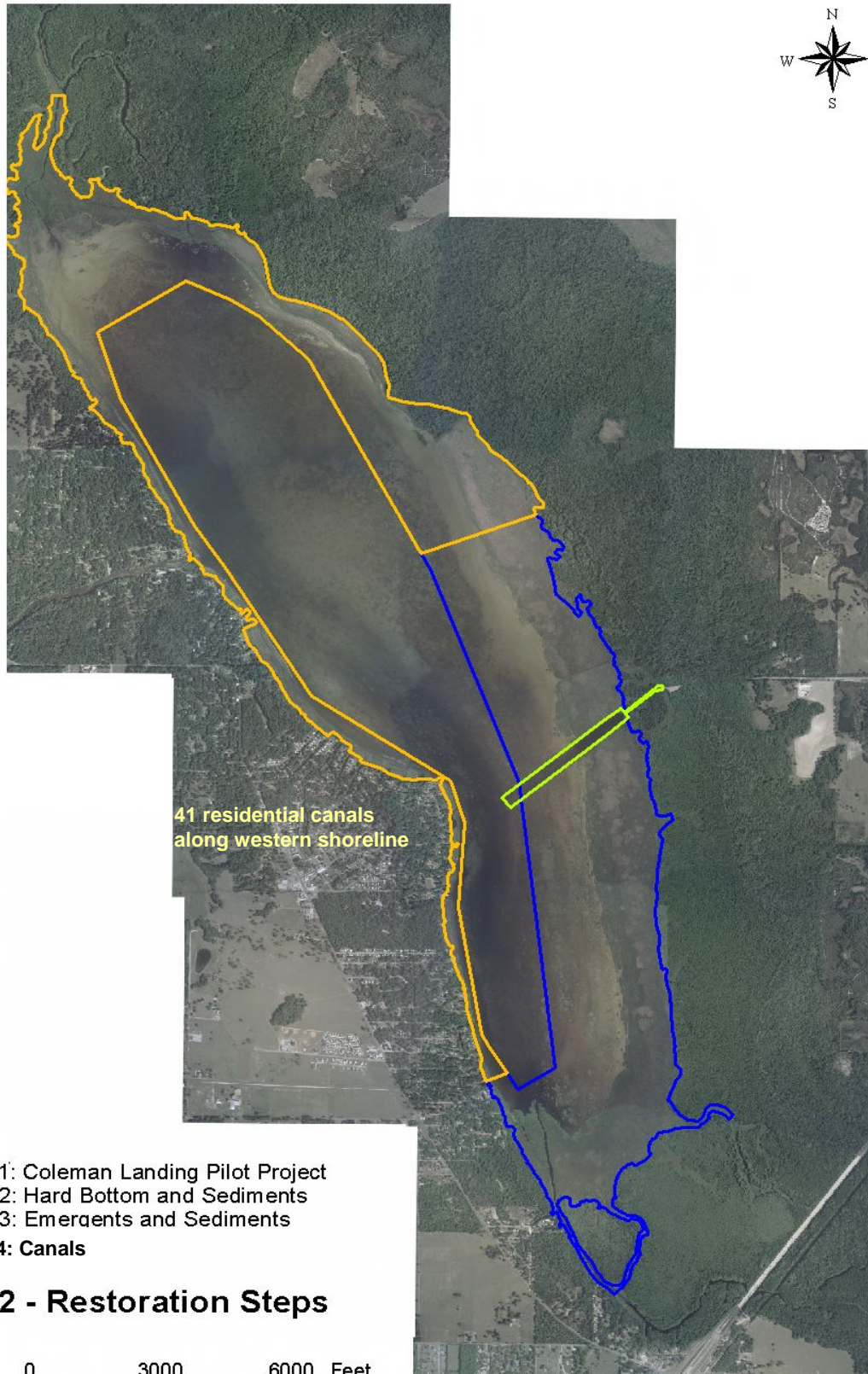
Step 1 – Coleman Landing Pilot Project: **(Completed in December 2000)** The goals of this step were threefold. First and foremost, this pilot dredging project provided information critical to the design, permitting, and dredging of Steps 2 and 3 by confirming settling rates needed to size the upland spoil disposal area for Steps 2 and 3, and by demonstrating that discharge water would meet state water quality standards. Step 1 also confirmed that submerged aquatic vegetation (SAV) would re-colonize in dredged areas, and provided an expected rate of re-colonization, both of which were key issues in the environmental permitting of Steps 2 and 3. The third goal was to restore public access and navigation by re-establishing a navigable channel from the existing Coleman's Landing boat ramp into the lake.

Step 2 – Dredge to Hard Bottom: The goal of this step is to dredge approximately 915 acres of lake bottom (3,442,071 cubic yards of sediment) to restore fisheries habitat, specifically the historic fish spawning areas in the vicinity of Grassy and Shell Points, where the desired hard bottom (sand/shell) for fish spawning has been covered by unconsolidated sediments. Dredging of this step will also restore historic shoreline conditions along the eastern and western shores to provide improved fisheries, navigation and recreational benefits.

Step 3 – Dredge East-side Emergent Vegetation: The goal of this step is to dredge approximately 1,062 acres of lake bottom (4,767,644 cubic yards of sediment) along the eastern and southern shores and in the creeks at the southern end of the lake to restore fisheries habitat and historic shoreline conditions.

Step 4 – Canals: The goal of this step is to improve lake access from the forty one residential canals located along the lake's western shoreline by the maintenance dredging of sediment and vegetation in the canals. Sumter County has taken the lead in implementing this step. In 2001, at the request of Sumter County, the Council authorized the District (as custodian for the restoration funds) to release \$200,000 in State appropriated funds to the county for the implementation of Step 4.

