

# A List of Accomplished Projects on the Butler Chain of Lakes



# PROJECTS ACCOMPLISHED IN FY 2006

## WINDERMERE WATER & NAVIGATION CONTROL DISTRICT (WWNCD)

### **1. Butler Chain Comprehensive Management Plan (ERD Inc. Study) (\$300K):**

This study includes the development of hydrologic and nutrient budgets to adopt a Lakes / Stormwater Mgt. Plan for the Butler Chain of Lakes. Field and laboratory analysis (water quality, precipitation, surface evaporation, ground water seepage, sediment monitoring, stormwater runoff, etc.) were completed in January 2006.

### **2. Installation of Navigation Signs and Buoy Markers (\$118K) (\$70K Butler Portion)**

The replacement and installation of new buoy markers and navigation signs at the Butler Chain and Lake Conway was completed on February 7, 2006. 128 regulatory, 28 directional signs and 16 emergency contact signs were installed. All the deteriorating and missing signs destroyed by the 2004 hurricanes were successfully replaced with bigger signs equipped with six-inch pilings, pilings caps, stainless steel  $\frac{3}{4}$  inch bolts and wind resistant back frames and reflective tape.

The Fish and Wildlife Conservation Commission is schedule to release the final “permit decals” for the Navigation signs in April 2006.

### **4. Lake Sawyer & Robinson Watershed and Pollutant Load Study (O.C. EPD CIP) (\$50K)**

This purpose of this watershed study projects is to identify specific areas where nutrient and load reductions could be achieved. This project is scheduled for completion in September 2006.

### **5. Lake Sloat and Tucker Shoreline Restoration Project (O.C. ReNew Grant) (\$16K)**

This shoreline restoration project in partnership with the “Bay Lakes HOA” is scheduled for completion in April 2006. This project will serve as a demonstration area to promote the Orange County - Clean Lakes Incentive Program.

### **6. Cypress Isle Wetland Restoration Project (O.C. ReNew Grant) (\$5K)**

This wetland restoration project in partnership with the “Cypress HOA” is scheduled for completion in April 2006. This project will serve as a demonstration area to promote the Orange County - Clean Lakes Incentive Program at the west side of the Butler Chain of Lakes.

### **7. WWNCD MSTU Boundary Evaluation**

This project is being conducted to evaluate all the parcels that need to be included into the MSTU, according to the boundaries of the taxing district. The GIS mapping was already completed and all the parcels that need to be included in the MSTU (tax district) were identified. A list of parcels would be sent to the OCPA in March 2006.

# PROJECTS ACCOMPLISHED IN FY 2006 WINDERMERE WATER & NAVIGATION CONTROL DISTRICT (WWNCD)

## **8. MSTU Proposal for Lake Robert's (Subdivisions outside Windermere MSTU)**

This project includes the elaboration of an Arc view map, list of property owners and tax calculations to propose the creation of a MSTU for the maintenance of Lake Roberts. This project is schedule to be completed in FY 2006.

## **9. Butler Chain of Lakes - Berm and Swale Survey**

A berm and swale survey was conducted in December 2005 with the "FWCC Butler Patrol Officers" to evaluate the percentage of linear feet of shoreline with berms/swales, as well as to determine the percentage of compliance on waterfront parcels constructed after the adoption of stormwater regulations in O.C. Approx. 1,267 parcels and 267,500 linear feet of shoreline were inspected to locate areas to be target for code enforcement actions, as well as for areas to promote the CLIP (Financial Incentive Program) to increase the # of berms /swales to protect the lakes.

## **10. Butler Chain of Lakes -Dilapidated Dock Survey**

A dilapidated dock survey was conducted in December 2005 with the "FWCC Butler Patrol Officers" to initiate code enforcement procedures for structures that could cause damage during hurricane winds or that may compromise the safety of boaters or lake users. Approx. 31 Dilapidated structures were identified and ranked in terms of safety concerns to proceed to contact the owners for dock removals or replacement/repair actions.

# PROJECTS ACCOMPLISHED IN FY 2007

## WINDERMERE WATER & NAVIGATION CONTROL DISTRICT (WWNCD)

### **1. Butler Chain Study (ERD Inc.) (Completed) (\$300K):**

This study includes the development of hydrologic and nutrient budgets to adopt a Lakes / Stormwater Mgt. Plan for the Butler Chain of Lakes. Three Presentations of the report were done on May 15, 2006, Dec. 6, 2006 and January 10, 2007. This study was paid with the help of a \$152K grant from the South Florida Water Management District. Final Report was received on January 31, 2007.

### **2. Cypress Isle Wetland Restoration Project (Completed) (\$5K):**

This wetland restoration project was done in partnership with the "Cypress HOA" in May 2006. This project will serve as a demonstration area to promote the Orange County - Clean Lakes Incentive Program at the west side of the Butler Chain of Lakes. This project was paid with an O.C Renew Grant.

