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# Winter Park, Rollins work to save lakes

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OF THE SENTINEL STAFF

WINTER PARK — The city is studded with lakes and many of them, experts say, are in the latter stages of life. The challenge is to save the aquatic life that is imperiled by burgeoning development.

Since the early 1960s, the biology department of Rollins College has been studying the conditions of area lakes. Those studies mostly have concentrated on cause and effect, but now under a year-old contract with Winter Park, researchers are trying to find solutions.

Rollins biologists David Richard and James Small said lakes are like fingerprints: Each is different.

The questions involving the survival of the lakes are the same, however: What best controls weeds in the lakes while still allowing the growth of foliage to support aquatic life? How do you prevent and control the influx of pollutants? How do you get rid of pollutants in the lakes without draining them and starting anew?

From 1979 to 1983 Richard and Small — who have backgrounds in aquatic biology and fisheries biology — studied Clear Lake, Lake Mann and Little Lake Fairview in Orange County and Lake Orienta in Seminole County with a grant from the state Department of Natural Resources.

Part of the study involved examining the effect grass carp had on lakes that had been specially stocked with various amounts of the fish that eat water weeds. They also studied a new herbicide called Fluoridone, or SONAR, to control the growth of hydrilla.

"We found it one of the most positive herbicides because of the effect of clearing weeds," said Small.

"It does not appear to have impact on living organisms in any kind of toxic or inhibitory way," said Richard. "It allows for options in lake management."

Hydrilla is a problem in most lakes because its growth has been accelerated by pollutants flowing into lakes.

Hydrilla clogs lakes so they cannot be used for recreation and it inhibits other plant growth. However, residents sometimes think hydrilla is good for the lake because it makes the water clear, the scientists said.

Concern about Winter Park's lakes has been building for some time, and about 16 months ago the city hired the Rollins biology department to do an intensive study of lakes Osceola, Virginia, Mizell and Maitland for \$30,000 annually.

City Manager David Harden said the Rollins biologists were the natural choice for the study.

"They've been studying the lakes for the city and other state agencies for a long time, and I think their background and the familiarity they have is invaluable. Also, Rollins has a proprietary interest because it occupies such a large part of the Lake Virginia shoreline."

Money for the study is coming from Winter Park's Save Our Lakes program, for which the city has allo-

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cated \$700,000 during the past three fiscal years. Most of the money is being set aside for later efforts to preserve the lakes.

This study is different from others done by Rollins, Harden said. Previous studies were mainly for research and no attempt was made to develop recommendations or to monitor the effect of the city's lakes control program.

Yet the prospect that the city could end up with only a research paper from the biologists caused some city commission members to balk at extending the program for a second year for another \$30,000. Commissioners did agree to extend the program after they were reminded that the city could end the contract any time after giving Rollins fair notice.

"The conflict between pure and applied research is something you see all the time. I think it's particularly hard for the city commission to fund pure research because the need is to see a problem solved," Harden said.

As a result, Small and Richard have been told the city is expecting to receive recommendations it can consider implementing in the chain of lakes when they submit their report in January.

The biologists said it is important for more than one year's data to be collected if the study is to give the most accurate information.

The Rollins study looks at water chemistry through monthly and bi-monthly samplings of the four lakes, plant and animal life, and fish are stunned, weighed and measured before being returned to the lakes.

During the study of the Winter Park lakes, the biologists said they have had a few surprises. For example, they found a large grass carp in Lake Maitland. No carp are supposed to be there. They also were alarmed to find an exotic variety of fish known as Tilapia in Lake Maitland.

"Tilapia is an aggressive and invading fish. It tends to move native fish out as it comes in. The grass carp I wouldn't be too concerned about. There aren't enough out there to control the vegetation. I'm much more concerned about Tilapia. It has the potential to be quite a pest. The only way to get rid of them is to completely kill the fish and restock the lakes," Small said.

Of the four lakes, Mizell is probably in the worst shape, the biologists said, because in relation to its size it has the most storm drains emptying into it and it is more land-locked than the others.

"Many people overlook the many underground linkages between lakes and even places far from lakes help pollute them because of the storm



DENNIS WALL/SENTINEL

Richard takes water sample  
... with Small on Lake Virginia

drainage system," Richard said.

"Leaves and debris appears to be a major, if not the major problem, in the Winter Park lakes," Small said. "There's also the problem of hydrilla and also very thick sediment on the lake bottoms."

The sediment is made up of leaves and other debris washed into the lake by rain-water runoff. The city has tried to combat that problem. In 1978 the city built a large pollution trap

near Lake Osceola. About 20-feet long by 10-feet wide and 10-feet deep, the pit traps leaves and debris that have washed into the storm drains before they can enter the lake. Harden said the trap has worked so well the city is considering building similar but smaller ones around other lakes.

He said he is excited that the study's preliminary indications show that hydrilla has been reduced in lakes where the city experimented with SONAR for 18 months. More information like that is what the city expects from the Rollins study, Harden said.

Small and Richard said the second year's study will help in analyzing the first year's findings.

"Are the changes we saw one-shot or are they normal at that particular time of the year? Every year of our data is quite distinct because there are different things going on which contribute to the findings," Small said.

Harden said the lakes, around which much of the city's most valuable real estate lies, are a valuable asset that the city wants preserved. The question is how much it will spend and how far it wants to go in its effort.

Although the lakes are dying, Richard said, there is still room for some optimism.

Death "will happen anyway but our concern is to attempt to slow down the process ... and secondly, to think about undoing some of the accumulated problems," he said.