

## LAKE LEVEL - DOUGLAS LAKE

From May 28 to July 6, the lake has dropped 9 inches (39 days). This is an average of  $1/4$  inch per day for a period of practically No Rain.

Normally, the lake drops  $1/8$  inch per day during seasons of average rainfall.

On July 6, the Maple River was flowing a maximum depth of 6" at lake outlet. Estimated loss of water per day is 16,200 cubic ft. This would be equal to a swimming pool 10 ft. deep and 40 ft. square. Actually, a very small amount of water compared to the total lake.

By far, the greatest loss of water from the lake is evaporation and underground seepage. The rate of this loss can only be retarded by rainfall and cloudy days.

A dam at the outlet would retard the loss of water - possibly one or two weeks in a season. Previous investigation by the George Snyder Company of Jackson, Michigan in 1969 concluded that disadvantages of a dam at the outlet of Douglas Lake would be greater than advantages that might be gained. The major disadvantage would be retardation of spring run-off which would increase flooding of low lands - property damage and erosion of shore line.

The level of Douglas Lake is directly related to the level of the Great Lakes according to a U. of M. study. The Great Lakes are nearly 2 ft. lower this year than they were last year.

Why is Douglas Lake different from other lakes that have successful level control?

- 1st - Douglas is at the top of the hill in the chain of lakes and streams draining into the Great Lakes. Douglas is 100 ft. higher than Burt Lake - only a few miles apart.
- 2nd - Douglas' supply basin is only  $1/3$  the area needed for adequate rainfall collection to maintain a fixed level.
- 3rd - Douglas has a sand and gravel bottom - not rock or clay - seepage is greater because of this.

Everything considered, it appears only practical to accept the natural fluctuation of the level of Douglas Lake as has occurred over the years. This is the condition which is believed to be the most beneficial to the ecology of the lake and the least provocative to the property owners around the lake.

In other words - Learn to Live With It.

DOUGLAS LAKE IMPROVEMENT ASSOCIATION  
July 8, 1977