FINAL

HARRIS CHAIN OF LAKES RESTORATION COUNCIL

SITE VISIT SUMMARY
of the
Projects and Lands Committee Tour
February 4, 2005
Lake Apopka

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was cancelled to facilitate a site visit to the Lake Apopka North Shore Restoration Area. Council members met at the St. Johns River Water Management District – Lake Apopka Field Office for the site visit at 11:00AM on 2/4/05.

Members Present	**Member Not Present**
Charles C. Clark	Hugh (Dave) Davis II, Chairman
Rick Powers, P.E.	Skip Goerner, Vice Chairman
	Thomas A. Cook, MD, Secretary
	W. Thomas Brooks
	Keith Farner
	Robert Kaiser
	Don Nicholson

The St. Johns River Water Management District (SJRWMD) hosted a site visit of the Lake Apopka Projects and Lands Committee Tour on 2/4/05. The tour was conducted to observe and discuss future proposed projects of the SJRWMD. The tour was attended by members of the Technical Advisory Group to the Council including Dr. Larry Battoe (SJRWMD), Mike Perry of the Lake County Water Authority (LCWA), and Bill Johnson of the Florida Fish and Wildlife Conservation Commission (FWCC). Dr. Eric Marzolf and Dr. Gian Basili of the SJRWMD conducted the tour and provided information. The itinerary of the tour and site map provided by the SJRWMD, are attachments to this summary.

The tour began within Unit 2 of the Lake Apopka North Shore Restoration Area (NSRA). This area had been formerly used as farmland cultivating primarily corn and carrots. Excessive runoff of nutrients and agri-chemicals has severely degraded water quality in Lake Apopka and other downstream lakes. The intent of the project for this area and Unit 1 to the north is to treat the land surface with flocculants in order to minimize nutrient rich runoff, and then flood the area to create a marshland. Vegetation has been mowed and roller chopped in an effort to reduce the amount of flocculant required and thus reducing the overall cost of the project. A small area within this project site has undergone extensive remediation due to increased levels of the pesticide Toxiphene that is believed to

be the crash site of a crop dusting aircraft. It was explained that the levels of this chemical were measured in the soil and groundwater in percentages, as opposed to parts per thousand. Fish in the canals that were sampled after the hurricanes of 2004 were determined to have levels of pesticides and chemicals that are below state standards.

Agricultural operations in this area began in the 1940s and initiated an increase in algae and algal blooms in Lake Apopka that has persisted for greater than 40 years. Phosphorus levels in the lake have been measured up to ten times the state standard for that nutrient. After flocculation treatment of the land, the SJRWMD plans to flood the area creating a marshland that will maximize water volume storage and minimize the volume discharged. The marshland will then function to aid in the reduction of chemicals and nutrients in stormwater runoff from surrounding agricultural and urban lands.

Water levels in the 3,000 acres of Unit 2 are controlled by a pumping station located on the northeast shore of Lake Apopka. The station operates with two diesel powered pumps and one electric pump which can move up to a total of 150,000 gallons of water per minute. Prior to discharge into the lake, the water receives flocculant treatment through an alum drip application system located just upstream of the pumping station. An important feature of this marshland project is that it is home to numerous species of migratory and native birds.

The tour then proceeded to a mesocosm bioaccumulation study project located at the north end of Unit 2. This project is to aid in the study of safe levels of pesticides in birds and fish, and operates three facilities to evaluate the effects of low, medium and high concentrations of pesticides and chemicals. The data obtained from this study will be used to determine fields within the area that are suitable for reflooding. It will also assist in evaluation of remediation options including land cover with dredge spoil from lake remediation projects. The study is a joint partnership of the SJRWMD and the Natural Resources Conservation Service (NRCS).

The tour continued to the CC Ranch property, which is the site proposed for the Apopka-Beauclair Nutrient Reduction Facility (NuRF). This project is designed to take water from the Apopka-Beauclair Canal, treat it with flocculants in the three, 5-acre settling ponds and then return it to the canal. The flocculated material will be placed in a floc drying area prior to disposal. A total of 80 acres of aboveground impoundments will be constructed to facilitate NuRF operations. While at this location, the tour attendees observed a breeding pair of Whooping Cranes which are an endangered species. Only five or six pairs are known to be found in this region of Florida.

The next stop on the tour was at the Duda Farms property. A wetland restoration project was being conducted in this area and was evidenced by the proliferation of wetland vegetation. An advantage of this wetland project is that water is not required to be discharged back into the Apopka-Beauclair Canal or Lake Apopka, thus increasing overall storage volume.

The final stop on the tour was at the shad harvest landing area. Commercial fishermen that are contracted by the SJRWMD to remove gizzard shad from Lake Apopka, unload their catches at this facility. The fish are washed and then packaged in ice for transportation to a crawfish farm in Louisiana. The facility processed 440,000 pounds of fish in January 2005. A total of 30 boats have been permitted to harvest the shad and six to twelve operate on the lake daily. The fishermen target three to four year old fish by using nets with 4' and 4.5" openings and are paid $0.25 per pound of shad. Gizzard shad are the targeted fish in this program due to the manner in which they resuspend phosphorus in lake bottom sediments and excrete large concentrations of phosphorus and nitrogen into area lakes. The data collected through these efforts are being evaluated to determine nutrient load reductions through shad harvesting. The program is scheduled to begin operations in Lake Dora in March 2005.

The tour ended at 2:15 PM
Photographs were taken to document onsite conditions.

