

Lake Management Planning Guide

GET IT IN WRITING

There are a lot of components that go into creating a Lake Management Plan for your lake. To help and empower anyone responsible for making lake management decisions, such as homeowner associations, municipalities, and park and forest preserve districts, the Lake County Health Department – Ecological Services (LCHD-ES) has created a Lake Management Planning Guide full of useful information, worksheets and templates to get you started. This document gives you an overview of the 7 main steps that are needed when developing a lake management plan. This document will also reference various worksheets that are intended to be used to further develop your lake management plan. All worksheets and several references are included on the accompanying CD.

Remember that the lake management planning process is a way for stakeholders to come together with a common interest in improving and protecting their lake. Having a document with specific goals, objectives, and actions for the future of the lake makes the lake management process easier and helps guide how time and resources are spent.

LCHD-ES would like to give a special thanks to Holly Hudson at the Chicago Metropolitan Agency for Planning (CMAP) for input on this document and the associated materials.



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SPECIAL POINTS OF INTEREST

- How to plan a meeting
- Visioning exercises
- Questions to ask for achievable goals
- Evaluation questions



STEPS IN DEVELOPING YOUR LAKE MANAGEMENT PLAN

A Lake Management Plan helps protect natural resource systems. It:

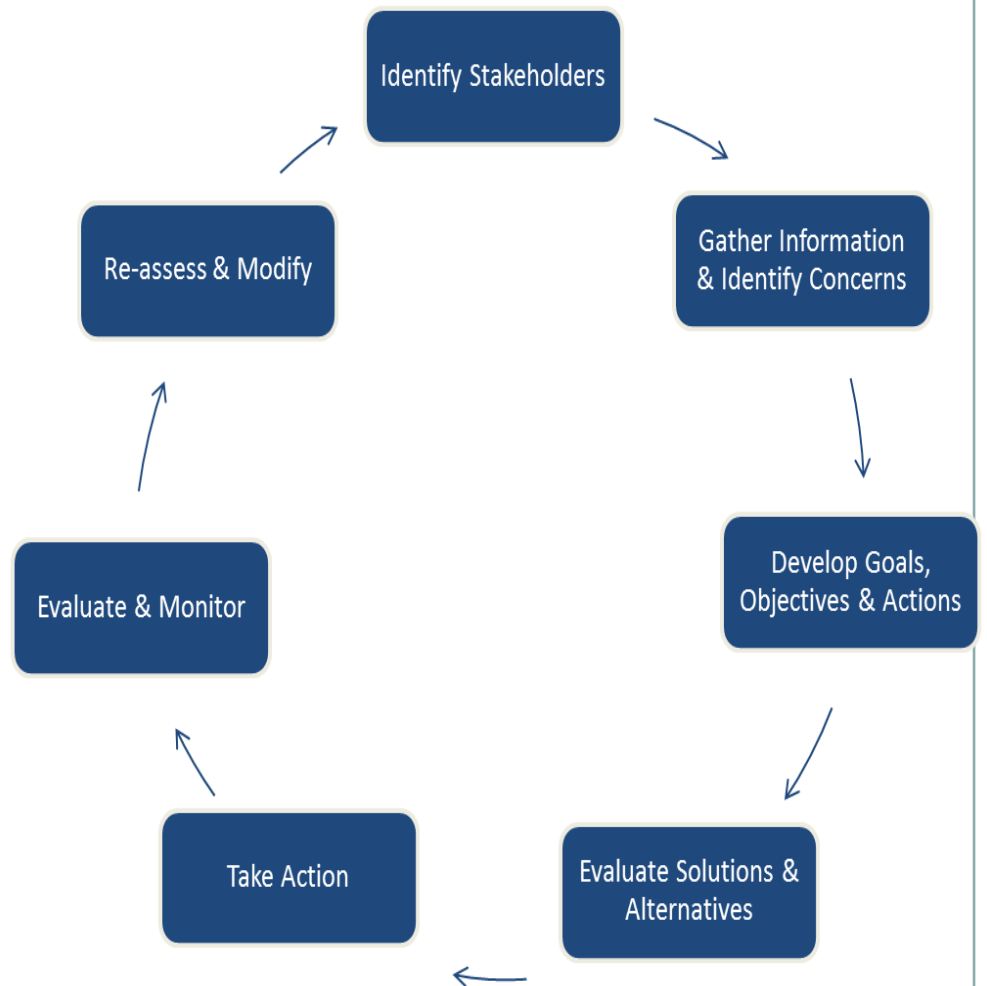
- ◆ Encourages partnerships between concerned citizens, special interest groups, and resource management agencies,
- ◆ Identifies the concerns regarding the lake.,
- ◆ Sets realistic goals, objectives, and actions, and
- ◆ Identifies needed funds and personnel.

The following are the 7 primary steps for adaptive lake management planning. While each step is necessary, the level of effort and detail for each step will vary depending on the project's goals, size of the lake, and number of stakeholders. Each step may also involve a series of sub-steps in order to be completed.

