



Lake Management Planning: Not Another Study!

By Tony Groves, Pam Tynning, and Paul Hausler
Water Resources Group, Progressive AE

In lake management, there is often a desire to forge ahead to tackle a problem rather than taking the time (and expense) to fully evaluate options. After all, who wants to spend time and money for a study when “all we have to do is treat the weeds?” This article discusses the need for fact-based decision-making in lake management.

Each lake is different and what works on one lake may not be appropriate or effective in another lake.

It is important to recognize that there is no panacea or “one-size-fits-all” in lake management. Each lake is different and what works on one lake may not be appropriate or effective in another lake. For example, in a high-quality lake with few aquatic plants and good water clarity, reducing nutrient inputs to the lake may be the most effective way to preserve water quality. However, in a lake that naturally supports abundant aquatic plants, reducing nutrient inputs may not have much of an impact. That is not to say nutrient reduction is not important, but one must know how a lake may respond to management measures before

embarking on a management plan. This allows for a more efficient use of time and often limited financial resources.

Ideally, a lake management plan should address both short-term improvements (e.g., aquatic plant control) and, to the extent practical, long-term pollution abatement issues (i.e., watershed management). However, in the context of this article, a lake management plan can encompass anything from a plan to control an invasive aquatic plant to watershed management.

While Michigan has a variety of laws that regulate activities in and around lakes, there is no governmental agency responsible for developing lake-specific management plans. In fact, it is often riparian property owners who take the initiative to get organized and make something happen. If there is no local initiative, it probably won't get done! Regardless of the scope of a lake management plan, the steps outlined below will probably apply.

While Michigan has a variety of laws that regulate activities in and around lakes, there is no governmental agency responsible for developing lake-specific management plans.

Get Organized: The first order of business is for people to get together and decide they want to do something. Many lake management plans begin with a lake association or a group of property owners who share common concerns and a desire to make something happen.

Get Help: Seek out and get input from someone with expertise in lake issues. This could be a university professor, a county or state agency or a lake management consultant. The role of the consultant is to provide professional and unbiased advice regarding lakes and lake management. The consultant will often begin with a study to evaluate the characteristics of the lake and watershed, and the feasibility and costs of management alternatives. The study is important because it becomes the basis for decision-making and development of a lake management plan. A lake consultant

The study is important because it becomes the basis for decision-making and development of a lake management plan.

should have a fundamental understanding of limnology (the study of the physical, chemical and biological characteristics of lakes), land use issues, environmental regulations, lake and watershed management techniques, contracting, public relations and, last but not least, municipal financing. On some projects, engineering and legal expertise may be needed as well.

A consultant is different from a contractor you may hire to perform a specific service on a lake, such as herbicide treatments, mechanical harvesting, lake dredging, etc. A consultant will look at a number



of alternatives, evaluate the pros and cons of each, and make a recommendation accordingly. To be truly objective, the consultant should be independent from the contractor and contract work. Beyond providing professional services, the consultant should have no financial interest in the project.

A lake management consultant can help with the following:

- **Fact Finding:** In devising a lake management plan, it is important to get the facts. An evaluation of the physical, chemical, and biological characteristics of the lake should be performed and an analysis of the watershed should be conducted to evaluate land uses, soils, and drainage features.
- **Data Analysis:** The consultant can identify valid and effective sampling and monitoring protocols, perform appropriate analyses, and interpret technical data.
- **Problem Identification:** It is important to identify specific problems that the lake management plan needs to address: Are invasive aquatic plants a problem? Is fertilizer runoff a problem? Are there too many boats on the lake? A management plan may address a variety of issues. A consultant can help identify management alternatives that will work and those that will not and perhaps temper unrealistic expectations.
- **Solutions and Costs:** Once problems have been identified, management strategies can be defined, and the benefits can then be weighed against the costs. The consult can define regulatory hurdles and financing alternatives, and help guide the decision-making process.

Build Consensus: Effective communication is often the key to success in lake management. These days, people appear to be busier than ever. Make sure you make the most of people's limited time. Attempt to communicate in a clear, concise and factual manner. By disseminating information regarding the proposed scope and cost of a management plan, people are in a much better position to make an informed decision on moving forward with a particular management plan.

Get Financing: Obtaining financing is often one of the biggest challenges in implementing a lake management plan. Evaluating funding sources and fundraising can be a time-consuming (and sometimes thankless) endeavor. In some cases, sufficient funds can be acquired by increasing association dues or through voluntary contributions. While there are some grant programs, competition is generally keen and grant requirements can be narrowly focused and cumbersome. (You can't expect them to just give you the money.) Many grants have an extended time period between the grant application and actual award of funds which, in turn, complicates planning. Many communities have opted to establish special

assessment districts to finance lake management plans. With this approach, all property owners who benefit from the project pay a fair share. With costs spread amongst benefitting property owners, individual costs can become much more reasonable. A special assessment district can enable projects to be tackled that would otherwise be financially out-of-reach.

Get Going: Implement the plan and take comfort in knowing you have taken action to protect one of your most valued assets – your lake.

Similar to land use planning, lake management planning is often an interactive process. Over time, adjustments may need to be made to address emerging issues, new technologies, and changing conditions. There is often an inclination to say “the last thing we need is another study!” However, as discussed herein, the study is important because it provides the foundation and basis for action. ●●●

Water Resources

Progressive AE's water resource specialists have helped communities across Michigan develop workable solutions to complex lake and watershed management problems.

Services:

- Aquatic vegetation surveys
- Dam safety inspections
- Geographic information system analyses
- Hydro-acoustic mapping
- Lake and watershed management plans
- Legal lake level studies and proceedings
- Limnological evaluations and diagnostic-feasibility studies
- Online information and outreach
- Project organization and financing assistance
- Water quality monitoring

progressive|ae
progressiveae.com/water-resources