

FINAL

**MINUTES OF THE MEETING  
of the  
HARRIS CHAIN OF LAKES RESTORATION COUNCIL**

**December 5, 2008**

The regular meeting of the Harris Chain of Lakes Restoration Council (Council) was held at 9:00 AM on December 5, 2008 at the Lake County Board of County Commissioners' (BOCC) Chambers, 315 West Main Street, Tavares, Florida.

**Members Present**

Skip Goerner, Vice Chairman  
Robert Kaiser, P.E.  
Don Nicholson  
Richard Royal  
Jon VanderLey

**Members Absent**

Hugh (Dave) Davis II, Chairman  
Rick Powers, P.G., Secretary  
Keith Farner  
Edward M. Schlein, M.D.

**1. CALL TO ORDER**

Vice (V.) Chairman Skip Goerner called the meeting to order at 9:00 AM.

**2. INVOCATION AND PLEDGE OF ALLEGIANCE**

An Invocation was given by Councilman Bob Kaiser, followed by the Pledge of Allegiance.

**3. ROLL CALL**

V. Chairman Goerner called roll. Chairman Dave Davis, Secretary Rick Powers, and councilmen Keith Farner and Ed Schlein were absent.

**4. APPROVAL OF MINUTES**

V. Chairman Goerner called for discussion of the November 7, 2008 meeting minutes. Patrick Hunter, Recording Secretary to the Council described minor edits to the minutes that had been suggested by Barbara Bess of the Florida Department of Environmental Protection (FDEP) and member of the Technical Advisory Group (TAG) to the Council. No additional edits or comments were suggested. The November 7, 2008 minutes were approved with the minor edits, by unanimous vote.

Mr. Hunter asked that TAG members review portions of the draft minutes which include comments made by the TAG member during the meeting. He suggested this may avoid issues

where TAG members refute comments recorded and approved in the meeting minutes, and later used in the annual report.

## **5. PRESENTATIONS / ACTION ITEMS**

### **District Comments on Annual Legislative Report – Jeff Elledge, SJRWMD**

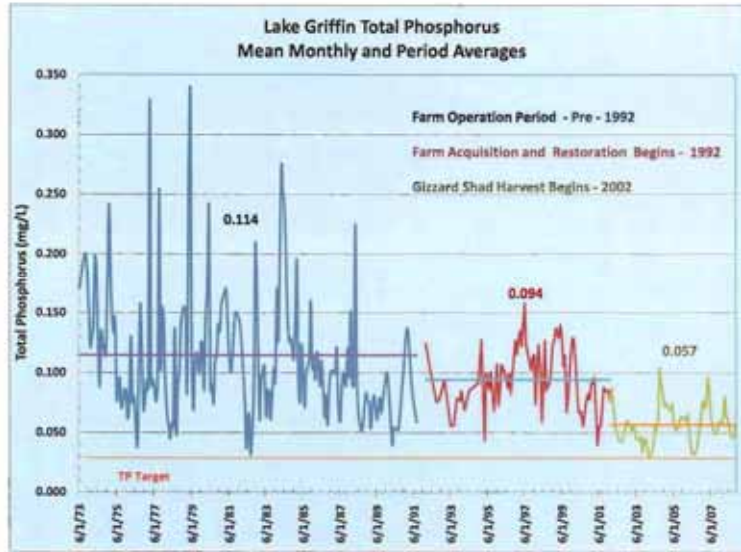
Jeff Elledge, Water Resources Department Director with the St. Johns River Water Management District (SJRWMD or District) said he was at the meeting to answer any questions the Council may have regarding the letter submitted by the District with the Council's annual report, which expressed their concerns with the report.

V. Chairman Goerner noted that the District did not make comments to the report until very late in the reporting process, which had been going on for months. He also explained that the Council had given direction that the District could not include their comments with the annual report; stating it is the Council's report and they stand by their comments. V. Chairman Goerner said the District has the right to make comments but they should have been submitted under separate cover.

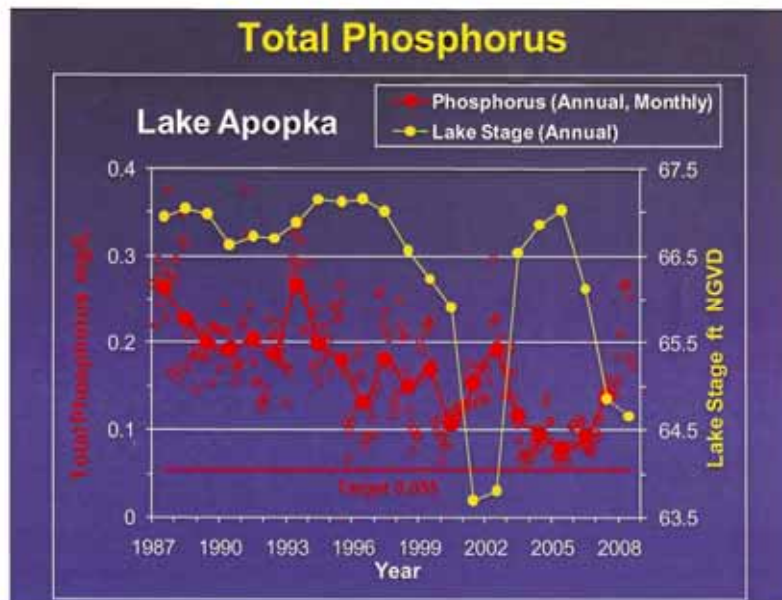
V. Chairman Goerner also expressed his displeasure with the fact that the Council received no copies of the report to present to the Legislative Delegation, as they have in the past. He said that currently the Council has no copies to provide to the Delegation and seven are needed. Mr. Elledge said he would provide seven [printed] copies of the annual report to the Council. Chairman Goerner asked that the copies be provided by next Wednesday, prior to the meeting with the Delegation. Mr. Elledge said that should not be a problem.

Mr. Elledge went on to discuss restoration techniques employed by the District which the Council opposed in their annual report. He displayed graphs of water quality in Lake Griffin and Total Phosphorus (TP) in Lake Apopka. Copies of those graphs are displayed below and provided in Attachment 1 of these minutes.

Mr. Elledge said that water quality saw immediate improvement in Lake Griffin after the SJRWMD purchased farms on the east side of the lake and began restoring them. He also said that water quality continues to improve as a result of the gizzard shad harvesting. Mr. Elledge explained that sport fisheries have also improved; saying that when they began shad harvesting gill net surveys produced over 90% gizzard shad and more recently the surveys indicated that about 30% of the fish netted were shad. He said this indicates that their efforts [on Lake Griffin] not only improved water quality but also sport fisheries.



Mr. Elledge then discussed the graph of TP concentrations in Lake Apopka (Attachment 1). He said the District disagrees with the statement in the annual report which says that based on a review of seven years of water quality data, conditions in the lake have not improved. V. Chairman Goerner corrected Mr. Elledge saying the Council based their opinion on many years of water quality data reviewed. Mr. Elledge said he was quoting what was written in the annual report and expressed his concern with the comment because there has been improvement in water quality at Lake Apopka. He believes that any fair review of the data would indicate there have been water quality improvements in the lake over the past seven years and added; there have been similar improvements in chlorophyll concentrations in the lake.



Mr. Elledge explained the reason for the District's letter is that they believe the report misrepresents the scientific information that is available.

Councilman Richard Royal asked if the District's position is that the majority of water quality improvements in Lake Griffin are attributed to the gizzard shad harvests. Mr. Elledge said no; the improvements are a result of the elimination of agricultural discharges from the Emerald Marsh area and the shad harvesting.

V. Chairman Goerner said he agrees that purchasing the farms along Lake Griffin has reduced the flow of phosphorus into the lake. He also a previous comment by Mr. Elledge that the Council has spent seven years reviewing water quality data and the data covered many years. V. Chairman Goerner then asked what year the Lake Griffin flow-way began operation. Walt Godwin, Environmental Scientist VI with the SJRWMD said it was operated in 1997.

