

LAKE POLLUTION CONTROL

Mr. CLAPPER. Mr. Chairman, I think my first appearance before this committee was about 10 years ago, and certainly we have been pleased at the increased interest that has developed since that time. We think your committee and the subcommittee headed by Mr. Jones in Government operations have done outstanding jobs in alerting the public to this.

I would like to limit my comments to the control of eutrophication, the lake problem.

We would like to comment specifically on the provisions in both H.R. 15907 and S. 2760, which would authorize the development and demonstration of new or improved methods for the prevention, removal, and control of natural or manmade pollution in lakes, including the undesirable effects of nutrients and vegetation.

Lakes, both natural and manmade, are among man's most valuable natural resources. From the utilitarian point of view, they provide sources of water supply for municipal, industrial, agricultural, and navigational purposes. From the recreational point of view, they offer magnificent opportunities for fishing, hunting, and a host of water-related sports such as swimming, water-skiing, boating, and skating. The mere existence of a lake lends beauty and attraction to a landscape.

The committee may be interested in a few statistics. The Bureau of Sport Fisheries and Wildlife, Department of the Interior, completed an economic survey of the sports of hunting and fishing for 1965. The survey revealed that 28,348,000 sport fishermen spent nearly \$3 billion that year in pursuing their activities. They enjoyed 522,759,000 fishing recreation days, of which 426,922,000 were spent on fresh water. Undoubtedly, a major part of the fresh water fishing is done on lakes and ponds. And these statistics do not include the many other recreational uses of lakes.

Limnology, or the study of fresh waters, especially ponds and lakes, is not a new science. Prof. F. A. Forel, of the University of Lausanne, Switzerland, is regarded as the founder of modern limnology. He established the study in the 1860's. However, much of the present information on the ecology of lakes is relatively new, having been developed since World War II. There is much that scientists still do not know, particularly about pollution and eutrophication.

Eutrophication, or aging of water, is regarded by many scientists as one of the foremost natural resource problems of our time—certainly with respect to water pollution. Eutrophication most often results from man-produced nutrients which enter the lake or pond and eventually become part of the plant and animal growth cycles. The control of excessive production through pollutants is of major importance and concern to those who use the water for recreation.

Once biological nuisances develop, the controls are costly and time-consuming. Often the controls are temporary. Overproduction will remain a continuing problem unless the basic causes can be reduced or eliminated. And this is a point worth stressing: biologists of the Federal Water Pollution Control Administration say that the problem of altering basic causes has not been fully solved at the present time. This fact highlights the need for comprehensive pilot programs