

CHAPTER II

Components of a Seven-Step Aquatic Plant Management Plan

Chapter II can be used to lay out your APM plan. It describes the concept of planning and goal setting in detail. Then it shows how to bring together information and techniques into a plan of action. More detail on each component of an APM plan can be found in Chapter III.

Aquatic plant management plans are working documents. They are used on lakes of all types and sizes; from 80-acre lakes with simple, short plans to protect wild rice beds; to lakes that are thousands of acres, having complex plans, full-time staff, specialized equipment, and big budgets.

Why Should We Have an Aquatic Plant Management Plan?

Aquatic plant communities, like the range of human activities, can vary greatly from one waterbody to the next. An Aquatic Plant Management (APM) plan will generally consist of describing the given lake, presenting the APM circumstances for that lake, and proposing a direction. An agreed upon APM plan is an action step that can help ensure that your time at the lake is satisfying and enjoyable. The amount of effort that you will need in developing your plan will be determined by the size of the group that needs to be engaged in the process, the size of the lake and its environmental sensitivity, and the number of issues that need to be addressed.

A sound plan can benefit your lake community and the lake in many ways. Consider these **5 Cs** of planning...increasing **communication**, building **consensus**, being **cost** effective with your project, getting a good **contractor**, and making sure you **comply** with state and federal laws. Whether or not a particular lake has a current aquatic plant issue, formulating an APM plan is a desirable and advantageous project. An aquatic plant management plan can present a coordinated strategy to prevent the introduction of invasive aquatic plants as well as manage the existing community of aquatic plants.

Positive Planning

Sitting down and planning together with the people that use the water can make life on the lake better for everyone. Like most other things in life, APM plans can be simple, complex, or somewhere in between. The approaches, techniques and participants can be as varied as the ways we use the water. We may not be able to agree that all the solutions we come up with are perfect, but we can agree that a healthy lake ecosystem, good fishing, enjoyable boating and a diverse native aquatic plant community are most likely to occur if a solid plan is in place.

The Planning Approach

Planning allows communities to control their fate. Planning can correct past problems, protect and improve current conditions, and provide a guide to the future. It seeks to minimize conflict and undesirable conditions while helping communities attain things they value.

The real appeal of planning is in its rational and systematic approach to dealing with issues. By responsibly analyzing issues and encouraging comprehensive research of the facts, sound decisions can be made. Without a plan, decisions have no basis for consistency, resulting in ineffective management and the likelihood of disagreement in the community.

Fulfilling Statute and Permit Requirements

By statute, before a permit is issued or activity is authorized, an aquatic plant management plan may be required. A good plan will make getting a permit easier. With an approved plan, permits may be issued for multiple years, as it will be clear to both the regulating agency and to the lake organization what management actions are expected over the permit period.

The Seven Step Plan

So, what are the steps in creating an aquatic plant management (APM) plan? While the specifics and details vary, the process of planning (and a plan) includes the following general steps:

<ol style="list-style-type: none">1. Goal setting – Getting the effort organized, identifying problems to be addressed, and agreeing on the goals2. Inventory – Collecting baseline information to define the past and existing conditions3. Analysis – Synthesizing the information, quantifying and comparing the current conditions to desired conditions, researching opportunities and constraints, and setting directions to achieving the goals4. Alternatives – Listing all the possible management alternatives and evaluating their strengths, weaknesses and general feasibility5. Recommendations – Prioritizing and selecting preferred management options, setting objectives, drafting the plan6. Implementation – Formally adopting the plan, lining up funding, and scheduling activities for taking action to achieve the goals7. Monitor & Modify – Developing a mechanism for tracking activities and adjusting the plan as it evolves	<p style="text-align: center;">A SEVEN STEP PLAN</p> <p><i>While each step is necessary, the level of effort and detail for each step will vary depending upon the project's goals, size of the lake, and number of stakeholders.</i></p>
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While each step is necessary, the level of effort and detail for each step will vary depending upon the project's goals, size of the lake, and number of stakeholders. For many Wisconsin lakes, the process described in this part may be more involved than is generally needed. You should carefully assess your lake's needs and then consider the detail required for each step in the process. A rule of thumb may be that the larger the plan or planned nuisance control, the more comprehensive the plan will need to be. The guidance offered here is to help assure important considerations that apply to your lake are not overlooked.