V. Chairman Goerner recalled that whenever the flow-way was operated there were large amounts of nutrients discharged to the lake which caused algal blooms that were *Cylindrospermopsis raciborskii* (a toxin producing blue-green alga). He explained that algae accounted for over 90% of the biomass in the lake which caused fish populations to plummet, and a tremendous number of the large alligator population died. V. Chairman Goerner said that each time the flow-way was started a new slug of nutrients was discharged. He added that much of this took place while he was serving on the Lake Griffin Task Force.

Mr. Elledge again stated that water quality improvements in Lake Griffin were a result of the elimination of agricultural discharges from the farms and the gizzard shad harvests. He went on to say that as water quality improved in the lake, the flow-way was no longer operated.

Councilman Jon VanderLey noted that the comments made by the District involve Lake Apopka while the current discussion is about Lake Griffin. He asked if the reason for that is because the District believes that the same results will occur to Lake Apopka over time. Mr. Elledge said he was responding to comments made in the Council's report regarding gizzard shad harvesting as it related to Lake Griffin. He also explained that the restoration strategies employed by the District on Lake Griffin have been successful and 20 years ago that lake had water quality that was akin to Lake Apopka. Mr. Elledge said their restoration efforts are continuing on Lake Griffin and they are working towards reconnecting the lake to all the restored wetlands around the lake that will occur as conditions in the marshes allow.

Councilman VanderLey noted that he had served on the Lake Apopka Basin Commission for several years and asked if the District's major objection to dredging is cost and not that it would not work. Mr. Elledge agreed saying they have conducted dredging in three of the tributaries to the Indian River Lagoon to minimize muck discharges to the lagoon during rain events. He said because the concentrated muck was in small areas of the tributaries, it was a cost-effective way to provide benefits to the lagoon. When it comes to dredging in Lake Apopka he explained the "soupy" sediments are the most problematic and they are difficult to dredge because they move

around by wind-driven currents. Mr. Elledge said the District has looked at the issue of dredging in Lake Apopka several times over the past 20 years, including in the past five years.

Councilman VanderLey asked if some sort of booms could be installed in Lake Apopka to help contain the muck, making it easier to pump. Mr. Elledge said that booms have proven to not be effective in the lake due to the wave energy generated by wind. He explained that the cost of dredging would be quite high and it would have to be conducted in the northern part of the lake where the District owns property for disposal of the dredged material. Mr. Elledge said there is an agreement with the federal agency that helped purchase the property, which prohibits the deposition of the spoil material. He noted that the Natural Resources Conservation Service (NRCS) has worked with the District for about 12 years and provided about \$20 million to purchase 9,000 acres in the north shore area to restore wetlands.

Mr. Elledge said they have considered other sites for spoil disposal in the north shore that are not encumbered by the NRCS agreement and are working with the Lake County Water Authority (LCWA) on identifying those sites. Currently Unit 1 of the Zellwood property is the only area east of the Apopka-Beauclair (A-B) Canal that is not encumbered by the agreement.

Councilman Royal asked why the lake bottom sediments would be considered a detriment to wetlands on the north shore of Lake Apopka. Mr. Elledge explained the fluid muck consists primarily of decaying algae that when dried out turns into a brick-like material that is not suitable substrate.

Councilman Kaiser asked what percentage of a volume of muck removed from the lake would be solids. Mr. Elledge estimated the muck to be possibly 5% solid or less. He also explained that dewatering the muck takes a long time and can be very expensive.

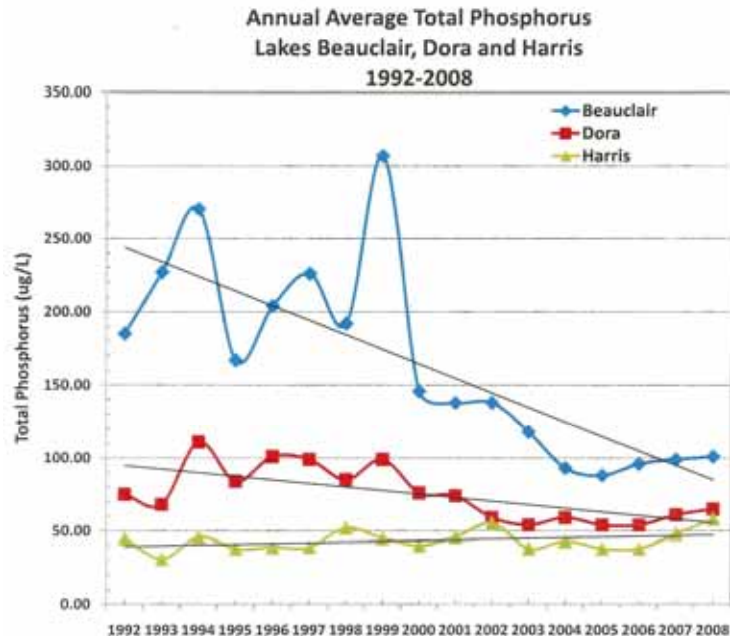
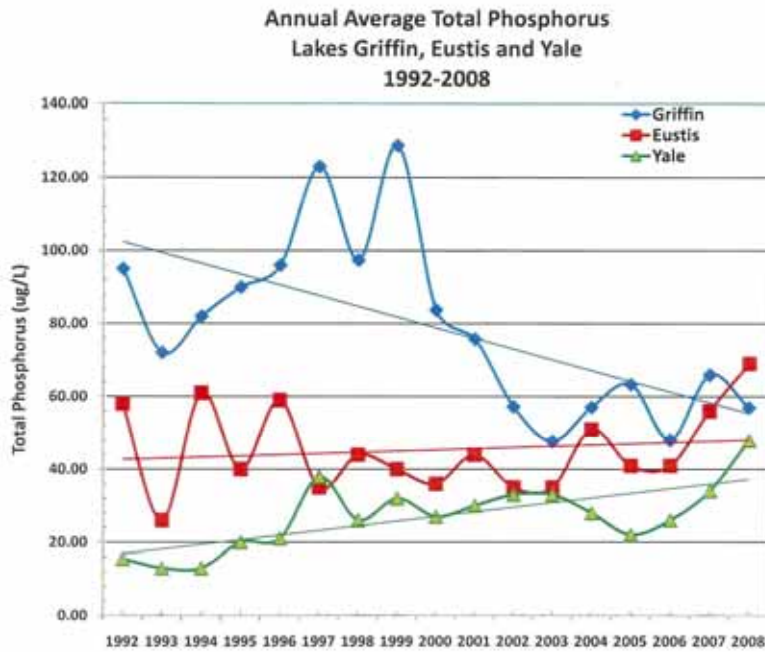
V. Chairman Goerner asked if Mr. Elledge considered dredging the canals in Lake Griffin as beneficial to restoration. Mr. Elledge said that dredging was performed to mitigate any impacts that lakefront owners may suffer as the result of the modified lake level fluctuation plan; not for the direct benefit from the muck removal. V. Chairman Goerner said the canal dredging was part of the original Surface Water Improvement and Management (SWIM) Plan. Mr. Elledge agreed.

V. Chairman Goerner then discussed the previously displayed graph of TP in Lake Griffin noting that a large decrease in phosphorus concentrations occurred in the lake in the 2002-2003 timeframe and asked if that is being attributed to the shad harvests. Mr. Elledge explained the graph just shows changes in TP concentration over time and any improvement in water quality can be attributed to the restoration efforts.

V. Chairman Goerner said the Council has requested and reviewed data relating to shad harvests, which they had always considered an experimental technique. He noted the changes in water quality reads like a calendar that are tied to events; like hurricanes and drought. Mr. Elledge agreed. V. Chairman Goerner also recalled that in 2002-2004 the area saw increased rainfall which may have had a role in improving water quality that just happened to occur when the shad

harvesting began. He also questioned the periods when there was increased chlorophyll concentrations in the lake when phosphorus concentrations went down.

Mr. Godwin explained that if the changes in water quality were truly attributable to environmental conditions [weather-related], then all the lakes would respond the same way. He said that when you look at the water quality graphs he provided earlier in the meeting, water quality in the lakes are responding differently. Copies of the graphs are provided in Attachment 2. Mr. Godwin suggested that water quality changes have to be viewed as a long-term trend because on the short-term phosphorus, chlorophyll, and Secchi depth will go up and down.