### **3. Bathymetric Data -Rematrix Inc. (Completed) (\$14K):**

Acquisition of digital Bathymetric maps from Rematrix, Inc. for the Butler Chain of Lakes Study.

### **4. Eng. Design Fish-Pocket Canal Dredging and Berm & Swale Project (Completed) (\$48K)**

This project includes surveys, engineering services, permits and elaboration of a bid package to accomplish the dredging of the Fish-Pocket Canal. The cross-section surveys and engineering calculations were done in 2006. The permit application and permit exemption were obtained and a bid package was put together to select a contractor. The bid was conducted on February 17/09.

### **5. Lake Sawyer & Robinson Watershed and Pollutant Load Study (Completed) (\$50K)**

This purpose of this watershed study was to identify specific areas where nutrient and load reductions could be achieved to preserve the water quality of Lake Sawyer. Half of the cost of the study was paid with a \$25K grant from the South Florida Water Management District.

### **6. MSBU Proposal for Lake Roberts (Subdivisions outside Windermere MSTU)**

This project includes the creation of a MSBU for the maintenance of Lake Roberts. This project is scheduled to be completed in FY 2008/09. Two meetings were conducted over the past months and the residents are scheduled to vote in June 2007 for the adoption of a 0.287 Millage Rate to maintain Lake Roberts.

### **7. Fish Population and Habitat Evaluation – Butler Chain of Lakes (completed) (~ \$100K)**

The Fish and Wildlife Conservation Commission (FWCC) conducted a "Fish Population and Habitat Study" at the Butler Chain during February, March and April 2007 to evaluate the need for fish enhancement projects. The project included the use of electro-fishing and extensive fish tissue analysis to determine the condition of the fish population and specific habitat restoration projects. This project was paid by the FWCC.

**8. Lake Butler Groundwater-surface water interaction (completed) (~ \$80K):** The FDEP Groundwater Protection Section conducted a surface water / groundwater study at Lake Butler, as part of a six lakes study from Gainesville down through Sebring. The study was completed in conjunction with the Florida State University, and the direction of Jennifer Gihring, Watershed Planning & Coordination Section (Florida Department of Environmental Protection). The entire project will be funded by FDEP.

# PROJECTS ACCOMPLISHED IN FY 2009

## WINDERMERE WATER & NAVIGATION CONTROL DISTRICT (WWNCD)

### **1. Eng. Design -Stormwater Project for the Tilden/W. Lake Butler Rd. (Completed) (\$37K)**

This project included engineering and cost evaluation of wetland enhancements, off-line stormwater retention pond and an alum injection system for the Tilden / West Lake Butler Outfall.

### **2. Eng. Design – Lake Down Sub-Basin 15 Stormwater Project (Completed) (\$37K)**

This project included engineering /cost evaluation of an off-line stormwater retention pond and an alum injection system for the Maguire / Park Gotha Outfall.

### **3. Lake Sawyer & Robinson Watershed and Pollutant Load Study (Completed) (\$50K)**

This purpose of this watershed study was to identify specific areas where nutrient and load reductions could be achieved to preserve the water quality of Lake Sawyer. Half of the cost of this study was paid with a \$25K grant from the South Florida Water Management District.

### **4. Fish-Pocket Canal Maintenance Dredging Project (completed) \$200K):**

This project included the Fish-Pocket Canal water depth restoration, construction of berms/swales with the use of geotex tubes and installation of sod

### **5. Pollutant Load Study for Lake Tibet Sub-basin 1 and 2 (Pending) (\$50K)**

The goal of this study is to identify the source of pollutants coming from reclaimed water at the Bay Hill Golf Course / stormwater runoff from nearby residential area. The study encompass the use of monitoring wells and stable isotopes analysis to identify the source of phosphorous and nitrogen; as well as means to achieve load reductions to preserve the water quality of Lake Tibet.

### **6. Egret Island Survey and Sign Installation Project (Completed) (\$12K):**

This project included the Survey of Egret Island and the installation of no trespassing signs

### **7. Melaleuca Removal /Reforestation of the Sandy Shores – L.Butler (Completed) (\$20K):**

This project included surveys, engineering services, permits and elaboration of a bid package to accomplish the dredging of the Fish-Pocket Canal. The cross-section surveys and engineering calculations were done in 2006. The permit application and permit exemption were obtained and a bid package was put together to select a contractor. The bid was conducted on February 17/09.

**PROJECTS ACCOMPLISHED IN FY 2009  
WINDERMERE WATER & NAVIGATION CONTROL DISTRICT  
(WWNCD)**

**8. Melaleuca Removal at Lake Down (Completed) (\$20K):**

Invasive Melaleuca tree removals -accomplished for the protection of Lake Down.

**9. Melaleuca Removal at Lake Bessie (Completed) (\$20K):**

Invasive Melaleuca tree removals -accomplished for the protection of Lake Down.

**10. Melaleuca Removal at Lake Mabel – Disney Parcel (Completed) (\$3K):**

Invasive Melaleuca tree removals -accomplished for the protection of Lake Down.