7 steps for Adaptive Lake Management

LAKE MANAGEMENT PLANS

It's important to remember that the lake management process is a fluid process. The document can change as the needs of the stakeholders change and/or the lake changes, or as new management options or data become available.



STEP 1: IDENTIFY LAKE STAKEHOLDERS & COMMUNICATION PATHWAYS

Lake Management Plans require community support to spearhead the initiative. It is important in the early stages to hold a meeting to introduce the initiative and inform property owners and other lake community stakeholders about what lake planning is, how a lake plan will protect the lake, and the community's role in the development of the lake plan. The meeting will provide the opportunity to assess the level of support for a lake plan and begin recruiting volunteers.

- ◆ Identify all stakeholders (lake association, shoreline and bottom owners, boaters, anglers, recreationists, businesses, regulators, etc.).
- ◆ Identify technical advisors—groups or individuals—that can provide support in the following areas:
 - ◇ Politics
 - ◇ Finance
 - ◇ Laws and Permits (examples: Lake County Stormwater Management Commission, Army Corps of Engineers, etc.)
 - ◇ Science & Technology (example: Lake County Health Department, consultants, etc.)
- ◆ Identify communication pathways – what are the best ways to find and reach the people that need to provide input?
 - ◇ Open public meetings
 - ◇ Workshops and focus groups
 - ◇ Social media
 - ◇ Websites
 - ◇ News releases
 - ◇ Questionnaires and surveys
- ◆ Identify current and past lake uses
- ◆ Establish a Lake Planning Committee that will spearhead writing the Lake Management Plan

PLANNING A MEETING:

- ◆ Set the date well in advance.
- ◆ Hold the meeting when seasonal residents are more likely to attend.
- ◆ Update your master contact list after each meeting.
- ◆ Send out hard or electronic copies of the meeting notice to all property owners and include an agenda.
- ◆ Include all property owners, including non-members of your association, businesses, etc.
- ◆ Associations should decide on the voting rights of non-members on Lake Plan issues prior to meetings. If only members are able to vote, be prepared to recruit and welcome new members to keep attendance up.
- ◆ Stick to the agenda
- ◆ Follow up meetings with a newsletter or other media announcement (local paper, website, social media page, email) to highlight major points and accomplishments, ask for volunteers, etc.

Adapted from the Ontario Trillium Foundation 2010/Rideau Valley Conservation Authority



VISIONING EXERCISES

What are the major issues and challenges facing this lake that can cause problems or are causing problems now?

What resources (strengths) and liabilities (weaknesses) does the lake have and what are the needs of the stakeholders in the watershed?

What issues need to be addressed/improved now and how might we start doing this?

What issues do we need to address immediately that are considered “top priorities”?

What ideas or resources do you have that could assist the lake association in addressing current issues and concerns?

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STEP 2: GATHER INFORMATION AND IDENTIFY CONCERNS

Gather Data and Information

The Lake Planning Committee is responsible for recruiting volunteers to collect and compile information about the lake. The purpose of this task is to learn as much as possible about the lake as well as to identify gaps in the information and target specific areas for field data collection. Data that needs to be collected includes:

- ◆ Information gathered about the physical, economic, and social characteristics of the lake’s watershed.
- ◆ Water quality, recreational use, and historical information about the specific lake basin are assembled from previous monitoring records, state resources, and long-time residents.

This data includes information on:

- ◆ Aquatic plants, fish, and wildlife,
- ◆ Maps and historical documents about the lake and traditional uses,
- ◆ Aerial photos,
- ◆ Bathymetric (bottom contour) maps,
- ◆ State and local regulations and ordinances,
- ◆ Technical information/research on topics of concern,
- ◆ Watershed map and land use characteristics,
- ◆ Social and demographic trends.
- ◆ All data are analyzed to identify commonalities between perceptual data and real data.

Identify Concerns

There are many ways to identify concerns but it is important to make sure all stakeholders are involved or have the option to provide input. Concerns are identified from water and other lake quality data and information. For example, surveys can be a useful way to obtain information from the community regarding lake perceptions, critical issues, and possible solutions. Examples of concerns that can be discovered from surveys include:

- ◆ *Catch rate has been declining over the last decade.*
- ◆ *The lake is frequently covered with scum.*
- ◆ *Private septic systems are a problem.*
- ◆ *Jet skis are ruining the lake.*

The “nominal group process” is one way to solicit input from the community during meetings or through mailed questionnaires. Refer to the **Nominal Group Process** handout to learn more about this process.

STEP 3: DEVELOP VISIONS, GOALS, OBJECTIVES & ACTIONS

A successful lake management plan must have clearly defined objectives and both short and long-term goals. When developing goals, it is important to balance the short-term solutions with the long-term water quality or ecological needs of the lake. Lake management efforts must take into consideration lake users and other stakeholders. Goal setting needs to focus on achieving sustainable, ecologically-based lake quality improvements, while improving the aesthetic condition of the lake for the benefit of all users.