Councilman Royal noted that the long-term trend on Mr. Godwin's graph of Average Annual TP in lakes Griffin, Eustis, and Yale indicates that phosphorus concentrations were coming down in 1992, prior to the SJRWMD purchasing the farmlands. Mr. Godwin said they did not have good data prior to 1992. Councilman Royal asked why Mr. Elledge's graph provides data for the period of 20 years before 1992. Mr. Godwin explained the data prior to 1992 was collected by various agencies and the SJRWMD could not verify the validity of the data; however the data are probably accurate. He went on to say the important thing to note is that there are always pulses (of change) in the data and the lakes respond to changes over time.

Dr. Dan Canfield of the University of Florida / Institute of Food and Agricultural Sciences (UF/IFAS) and Chairman of the TAG discussed a set of graphs on Lake Griffin he displayed saying; if you look at the long-term trend for phosphorus in Lake Apopka, it is going down. However, he said when you look at other parameters like chlorophyll and Secchi depth; they seem to not correlate with the decreases in phosphorus.

Dr. Canfield also displayed graphs of water quality parameters in Lake Apopka and said the same thing is true that phosphorus concentrations go down during droughts, and then back up; but the other parameters don't necessarily follow that trend. He suggested that in some instances the nitrogen concentrations play a more important role in producing chlorophyll than phosphorus. Dr. Canfield said the state mandated phosphorus concentration in Lake Apopka is 55 parts per billion (ppb) and that phosphorus limitation does not occur until the concentration falls below 50 ppb, and the lake is no where near that concentration. He also noted that whenever the levels of phosphorus get low, resuspension of bottom sediments drives it back up. Dr. Canfield agreed the Council should focus on long-term trends but they should also be watching the changes in biology in the lakes. Copies of Dr. Canfield's graphs are provided in Attachment 3.

Dr. Canfield also said that he took exception with Mr. Elledge's comment regarding the Council having reviewed seven years of water quality data, as discussed in the annual report. He explained that Mr. Elledge didn't provide the whole quote which states; "The Council has reviewed seven years of water quality data provided by the SJRWMD which included total phosphorus, algal biomass as measured by chlorophyll, and water clarity as measured by Secchi disk. Additionally, after the review of recent data provided by other agencies including the UF and published historical data from the 1970s and 1980s; the Council has determined there have been no major improvements in lake water quality, *which can be directly attributed to the restoration efforts of the SJRWMD.*" Dr. Canfield believes the Council is correct in their statement because water quality includes more than just phosphorus.

Councilman Kaiser asked what percentages of the fluid muck would be solid phosphorus or chlorophyll and what percentages would be soluble or dissolved. Mr. Godwin estimated that approximately 90% of the phosphorus and nearly all of the chlorophyll would be in solid form.

Councilman Kaiser suggested that perhaps a project could be implemented which utilizes a solar-powered pump on a barge to dredge or pump sediments into coffer dams located in the middle of

the lake that would create islands. He said the project could also include a centrifugal separator that could extract the majority of the water from the material for return to the lake while the slurry is pumped into the coffer dams. Councilman Kaiser explained a big advantage of dredging in this manner is that the material wouldn't have to be pumped a long distance and several small islands could be created.

V. Chairman Goerner said the Council is continuing to review different restoration technologies and will formulate a plan that removes sediments from the lakes. He also noted that the SJRWMD recognizes the importance of removing sediments from Lake Apopka because they are a detriment to Lake Beauclair and downstream lakes. V. Chairman Goerner explained that restoring the lakes does not involve only the reduction of phosphorus, but also other parameters including water clarity. He recalled that after heavy rains in 2002 following the extended period of drought, the lakes had much greater clarity which is an indication of improved water quality to everyone.

V. Chairman Goerner explained that is what the annual report tried to reflect; that although there have been some reductions in phosphorus, there hasn't much improvement in water quality. He said in order to achieve this; the flow of nutrients from Lake Apopka and the flow-way needs to cease. He noted it is also very important that somehow bottom sediments near the shoreline have to be more consolidated so they can support macrophytes (aquatic plants). V. Chairman Goerner said the Council recognizes that some projects work while others don't, and that is why new things need to be tried.

Councilman Royal agreed saying that new things do need to be tried and when something doesn't work, and then you should stop doing that and go on to try something else. He said the flow-way at Lake Apopka is not providing the benefits that were expected and a lot of money is being spent on that project, so perhaps the SJRWMD should consider other projects. Councilman Royal suggested that possibly drawing down Lake Apopka like is planned for Lake Griffin might be one option to consolidate the bottom sediments. He said instead of spending million of dollars per year on the flow-way and gizzard shad harvesting projects, perhaps the SJRWMD could escrow some funds for a couple of years and then possibly do some near-shore dredging to create habitat for aquatic plants.

Mr. Godwin said that one concern with removing the near-shore sediments is that without some sort of barrier to stop the flow of suspended solids (sediments), there is no indication that those soft sediments would not move back into the area that was just cleaned. He went on to say if that were to happen, then it would have been a lot of money spent with no benefit.

V. Chairman Goerner said there needs to be a better plan because the current methods being employed are not acceptable to the Council and other people attending the meeting. He explained that the LCWA is going to spend between \$10 and \$15 million to remove the sediments in the A-B Canal that were discharged from Lake Apopka; and there are people who want their canals dredged because of the same problem. V. Chairman Goerner also would like to see the SJRWMD and the Council working more closely together on these projects.



Councilman Kaiser said he stands by the comments made in the annual report and they were not made to damage the District. He explained the Council was formed to review this information and the annual report reflects their opinions. Councilman Kaiser also suggested that the Council and the SJRWMD need to work more closely together to find more timely solutions. Mr. Godwin said there is a basic tenant that the lakes will never be restored without reducing the nutrients and that's why the District has put most of their efforts into that goal.

V. Chairman Goerner suggested that projects need to be implemented that provide benefits in a shorter amount of time. He explained there are new technologies available because there are lakes all around the world that have similar issues and they're dealing with them in different ways. V. Chairman Goerner said the Council has come to the conclusion that some dredging to physically remove the fluid sediments will need to be conducted. Mr. Godwin said, unfortunately they would never be able to generate that amount of restoration funding.

Dr. Canfield explained the "bottom-up" approach being employed by the District involves reducing nutrients, particularly phosphorus because; if you reduce phosphorus you'll reduce algae, if you reduce algae you'll improve water clarity, if you improve water clarity you'll increase macrophytes, and if you increase macrophytes you'll increase fish populations. He went on to suggest that using a "top-down" approach utilizing other methods could restore the lakes to a useable condition (meaning improved fishing) in a short period of time. Dr. Canfield recalled that at a meeting with the SJRWMD in 1992; they said with using the nutrient reduction methods they were suggesting, the lakes would be cleared up in 10 years. He said now the estimates on the amount of time that would be required to restore the lakes ranges from 60 years to 200 years, but there are things that can be done to restore the lakes to quality fishing habitat much sooner. Dr. Canfield also said there are many environmental factors besides phosphorus, which affect water quality in the lakes.

Mr. Godwin asked if Dr. Canfield could explain the reductions in phosphorus as seen in Lake Griffin on the graph displayed by Mr. Elledge earlier. Dr. Canfield said it is his opinion that algae and phosphorus are not correlated in the manner suggested by the SJRWMD. He said there are other factors involved in Lake Griffin that include nitrogen, and added that lakes are complicated things. Dr. Canfield explained that if you look at the long-term averages, the lakes are not changing relative to chlorophyll and water clarity, related to the management efforts. He suggested that until the phosphorus concentrations fall below 50 ppb, which is below the target concentration of 55 ppb, the lake will not be "restored".

