

Deep Creek Lake Water Quality Assessment

The health of Deep Creek Lake (the Lake) is vital to the economic development of the County. A water quality assessment study currently being performed by ERM for the Garrett County Department of Planning and Zoning is concluding that the Lake will remain healthy for some time to come regardless of the assumed development scenarios. The study, however, neglects many factors that can possibly have a significant bearing on their assumptions, and hence conclusions. It's in the interest of the County to establish a comprehensive management strategy to assess the eutrophication¹ of the lake. This note proposes an approach.

The components of this strategy are research, monitoring, modeling, and remedial programs. The key component is the development and validation of a detailed water quality model of Deep Creek Lake. Results from model calculations provides the basis for remedial action programs, if any are required. The purpose of modeling is to develop tools that aid in the prediction of lake eutrophication, and the evaluation of alternative management options. Monitoring and targeted research provides valuable information to support the modeling effort.

A program should be composed of the following elements:

1. The development of a comprehensive computer model for predicting trophic status of the Lake.
2. A comprehensive monitoring program to determine lymnological² properties.
3. Research in areas to support modeling that are specific to the Lake.
4. Periodic assessments with the model to recommend remedial actions if required.

Funding for this program could come from a combination of Federal, State, County, and Lake area property owners.

Program definition is by a task force or steering committee whose members are drawn from the government and private sectors.

Program management would be by Garrett College.

Labor is from Garrett College staff and students, County and DNR personnel, and private citizens.

To go forward with this approach requires the following actions:

1. Establish and staff a program office at Garrett College

¹ Eutrophication is the process by which lakes and ponds become enriched with dissolved nutrients from natural and man-made processes, resulting in increased growth of algae and other microscopic plants that can eventually cause the elimination of aerobic organisms such as fish.

² Limnology is the study of lakes, ponds, and streams, and involves the understanding of physical, chemical, hydrological, and biological aspects as they pertain to water quality.

2. Elect the steering committee. It's visualized that its members are volunteers.
3. Define in detail the initial program elements
4. Obtaining funding
5. Execute the program
6. Periodic reviews by the Steering Committee

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