

Water Pollution, Weed

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Control Costly

Recreation Chief, Manager Report

By **BRUCE DUDLEY**
Staff Writer

(Editor's Note: This is the first article in a two-part series on the control of water weeds in Winter Park and the prevention of pollution.)

Muck and the overload of nutrients that have been killing Lake Apopka and other Central Florida lakes for centuries have been kept under control in the Winter Park area with the use of a mechanical harvester and herbicides.

WINTER PARK hasn't completely solved its weed problem, but it has managed to keep its lakes free from pollution.

Parks and recreational Director Jay Blanchard and City Manager Richard Simmons both report the city still has trouble with the numerous water weeds that cause trouble, but Winter Park is advanced enough in its study of water pollution and weed control that officials from several Florida cities have visited the city to see the mechanical harvester and study the herbicides being used.

The city of Winter Park has 14 lakes within the city in part or wholly, and there are five major lakes with over 20 miles of shoreline. The major lakes are Virginia, Osceola, Maitland, Mizell and part of Killarney.

SIMMONS AND Blanchard both feel that other areas could eliminate portions of the pollution problem by using the same methods employed in Winter Park, but the remedies aren't cheap.

"There are four different water weeds that are our primary concern and concern is the correct word for Winter Park will continue to spend considerable time and money to control these weeds," Blanchard said.

"For several years we have been working with the USDA on this problem," Blanchard said.

Dr. Robert Blackburn of Crops Research Division, Agriculture Research Service, USDA, a research agronomist, has set up several plots in Lake Virginia, using different herbicides for weed control.

FROM THESE plots the city was able to determine what herbicide would be the most useful, and was also able to determine what herbicides would best be used in conjunction with mechanical control, Blanchard said.

"When applying any of the herbicides, we contact the abutting homeowners and those on each side of a given area that we are going to treat," Blanchard said.

"We inform them of the herbicide we are using and the length of time for them to refrain from using the water for irrigation, fishing and swimming. We also place signs in the lake at these points."

BLANCHARD reports that herbicidal control is not an inexpensive process. It works on parts per million parts of water and in deep water to maintain the necessary concentration to kill certain types of weeds the requirement is three parts per million of the herbicide to one million parts of water.

In deep water such as 15 feet, large amounts of herbicide are necessary to kill the weeds.

"In Lake Virginia alone to treat the entire lake 35 feet from shore would require 15,850 pounds of herbicide," Blanchard said.

"**AT RETAIL** prices this

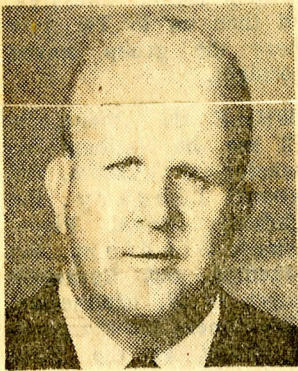
would cost \$5,547. To completely eradicate the weed would cost many times that for the area left in deep water would require a much heavier concentration," the parks and recreational director said.

The other part of the weed control program in Winter Park consists of a \$22,000 aquatic weed harvester, which was purchased from the Aquatic Controls Corporation of Hartland, Wis., in 1963.

The harvester consists of two units — an amphibious, self-propelled harvester and an amphibious barge. The harvester and barge work together requiring one operator each.

AQUATIC WEEDS from 12 inches to about four feet in depth are cut by the harvester. Blanchard said shallower cutting isn't possible because of the position of the cutting mechanism and chains at the bottom of the cutter blade.

Blanchard said that liter-



Jay Blanchard

ature describes the harvester as cutting one acre or seven tons per hour, but the city has not been able to obtain this amount due to its method of operation.

"The lakes in Winter Park are surrounded with homes leaving very few places to unload the aquatic weeds," the parks director said. "This makes it necessary that the barge travel long distances to the dumping areas, and this sometimes leaves the harvester full and idle until the barge returns for another load."

THE HARVESTING of aquatic weeds near the shoreline is a slow and tedious operation because the harvester has to maneuver in and out looking for water pipes and submerged piers, Blanchard said.

Daily operational and cost records on the harvester and barge show that the city can harvest an average of 1.3 acres per day removing eight tons of aquatic weed growth at a cost of \$350.56 per acre.

Labor costs for operating the equipment is \$25.23 per

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operating day. The cost of repairs, gas and oil is \$8.95 per day, with the depreciation at \$6 a day. This gives a total cost of \$40.18 per operating day for both units.

AT PRESENT the harvester is only working 65 per cent of the time due to mechanical breakdown, travel time, servicing time and equipment moving time, according to Blanchard.

"Most of the difficulties have occurred from hydraulic breaks in the lines and from seals breaking on the barge outboard motor due to fishing lines entwining around the prop," Blanchard said.

When the barge is out of operation it automatically takes the harvester out. However, when the harvester is out the city can still use the barge to clean the shore lines of any cuttings that have floated in.

"The harvester loses very few of the cut weeds, but motor boat props cut

and chop loose quite an amount," the parks director said.

Lakes