Respectfully submitted by:

_____
Chairman Dave Davis

_____
Vice Chairman Skip Goerner

Projects and Lands Committee Tour
February 4, 2005
Lake Apopka

Tour Highlights:

Unit 1 and Unit 2 potential areas for spoil disposal
Mesocosm for bioaccumulation study
Proposed NuRF site location
Wetland restoration on the former Duda Farms
Gizzard shad harvesting

Itinerary: Transportation and bag lunch provided

11:00 Meet at Field Station on CR448-A

11:30 Arrive at Lust Road gate and enter NSRA

11:45 Arrive at Pump Station #2 and view lake

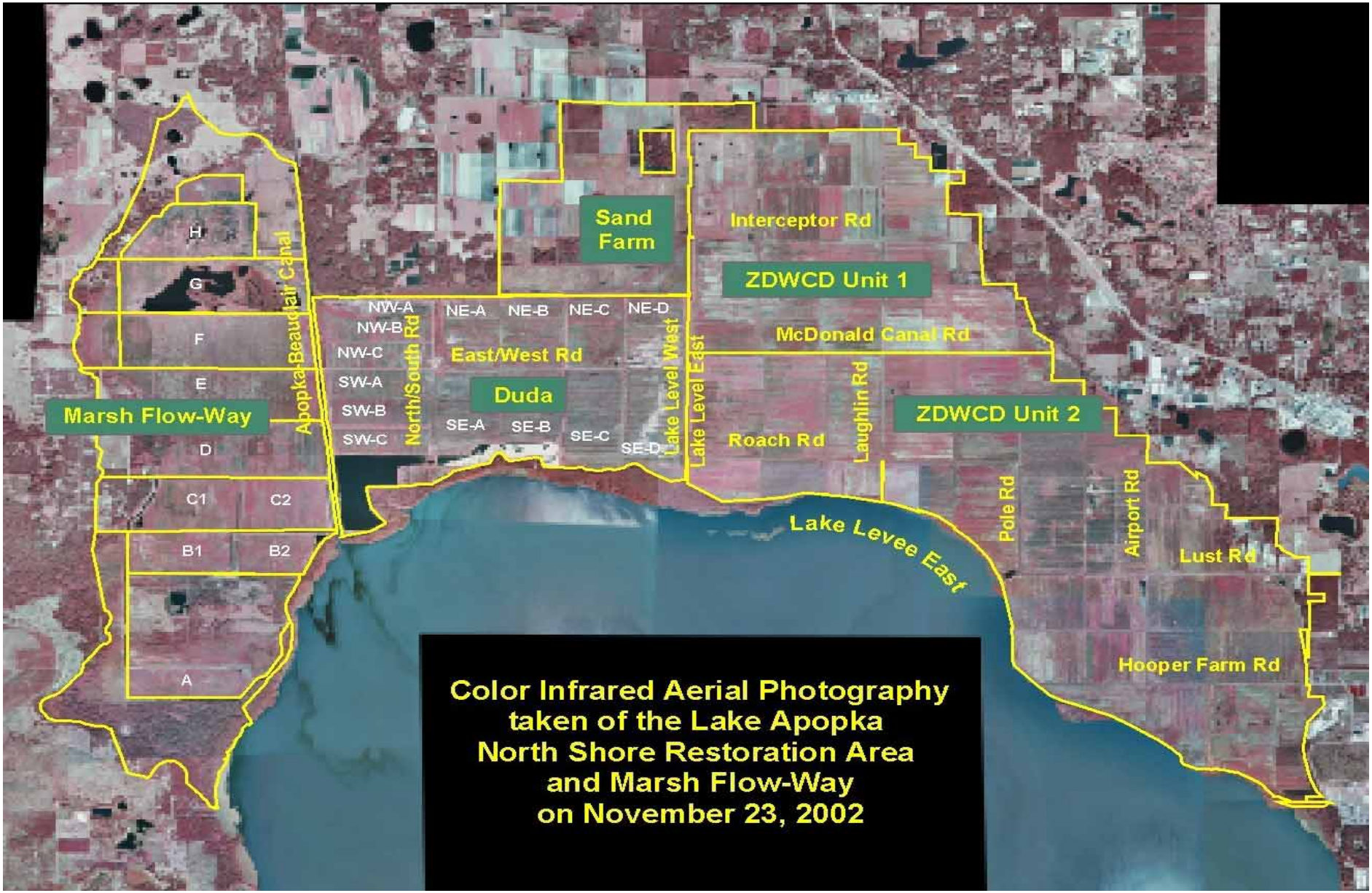
12:15 View mesocosm on Laughlin Road, discuss bioaccumulation study and remediation options including land cover with dredge spoil

1:00 Arrive at CC Ranch –site of proposed NuRF

1:40 Arrive at former Duda Property and view wetland restoration

2:00 Arrive at shad landing

2:30 End tour at field station


Sand Farm
Interceptor Rd
ZDWCD Unit 1
McDonald Canal Rd
ZDWCD Unit 2
Marsh Flow-Way
Duda
East/West Rd
North/South Rd
Apopka-Beauclair Canal
Lake Level West
Lake Level East
Laughlin Rd
Roach Rd
Pole Rd
Airport Rd
Lust Rd
Lake Levee East
Hooper Farm Rd
H
G
F
E
D
C1
C2
B1
B2
A
NW-A
NW-B
NW-C
SW-A
SW-B
SW-C
NE-A
NE-B
NE-C
NE-D
SE-A
SE-B
SE-C
SE-D
Color Infrared Aerial Photography
taken of the Lake Apopka
North Shore Restoration Area
and Marsh Flow-Way
on November 23, 2002