V. Chairman Goerner said he understands the main goal on Lake Apopka is to reduce the nutrients and resuspension, which is flushed out to the downstream lakes. Mr. Godwin said one of the benefits of the flow-way at Lake Apopka is that it interrupts the cycle by intercepting the suspended solids which will have an impact to downstream lakes. V. Chairman Goerner noted that the 20 acre-feet [of suspended sediments] that discharged down the A-B Canal (following a major storm event in 2004) negated all the restoration efforts ever conducted [on the lakes]. Mr. Godwin said period of time for the accumulation of the 20 acre-feet has not been determined and it may have accumulated over a period of 50 years. V. Chairman Goerner said the period of

accumulation is not as important as the fact that it came from Lake Apopka and flushed into Lake Beauclair and downstream lakes.

V. Chairman Goerner and the Council offered their appreciation for Mr. Elledge coming to the meeting. Mr. Elledge said the SJRWMD and the Council share the same objectives and reminded the Council that the dredging issue has been looked at many times and in the past nine years he had requested additional review of the option twice. He said they are open to new ideas he personally believes that some sort of dredging project may be required, however; it must be cost-effective. He said the main concern with the Council's report is that it basically opposes all the restoration efforts conducted by the SJRWMD to date. He explained the report; raised concerns about the restoration of the north shore because it wasn't going to be reconnected to Lake Apopka, and it opposed the shad harvesting and the flow-way. Mr. Elledge said lakes Apopka and Griffin are better because of all the restoration efforts and if those efforts were to stop, the lakes would return to their conditions seen 20 years ago. He pointed out that each of the restoration techniques applied to Lake Apopka, helped the lake improve in steps. He also suggested that perhaps to either raise the [water] level of the lake or to lower the bottom by dredging, may be the next step in the process. Mr. Elledge reminded the Council there are still projects in process, including restoration of the marshes, around lakes Griffin and Apopka.

Mr. Elledge went on to say that he disagrees with Dr. Canfield's comments because the data he has reviewed indicates that both the levels of chlorophyll and transparency have improved over the long term. He agreed that the lakes are not where they need to be yet and more needs to be done, but the current projects cannot be abandoned. V. Chairman Goerner said it was one of the original goals of the Council to reconnect the lakes to the marshes and he pointed to the successes of the marsh at Lowrie Brown.

Councilman Royal leaves the meeting at 10:25 am.

### **Council and Public – Questions and Answers**

V. Chairman Goerner called for Public comments. No public comments were made.

### **Funding Issues – Council Discussion**

V. Chairman Goerner explained there would be no discussion of funding because the Florida Legislature said they are not currently accepting Community Issue Budget Requests (CIBRs).

Councilman VanderLey asked if there was any funding approved for the dredging of residential canals as part of the Lake Beauclair dredging project. Mike Perry, Executive Director of the LCWA explained that funding was approved by the LCWA Board of Trustees (Board) to dredge the portions of the canals where they meet the A-B Canal, but not for the entire canal systems. He also noted that the water clarity further down the residential canals is very good and for the most part there is no problem with navigation within those canals.

V. Chairman Goerner told the Council that he is scheduled to speak before the Legislative Delegation and he will discuss the funding already awarded to the Council and also about the annual report.

### **Agency Updates**

Mr. Perry provided the following updates to the Council;

- Four new members were elected to the LCWA Board
  - o [Charles Clark, former Council member]
  - o [Carolyn Dillon, of the Restore Our Waterways (ROW) organization]
- Power was recently turned-on at the Lake Beauclair Nutrient Reduction Facility (NuRF) and no problems were detected
  - o They anticipate a “soft start-up” of the system later this month
  - o Currently the flow through the A-B Canal is 24 cubic feet per second (cfs)
- The engineering/design portion of the Lake Beauclair dredging project is moving along

V. Chairman Goerner asked when the Lake Beauclair dredging project might begin and if a location for the spoil material has been determined. Mr. Perry explained that the project has not begun permitting and with respect to the spoil disposal; Cells E, F, and G are available at the Lake Apopka flow-way and they only anticipate using Cell G.

Dr. Canfield provided the following updates to the Council;

- UF had received the permits to continue the bass relocation / restocking program for lakes Dora and Griffin, but there are no funds available to continue the effort
- The mechanical harvester has been removing cattails and floating tussocks as site approved by the Florida Fish and Wildlife Conservation Commission (FWCC)
  - o There has been an increase in requests for the harvester
- The 1988 draft of the SWIM Plan indicated by Dave Walker, Basin Program Manager with the SJRWMD; “...connecting Lake Apopka to the marshes...” and the term “kidney” was used. Now an agreement with the NRCS is preventing that and perhaps that agreement should be discussed.
- Dr. Mike Allen stands behind his work/opinions on the removal of gizzard shad that phosphorus is continually recycled

Barbara Bess, a Watershed Management Coordinator with the Florida Department of Environmental Protection (FDEP) provided the following updates to the Council;

- After a review of FDEP files; Covanta waste-to-energy facility has no open enforcement cases and the company is in compliance
- They are considering air quality / facility discharges and Total Maximum Daily Loads (TMDLs) and how that may affect water quality
  - o She will review what facilities the FDEP permits that may be contributing to pollution in the water [via air discharges]

Mr. Godwin said he had no further updates for the Council besides the monthly water quality graphs he had provided.

Bill Johnson, Biological Administrator II with the FWCC provided the following updates to the Council;

- They have tagged about 500 Black crappie and are offering rewards of \$5 to \$200 for return of the tags so they can study exploitation of the species
  - o He provided copies of the poster displayed by the FWCC which is presented in Attachment 4.

## **6. OTHER PUBLIC COMMENTS**

V. Chairman Goerner made a call for additional public comments.

Charles Clark (speaking as a private citizen) suggested dredging in Lake Beauclair may be financially feasible and would improve water quality in the downstream lakes. He displayed graphics of his information which are provided in Attachment 5.

- Resuspendable sediment accumulation contours in Lake Beauclair
  - o The larger of the accumulations is at the discharge site and the smaller is at the inlet.
- Graph depicting the bottom contours and depths of the lake
- Graphic of the resuspendable sediments which are affected by wind/wave action
  - o There an area in the southern portion of the lake which could benefit greatly from dredging.

Mr. Clark suggested that if the sediments he indicated there was limited dredging in Lake Beauclair and the NuRF becomes successful at removing [suspended sediments], then the lake will be receiving clean water and benefit the downstream lakes. He also explained that Lake Beauclair is about 3% the size of Lake Apopka and would be more economically feasible to conduct dredging to improve water quality.

V. Chairman Goerner agreed and expressed his concern that without removing the suspendable sediments from Lake Apopka, then future storm events like hurricanes will send large volumes of sediments down the A-B Canal. Mr. Clark reminded the Council the NuRF is designed to treat a maximum of 300 cfs and flows in the range of 500 cfs moved the 20 acre-feet of sediments down the A-B Canal.

V. Chairman expressed his concerns that if greater than 300 cfs were allowed to flow down the canal it would undermine the effectiveness of the NuRF. He also believes that either some of the resuspendable sediments in Lake Apopka need to be consolidated by aquatic macrophytes or there needs to be some limited dredging to prevent the large discharges.

Mr. Clark also noted that the 20 acre-feet discharged to Lake Beauclair did not increase the volume of suspendable sediments or phosphorus concentrations in the lake because the lake concentrations were the same as those in the 20 acre-feet of sediments. V. Chairman Goerner that may be true but it did provide additional phosphorus loading for Lake Dora and the downstream lakes. Mr. Clark agreed.

Councilman Kaiser asked whether the north shore at Lake Apopka could be used to store water that minimizes the surge that goes down the A-B Canal. Mr. Clark said that would be a question for the SJRWMD but the biggest concern is controlling flows greater than 300 cfs.

Councilman Don Nicholson also suggested that perhaps the A-B Canal should be dredged south of the NuRF. Mr. Clark said that issue was discussed by the SJRWMD and it was believed those sediments are deep enough to no be affected by high flows.

Mr. Perry said the LCWA had looked at this issue and determined that the majority of the sediments actually in the canal are sand therefore, there is not reason to conduct that additional dredging.