Vision

An overall vision for your lake is useful in guiding your lake management plan. Visions are idealized description of a desired outcome that inspires and energizes the goals for your lake.

Examples:

- ◆ *Fox River Ecosystem Partnership: "Our vision for the Fox River Watershed in Illinois is to balance all the uses and demands on our natural resources while preserving and enhancing a healthy environment."*
- ◆ *Michigan DNR—Fisheries Division: "To provide world-class freshwater fishing opportunities, supported by healthy aquatic environments, which enhance the quality of life in Michigan."*

Goals

Goals are general statements relating to what the group hopes to accomplish over the long term. They are achievable.

Examples:

- ◆ *Protect and improve the water quality of the lake by reducing the nonpoint source pollution entering the lake from the watershed.*
- ◆ *Reduce in-lake phosphorus concentrations.*
- ◆ *Promote the growth and protection of the native aquatic plant community.*

Objectives

Objectives convey what the group hopes to accomplish in the near term to make progress toward the goal. They are specific and measurable.

Examples:

- ◆ *By the year 2020, the in-lake phosphorus concentration will be reduced to under 0.050 mg/L.*

Actions

Actions are the specific steps that will be taken to accomplish the objective. They are realistic and results oriented.

Examples:

- ◆ *Inventory existing septic systems on shoreland property.*
- ◆ *Increase the number of shoreland owners who install shoreland buffers.*
- ◆ *Inventory the aquatic plant community.*

ACHIEVABILITY ANALYSIS

Questions to ask when determining different actions to address goals and objectives:

What do you want to use the lake for? What uses can the lake support?

What do you want the lake to look like in 10 years? In 20 years?

What needs to be accomplished to achieve your vision?

What is reasonable given lake potential?

What management options are feasible?

Will the action be effective?

Will the action be cost effective?

continued on next page...

Refer to the Goals, Objectives, and Actions Worksheet to begin to develop your goals.

ACHIEVABILITY ANALYSIS

Questions to ask when determining different actions to address goals and objectives (*continued*):

Which of the goals are short-term and which are long-term?

What steps are you going to take this year to work toward your goals? In two years? In five years?

How long will each step take and who's responsible?

Will actions be acceptable to the public?

Will water quality and habitat goals be achieved?

STEP 4: EVALUATE SOLUTIONS & ALTERNATIVES

There are likely multiple solutions and options to achieve the short & long-term goals identified in Step 3. It is important to identify the management options that are most feasible and cost efficient to meet the management objective. Options should be evaluated in relation to both the lake and its watershed.



Refer to the Lake County Health Department **Problem Identification Worksheet** and the **Lake Management Issues Options Tables** to determine and analyze varying solutions to common lake management issues.

The next step is combining all the information and writing a Lake Management Plan. The draft should be made available for review by everyone with an interest in the lake and should be open to comments and suggestions. The final plan will take into account any comments on the draft plan and must be approved and supported by the Lake Management Committee/Board/Community. Refer to the **Lake Management Plan Template** to help guide the writing process for your Lake Management Plan.

STEP 5: TAKE ACTION!

Once your recommendations have been approved, your plan is ready for action! Adopting the plan, lining up funding, and scheduling activities for taking action to achieve your goals are the next steps. Actions could be categorized on a time scale, as actions fall into immediate, short, medium or longer range. Roles and responsibilities should also be clearly identified at this time.



STEP 6: MONITOR & EVALUATE

It is important to develop a mechanism for tracking activities and monitoring successes and hurdles. Continued monitoring should be conducted following implementation in order to determine if the actions taken are successful. Monitoring progress may require collecting data (e.g., water quality, plant surveys, community surveys to assess how actions are perceived, etc.). Reporting the success of your actions (in newsletters, local newspaper, meetings, website, social media, etc.) will help to maintain public interest and will facilitate implementation and revision of the plan when required.

It is also important to keep track of project management. Do not overlook the importance of or time associated with keeping detailed records of expenses, time, and labor in addition to the management of assets, which include financial resources, partnerships, and volunteers. Keeping a balance sheet for each project can help keep the plan on track and be essential in the evaluation process. Refer to the Lake Management Plan Tracking Sheet for an example of tracking project management activities. Use the [Project Management Template and Timeline Worksheet](#) to track costs and budgeting.

STEP 7: RE-ASSESS & MODIFY

The evaluation and monitoring described in Step 6 will identify if changes are needed to the plan to more successfully reach your lake management goals. This adaptive management approach will enable the lake community to re-prioritize or improve management plan elements. It is important the lake community recognizes that lakes are complex ecosystems, management is not an exact science, and improvements in lake quality or correction of lake problems is often a slow process.



EVALUATION QUESTIONS

What actions did you take in an attempt to accomplish this goal?

What important accomplishments were made?

How has the lake changed as a result?

How will you determine success or failure?

Where do you need to focus more energy?

What new issues or challenges have arisen since your plan was developed?

Do your current goals address these challenges or do you need to refocus?