

INTERIM LAKE APOPKA REPORT  
August, 1974

The question frequently arises: "Why try to clean up and restore Lake Apopka?"

The answers are many:

1. Lake Apopka is a 30,600 acre body of water and as such, it is a valuable natural resource for the people of Central Florida for fishing, boating, and other recreational activities. It's water is used for agricultural purposes - muck farming, foliage industry, and citrus production. It is also a source of water for future growth and use, residential, agricultural, industrial, etc.
2. As the head waters of a large and vast chain of lakes and rivers, its deteriorated condition is easily transmitted to these other bodies of water. The Oklawaha Valley is Florida's greatest inland recreational area and is still relatively undeveloped as to its potential. Its protection should be a major concern of all Floridans.
3. Clean air and water are our greatest natural assets in attracting people-tourists, residents, and businesses to Central Florida.
4. Lake Apopka is Florida's second largest lake. It still can be saved. It doesn't make economical sense to destroy such a large natural resource. With our growing population and development it is only sensible to preserve such a large and beautiful natural resource.

History of Lake Apopka

1. Lake Apopka is located in the northwest part of Orange County and extends into Lake County. It is approximately 30,600 acres today and relatively shallow except for two depressions. Lake Apopka is 100,000 years old and once covered many more acres. However, through flood control structures the vast muck farms on the northeast shore at Zellwood were developed and today are a major source of agricultural production in Orange County.
2. In 1922, the first major pollutants (sewage effluents) were bumed into the Lake. The lake still had clear and clean water (with a healthy growth of pond weed and mats of water hyacinths) which supported a flourishing game and commercial fishing industry through 1946. By 1948 citrus concentrate, waste water and other citrus wastes were also dumped into Lake Apopka in damaging amounts. The first pilings and earthen dams were constructed in the Apopka-Beauclair Canal for flood control. In 1950 the Corps of Engineers and Southwest Florida Water Management District deepened the canal and built a new lock and spillway thus providing for strict water level control.
3. In 1947 a major hurrican passed over the area loosening and uprooting much of the submerged aquatic vegetation which subsequently decayed releasing vast amounts of nutrients. These nutrients caused the first green algae "bloom" on record in Lake Apopka. Water hyacinths then grew in even greater volume fed through the rich nutrients. In 1952 the Florida Game and Fresh Water Fish Commission and the Corps of Army Engineers



sprayed hyacinths to improve navigation in the Lakes and canals. This spray operation began the "vicious cycle" of lake destruction and as the dead hyacinths settled on the lake bottom they released the stored nutrients thus creating a new cycle of algae "bloom".

4. By 1962 fish kills were commonplace. Heavy use of pesticides by the muck farming operations added to the lakes problems as the water to irrigate the muck farms is drawn from the lake. Then the water is released into the lake after absorbing pesticides, fertilizers, and other nutrients. In 1965 commercial catfish harvesting ended because DDT concentration in fish exceeded allowable limits. Today Lake Apopka and its chain receive the following discharges:
  - a. 261 million gallons of agricultural drainage from 43 pumping stations.
  - b. 3.5 million gallons of domestic waste water from 17 sewage treatment plants.
  - c. 22.7 million gallons of water from six citrus processing plants.
  - d. Dirty surface drainage from land developing areas which are now becoming a major source of pollutants.
  - e. Waste from spraying of water hyacinths
  - f. Nutrients from muck farms and gardens.