## **7. COUNCIL MEMBER COMMENTS**

V. Chairman Goerner made a call for Council member comments.

Councilman VanderLey discussed the stormwater fees in property taxes and how it appears to have evolved into budgets which include parks and roads. He also believes it is important to consider the stormwater discharges from the residential properties that pay the fees, and discharge to the lakes. Mr. Perry said the LCWA considers not only the quality of stormwater discharges but also the quantity and that is why Parks and Recreation Departments receive some of the funds available. He explained that the Stormwater Tax millage is more than twice the amount for the LCWA and perhaps the Council could pursue an inquiry into how those fees are being spent. Mr. Perry also noted that local governments are more concerned with reducing flooding than the quality of the stormwater and he has heard it said: “They don’t want to be drowning in clean water.”

Councilman Kaiser also expressed his concerns that money that was originally collected for stormwater projects is now being used for other project. He believes there would be sufficient money available to assist with some of the projects endorsed by the Council.

Councilman VanderLey believes there needs to be additional public education on the stormwater issues and to possibly provide incentives for homeowners on the lakes that create a swale to intercept stormwater before it enters the lakes. V. Chairman Goerner agreed and perhaps the stormwater tax could help fund those efforts.

Councilman Kaiser again suggested his idea of building small islands in Lake Apopka by pumping dredge material into coffer dams is a viable project.

No further Council member comments were made.

Discussion of January 2, 2009 Meeting

- Update on the Lake County Stormwater Tax – Jim Stivender, Lake County Public Works
- Update of the Legislative Delegation Meeting – V. Chairman Goerner

**8. ADJOURNMENT**

The meeting was adjourned at 11:20 AM.

Respectfully submitted by:

---

V. Chairman Skip Goerner

---

Secretary Rick Powers, P.G.