The dredging boundaries of the in-lake steps of the restoration plan are shown in Figure 2 on the following page.



**Figure 2 - Restoration Steps**

# PROGRESS REPORT

## *Funding and Project Costs*

Updated costs for the four steps of the Council's recommended restoration plan are shown in Table 1. The costs shown for each step include design, permitting, construction management, SAV monitoring, and construction/dredging costs. In-kind costs incurred by the District, FFWCC and the FDEP for water quality and fisheries monitoring and project management are not included.

**Table 1 - Restoration steps showing acreage, sediment volume and costs**

<b>Restoration Step</b>	<b>Area Acres</b>	<b>Volume Cu. Yards</b>	<b>Total Costs</b>
Step 1 - Coleman Landing Pilot Project <sup>1</sup>	24.5	138,035	\$756,767
Step 2 - Dredge to Hard Bottom <sup>2</sup>	915	3,442,071	\$12,098,254
Step 3 - Dredge East-side Emergent Zone <sup>2</sup>	1,062	4,767,664	\$11,996,206
Step 4 - Canals <sup>3</sup>		128,444	\$200,000
Total			\$25,051,227

**Notes:**

1. Step 1 was completed in December 2000. Costs include reclamation costs for the spoil disposal site.
2. Costs for design, permitting, construction management, SAV monitoring, mobilization, contingency and site work have been pro-rated between Steps 2 and 3. Costs shown are based on actual costs and bid amounts, and have been refined since the 2003 Report.
3. The dredging of the canals is being undertaken by Sumter County. The amount shown in the total cost column, \$200,000, only represents the amount committed by the Council in 2001. Sumter County is providing additional funds and resources. Additionally, the 128,444 cubic yard figure is the estimated volume of material to be removed from the canals, but should not be used as a comparative cost per cubic yard against the \$200,000 shown to the right.

## ***Project Implementation***

Since award of the dredging contract for Steps 2 and 3 in August 2003, significant construction activity has taken place. The status of construction for the dredging of Steps 2 and 3 and related site work, along with the status of other recommendations in the Council's the 2003 Report to the Legislature are reported below.

Spoil Disposal Area: The District issued the notice to proceed to the contractor on December 8, 2003 to construct the 450 acre upland confined disposal facility to contain the sediments to be dredged from Steps 2 and 3. This work also included the placement of the dredge pipeline from the lake to the disposal facility. The disposal facility was completed and accepted by the District on June 2, 2004. The completed facility was subsequently certified to the FDEP on June 30, 2004 in accordance with the specific conditions of the Environmental Resource Permit issued for Steps 2 and 3. The total cost of the confined disposal facility was \$6,947,803. It is worthy to note that the spoil disposal area

was completed within budget and ahead of schedule. Figures 3 and 4 provide aerial photographs of the completed disposal facility.

Dredging of Steps 2 and 3: The District issued the notice to proceed for the dredging of Step 2 on July 2, 2004. The cost of the dredging of Step 2 is \$11,361,866. Step 2 has a 500 calendar day construction period making the projected completion date November 14, 2005. Upon the completion of Step 2, the District will issue the notice to proceed with Step 3, which has a cost of \$11,266,029. Step 3 will have an 800 calendar construction period making its projected completion date January 3, 2008. Figure 5 provides an aerial view of the disposal area showing the dredge pipeline discharging sediments into settling cell No. 2. Figure 6 provides an aerial view of the dredge in the lake dredging Step 2 near the southern end of the lake.

Monitoring of submerged aquatic vegetation (SAV): The Council's first Report to the Legislature, dated November 1998, acknowledged the importance of existing healthy SAV in Lake Panasoffkee. Baseline SAV mapping for the entire lake was completed in December 2000. Since the baseline mapping effort, the District has implemented an annual SAV monitoring program to monitor the areal coverage. The annual aerial mapping and monitoring of the SAV coverage could not be performed in 2003 due to poor water clarity conditions resulting from heavy rainfall that began in the summer of 2002 and extended through the summer of 2003. However, water clarity in the lake improved this past year to the point where the District was able to resume mapping in April 2004. The updated mapping showed the areal coverage of SAV to be at 70 percent.

Continue Fish Population study using electrofishing methods: The Commission continued its fish population studies using electrofishing methods. Data collected indicate increases in largemouth bass densities since the 2001 data collection effort. It is believed that this increase may be due to rising water levels that have caused a decline in deep SAV beds. This would lead fish to congregate in near shore areas making them more susceptible to capture using electrofishing methods. An increase in panfish densities was also noted, though less significant than largemouth bass increase.



## **RECOMMENDATIONS**

The Council's recommendations for the upcoming year are listed below.

- Complete the dredging of Step 2 by the scheduled date of November 14, 2005.
- Commence the dredging of Step 3.
- Continue to map and monitor SAV trends.
- Submit semi-annual status reports to the FDEP as required under the Environmental Resource Permit issued for Steps 2 and 3.
- Request re-verification letter from the U. S. Army Corps of Engineers for the Nationwide 27 and Nationwide 29 permits issued for Steps 2 and 3.



**Lake Panasoffkee Restoration Project – Upland Confined Disposal Facility for Steps 2 and 3  
(Oblique View Looking Northwest)**

**Figure 3**





**Lake Panasoffkee Restoration Project  
Upland Confined Disposal Facility for Steps 2 and 3  
(Orthogonal View)**

**Figure 4**





**Aerial View of the Dredge Discharge into the Confined Disposal Facility**

**Figure 5**





**Aerial View of the Dredge In-lake Dredging Step 2 Near South End of Lake Panasoffkee**

**Figure 6**