#### Solutions

1. Put a stop to the release of pollutants into the lake by strict pollution control laws and supervision. This procedure has begun, but has many years before results will show. The muck farmers have created their own research program to solve their water problems in relation to Lake Apopka.
2. Set these goals for water quality:
  - a. Six percent dissolved oxygen - nominally.
  - b. Clarity of 30 jackson turbidity units.
  - c. Total nutrients.
    1. Nitrogen - 0.60 mg. per liter
    2. Phosphates - 0.05 mg. per liter
  - d. Experiment and test various proposals for cleaning up the water such as:
    1. Chemical treatment
    2. Partial drawdown-already tried with good "temporary" results - water clarity, game fish spawning, etc.
    3. Adding sand in areas to provide spawning grounds for game fish.
    4. Digging a deep channel to hopefully allow silt to slide into a storage area, thus removing the major hinderance to plant germination and fish spawning.
  5. A complete drawdown-this is the most controversial proposal with serious and valid reservations to be solved:
    - a. Citrus industry relies on the large surface water area for frost protection-a valid claim.
    - b. Cities downstream do not want large bodies of polluted water through their lakes and rivers with unknown results.

- e. There is a proposal to drawdown Lake Carlton - a small 382 Lake downstream from Lake Apopka. This would present a very useful and accurate laboratory for testing the results of a drawdown. It is very similar to Lake Apopka in water quality, lake bottom, shore development, etc. and this project should be encouraged.
- f. Another proposal is for the state to purchase the Gourd Neck Springs in Lake County on the southwest corner. The springs are a source of fresh clean water for Lake Apopka. (It would require large scale dredging to clean out the area before it would be useful. A private individual has acquired options of title to much of the land surrounding Gourd Neck. He wishes to sell it to the State of Florida under the endangered lands bond money program for a park. However, the State Interagency Planning Committee turned down the purchase unless and until an overall plan to restore Lake Apopka is implemented.)

#### Recommendations

- 1. It is our recommendation that the restoration of Lake Apopka be encouraged and supported through the following:
  - a. Encourage the restoration of the entire Oklawaha chain of lakes and rivers as a huge state recreation area. This might be through the existing Oklawaha River Basin Restoration Council.
  - b. Encourage the cleaning up of all lakes in the chain with an educational program on the importance of starting with Lake Apopka as the headwater and working downstream as natural processes might cleanse the lakes.
  - c. Acquire the "Gourd Neck Springs area" as a regional park.
  - d. Point out that those who benefit from the flood control structures should make some sacrifice in relations to the benefits received to help restore the lakes.
  - e. Encourage the possible creation of an Oklawaha tax district to obtain funds for cleansing, recreational facilities, maintenance, promotion, etc.
  - f. Hold public hearings on the above ideas with feedback to develop solutions to the problems.
  - g. We would circulate this report to solicit support from the following groups:
    - 1. Area Chamber of Commerce
    - 2. Environmental agencies and organizations.
    - 3. City and county governments
    - 4. Special interest groups - Zellwood Drainage District, Environmental groups, etc.



We propose these questions to the above groups.

- a. Do you think Lake Apopka should be restored to a good game fishing Lake? YES \_\_\_\_\_ NO \_\_\_\_\_.
- b. Do you think the proposed drawdown method is the best way? YES \_\_\_\_\_ NO \_\_\_\_\_.  
If the answer is no, what method should be used? \_\_\_\_\_
- c. Would you be in favor of a special tax to restore Lake Apopka? YES \_\_\_\_\_ NO \_\_\_\_\_. And the entire Oklawaha chain of lakes? YES \_\_\_\_\_ NO \_\_\_\_\_.
- d. Do you think the Oklawaha Restoration Council should be the agency to enact this type of restoration project? YES \_\_\_\_\_ NO \_\_\_\_\_.
- e. In what county do you reside? \_\_\_\_\_
- f. In what county do you work? \_\_\_\_\_
- g. Your occupation (check one)  
Agriculture \_\_\_\_\_  
Business \_\_\_\_\_  
Professional \_\_\_\_\_  
Elected Official \_\_\_\_\_  
Student \_\_\_\_\_  
Other \_\_\_\_\_
- h. Other Comments \_\_\_\_\_

History of Lake Apopka - reference material obtained from article entitled "Lake Apopka" by Joe Crumpton in the March, 1974 issue of Florida Wildlife.

Respectfully submitted:

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