**Attachment 1**

**Water Quality Graphs**

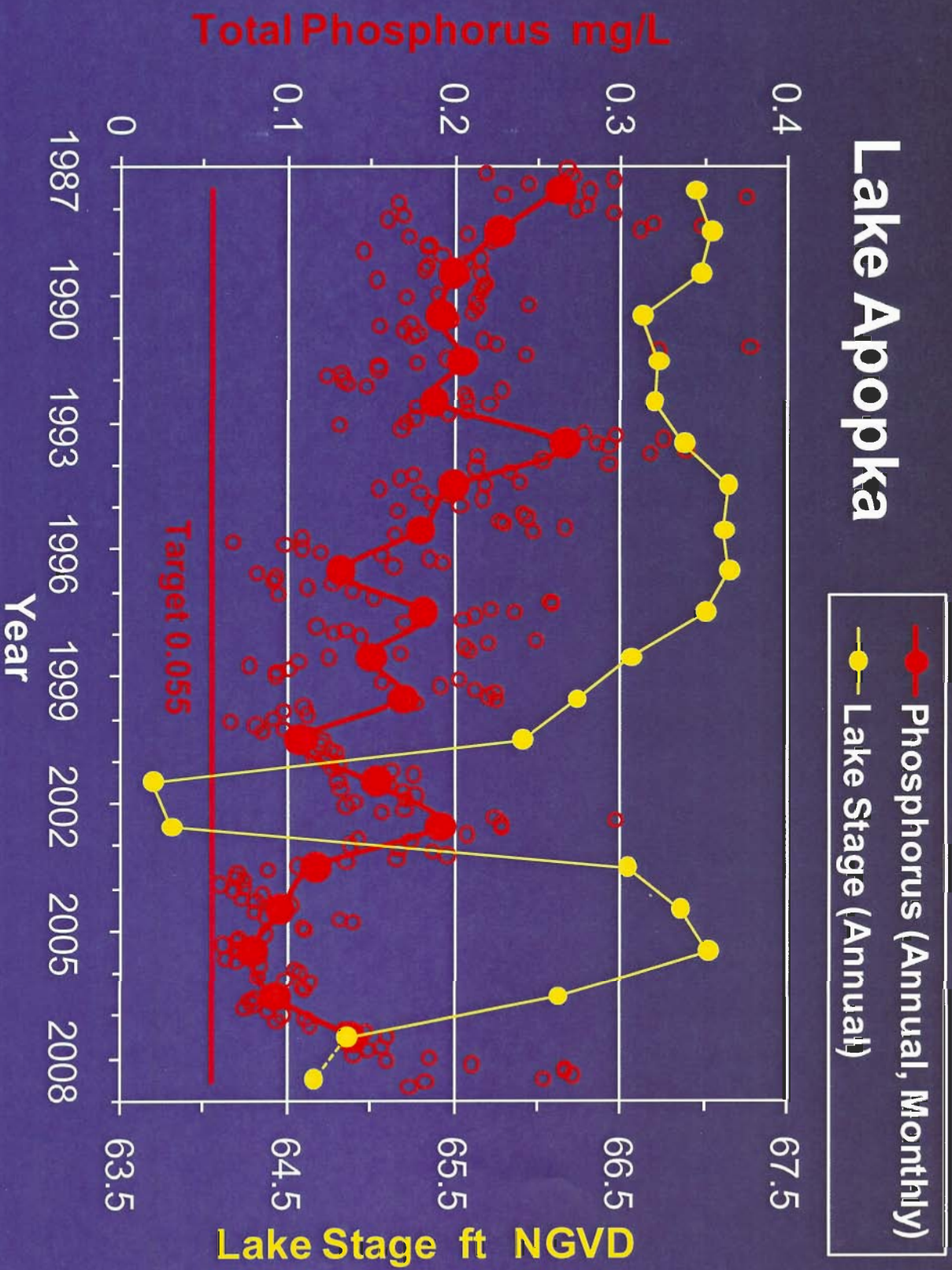
**Lake Griffin and Lake Apopka**

**Jeff Elledge - SJRWMD**

**December 2008**

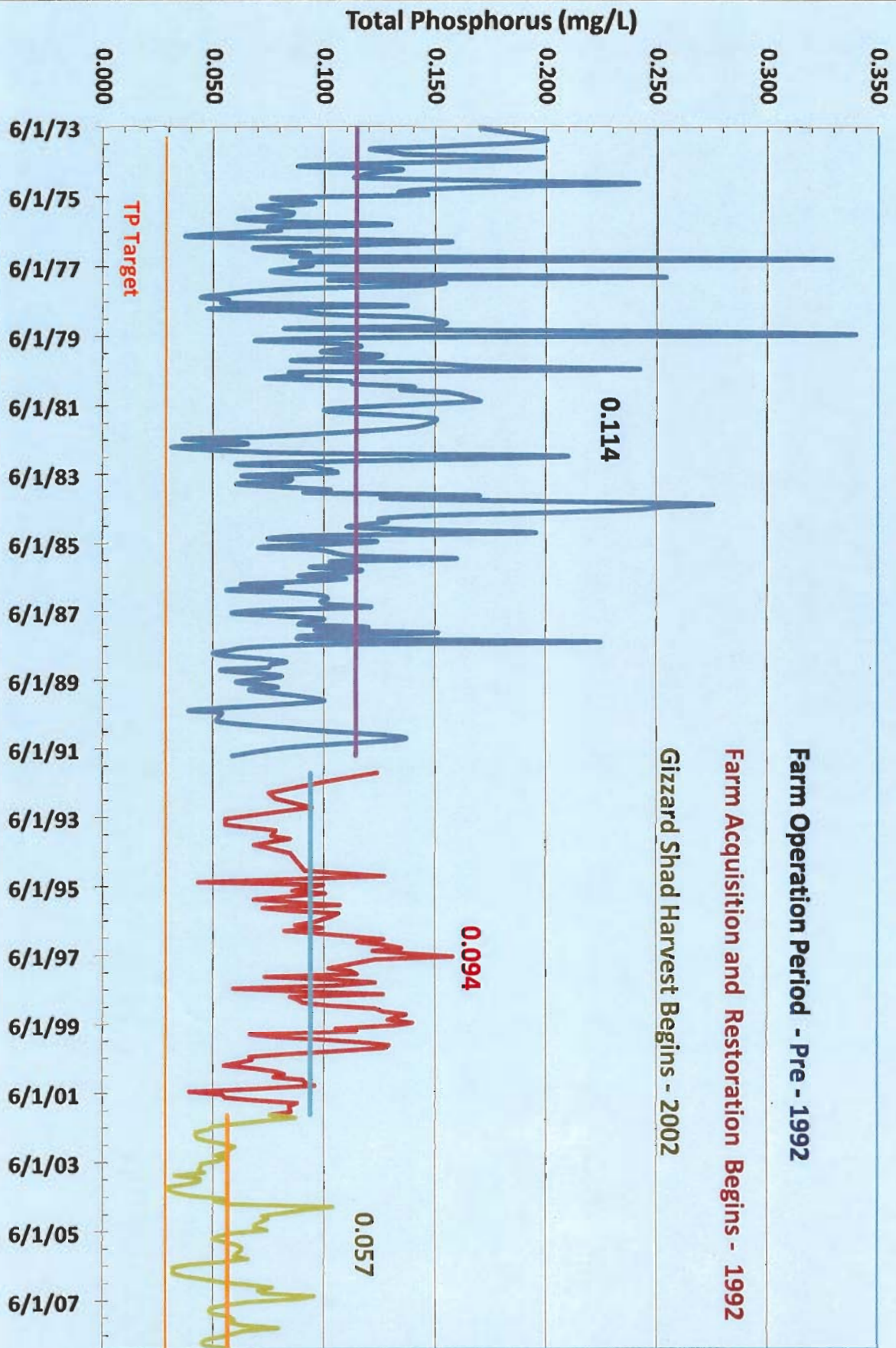
# Total Phosphorus

## Lake Apopka





# Lake Griffin Total Phosphorus Mean Monthly and Period Averages



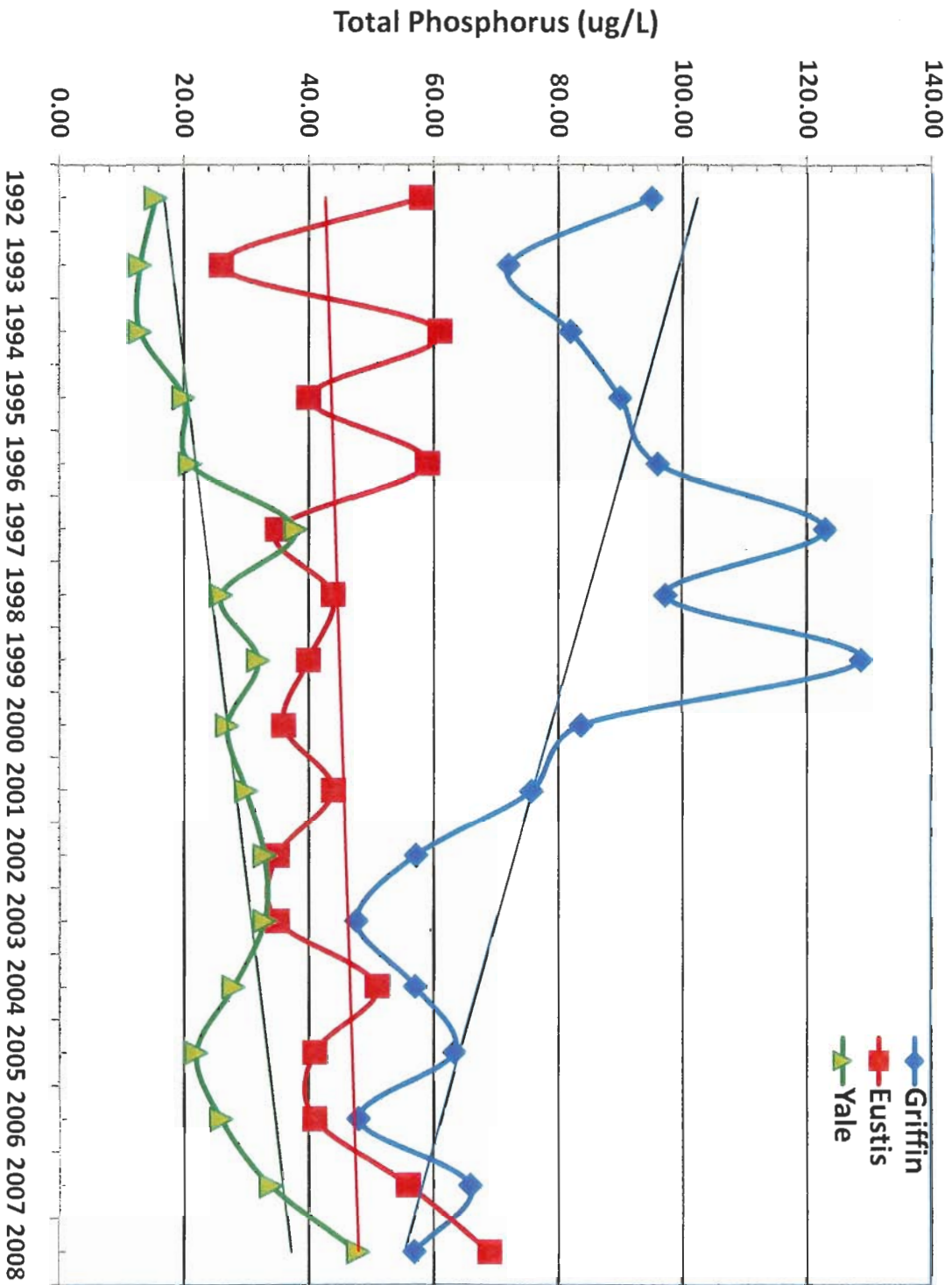
**Attachment 2**

**Water Quality Graphs for  
Lakes Griffin, Eustis, Yale,  
Beauclair, Dora, and Harris**

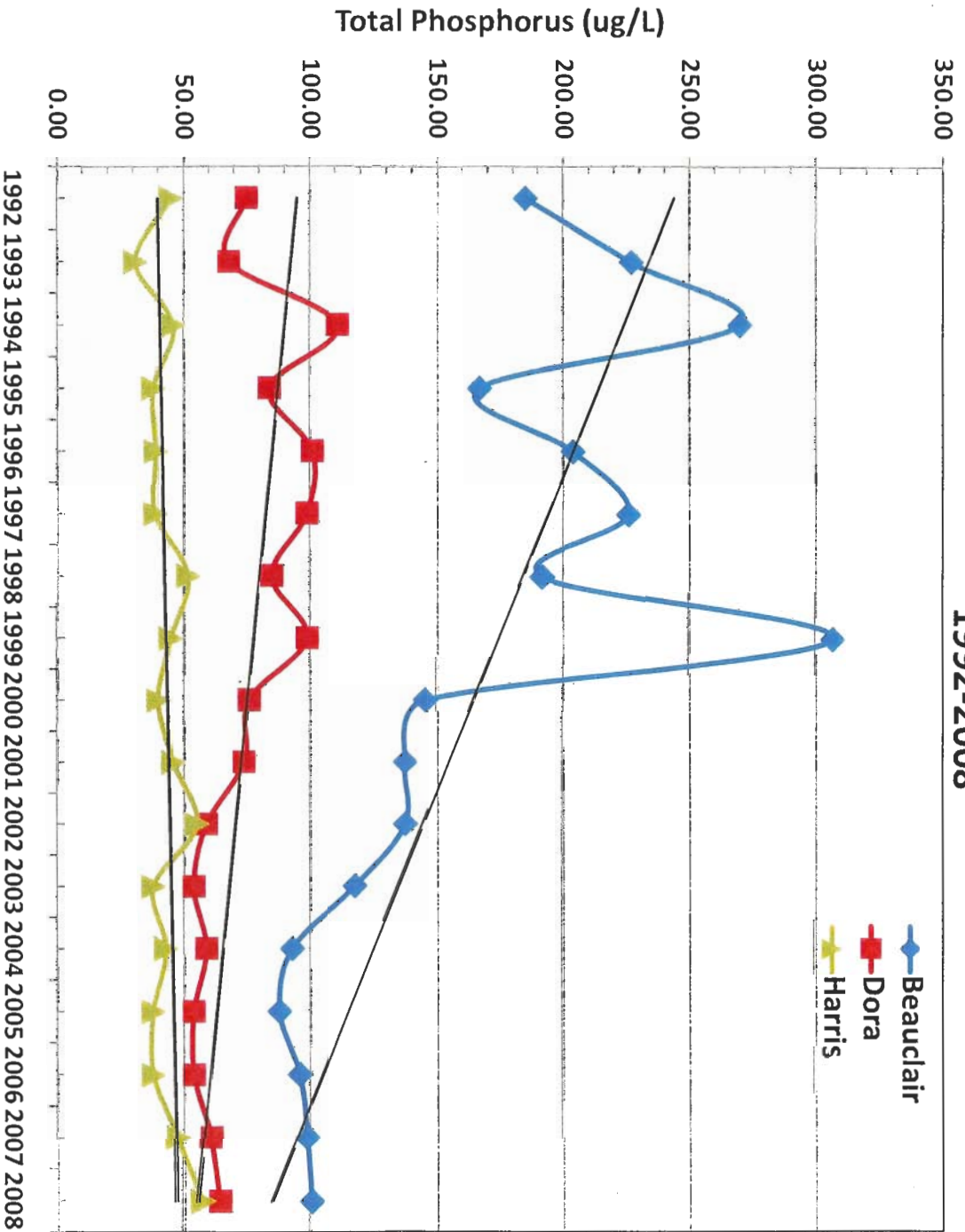
**Walt Godwin – SJRWMD**

**December 2008**

# Annual Average Total Phosphorus Lakes Griffin, Eustis and Yale 1992-2008



# Annual Average Total Phosphorus Lakes Beauclair, Dora and Harris 1992-2008

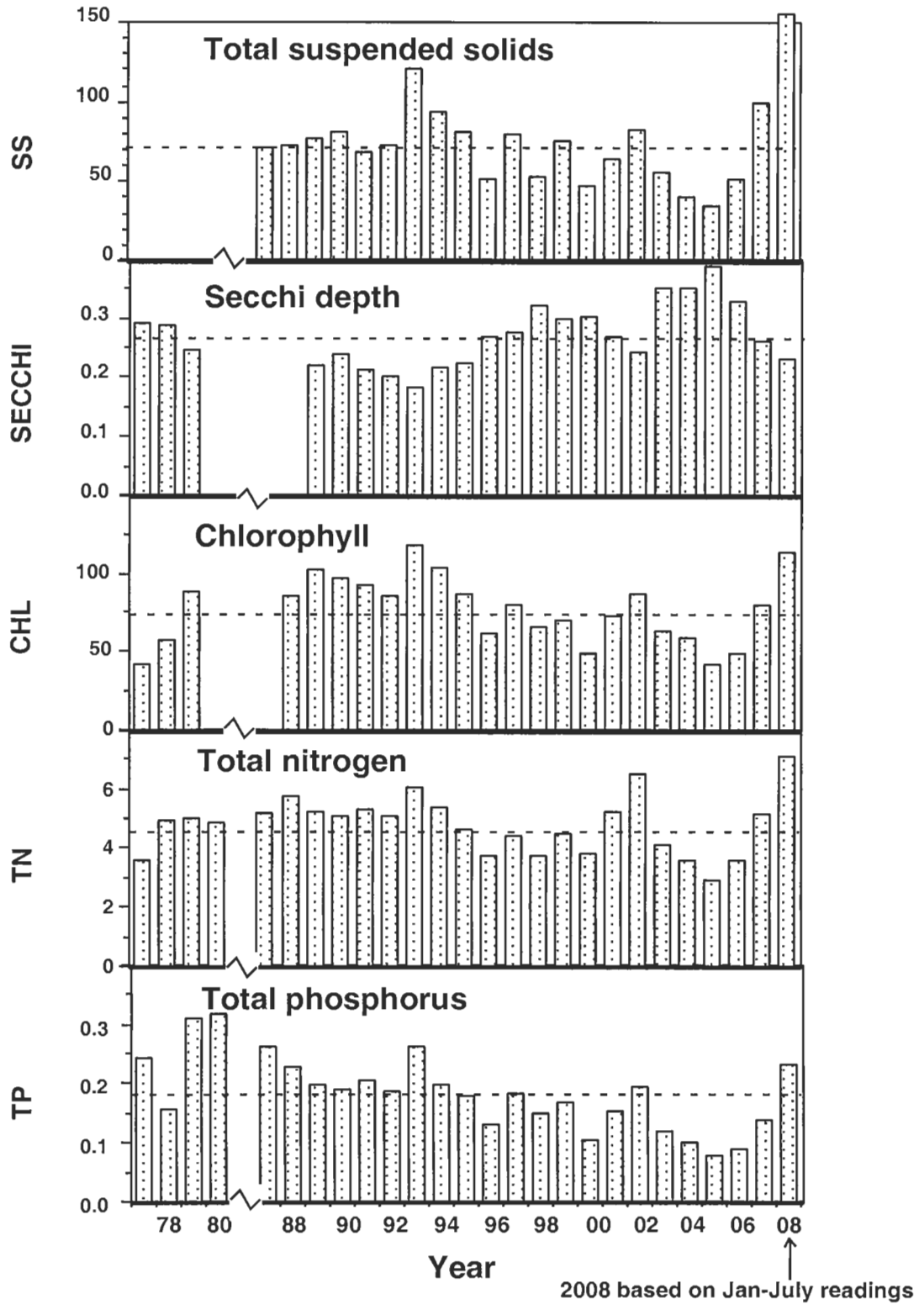


**Attachment 3**  
**Water Quality Graphs for**  
**Lake Apopka**

**Dr. Daniel Canfield – UF / IFAS**

**December 2008**

# Lake Apopka annual averages



**Attachment 4**

**Black Crappie Reward Poster**

**Bill Johnson - FWCC**

**December 2008**

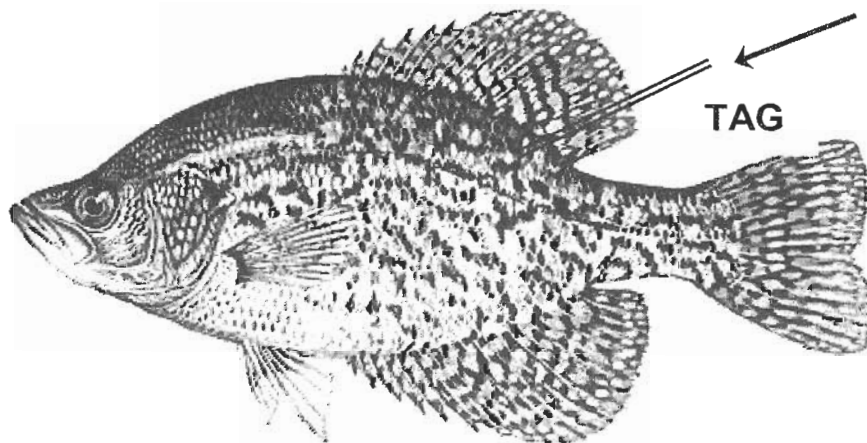


# REWARD



**\$5.00 or \$200.00**

Florida Fish and Wildlife Conservation Commission fishery biologists have tagged black crappie in Lake Griffin. The tags are yellow and are printed with a telephone number, tag number, and tag reward value. Tags will be located in the body of the fish below the dorsal fin. Some crappie may have multiple reward tags.



**If you catch a tagged crappie, remove the tag(s) and phone:**

**352-357-2951**

To receive a pre-determined reward of either \$5 or \$200, you must remove the tag from the fish and mail the tag and all the following information to the address listed below. Thank you for supporting our study.

**Please provide the following information with each tag:**

- 1. Your name, address, phone number and SSN (needed for payment).**
- 2. Tag number; and note if fish was kept or returned**
- 3. Date caught and lake name**
- 4. Your signature**

**Please mail (or drop off) tag and information to:**

**Florida Fish and Wildlife Conservation Commission  
601 W. Woodward Avenue  
Eustis, Florida 32726**



**Attachment 5**

**Lake Beauclair Potential Dredging Graphics**

**Presented by**

**Charles Clark**

**December 2008**



# Lake Beauclair

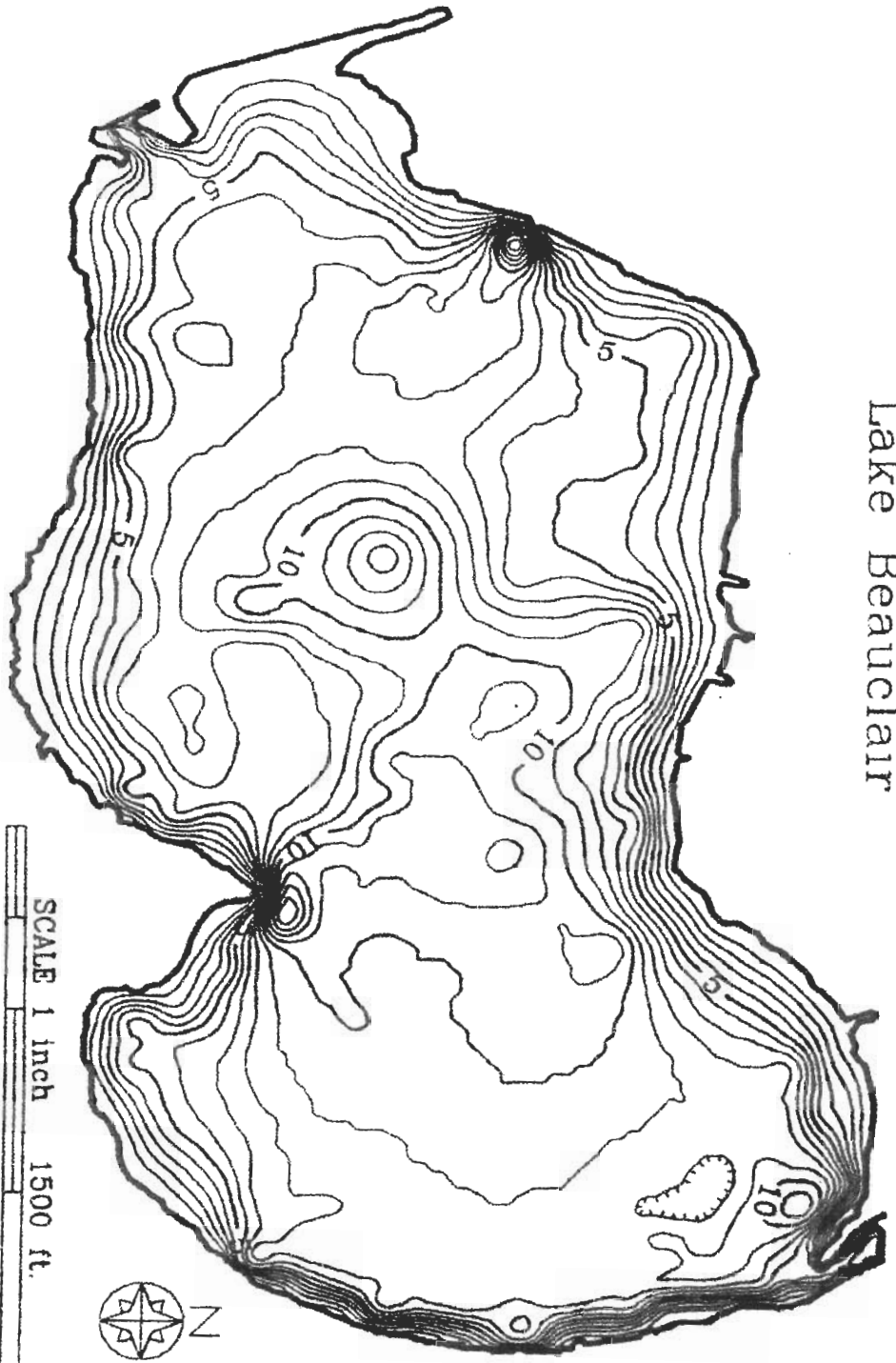


Fig. 25:

BATHYMETRIC CONTOUR PLOT OF LAKE BEAUCLAIR (CONTOURS ARE IN FEET)

Source: ECT, 1991.

Environmental Consulting & Technology, Inc

# ECT

# Lake Beauclair

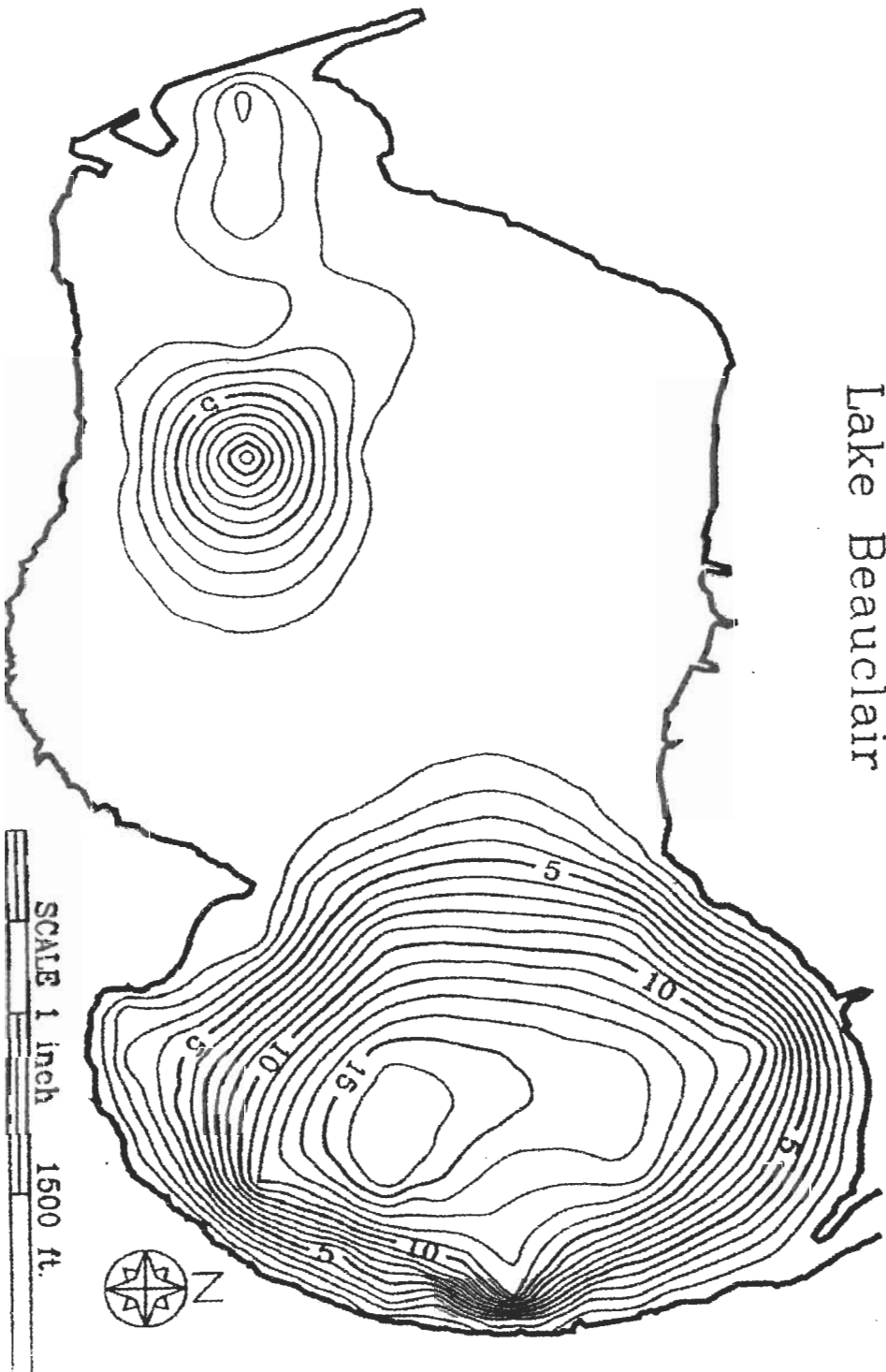


Fig. 26

SEDIMENT THICKNESS CONTOURS FOR LAKE BEAUCLAIR (CONTOURS ARE IN FEET)

Source: ECT, 1991.