Getting Organized

While most folks accept the idea of planning, it does not necessarily mean they will participate in, or accept the results of the plan. An expansive and open approach is most likely to help folks understand the planning process. A broad cross-section of people and interests should be involved in the planning process from beginning to end allowing all ideas and opinions to be voiced. Though this can be time consuming and arduous, the process allows differences and conflicts to be reconciled, resulting in a plan (and decision-making) that is more likely to be accepted by the community.

The start-up step of your planning effort is critical. This first step is called setting goals, but it is really several steps about getting organized. It is about organizing thoughts, issues and people, and laying out a process for addressing common concerns. Goals at this point should be general, keeping in mind that as the process unfolds they will become more specific and refined.

A Plan for Decision Making

The importance of preparing a pre-plan or “blueprint for planning” is often underestimated. It is essential that everyone understand why a plan is needed and the approach that will be followed to develop it. Good preparation will lead to a good plan. It begins with thinking hard about why a plan is needed, who needs to be involved, how ideas and information will be collected and communicated and the process for making decisions. A fairly detailed work plan, timeline and budget should be assembled. Assistance may be available from your county UW-Extension Educator or local government staff.

The Process

A key element is to think through the process of how information will be submitted and how decisions will be made. Aim for a factual basis for making your decisions. Schedule convenient times and locations for meetings, and prepare a calendar of what information will be discussed and what decisions will be made. Develop a timeline of milestones for each major step in the process to help keep the effort on track. If you represent a governmental body, such as a public inland lake protection and rehabilitation district (lake district), you need to post notice of meetings and conform to other aspects of the open meetings and open records laws of the state.

(http://www.doj.state.wi.us/dls/docs/op_rec.pdf)

Who Should be Involved?

Responsibility for lake management does not lie solely with any one group. This makes the initial organizational step critical. Successful management efforts may require cooperation among local government, lake organizations, state, and sometimes federal, agencies. Businesses, sportsmen and organized lake recreationists may also hold considerable sway over the management of some lakes. In planning your strategy, you will need to identify stakeholders and consider how they will participate. The types of issues you are concerned with will play a role in determining who is responsible for dealing with them and who needs to be “at the table”. In broadest terms these will be people who:

- Are concerned about the issue
- Have interests that are affected
- Have interests they believe will be affected
- Believe their power will be enhanced or diminished

The Planning Committee

The size of your lake will help determine how you go about forming an advisory planning committee which should contain a cross-section of your lake neighborhood with folks from all sides of the issue: property owners, passive and active lake users, businesses, clubs, agencies and local government. If your lake is large, or your issues complex, the committee may be broken into subcommittees assigned to specific tasks that relate to the overall scope of the project. The size of the group will often be in direct proportion to the size of the lake community. Participants should be interested in bringing the lake community together to solve common issues. Even if people decline the offer to play a role, you've made the effort to solicit their input, and let them know they are welcome to participate in a community effort to create an APM plan.

In deciding the committee make-up, be sure to think beyond residents and users of the lake and consider groups or people that can provide support in the areas of:

- Politics
- Finance
- Laws and Permits
- Education
- Science and Technology

The size of your lake will help determine how you go about forming an advisory planning committee.

The committee members have a two-way responsibility: to report to their constituent group, and to provide feedback to the committee. This should be made clear from the outset. The planning committee will provide input and recommendations to the elected officials, regulators, lake district or lake association boards which may have the final decision-making responsibilities.

In some cases, you may want to find someone familiar with the planning process that has facilitation skills to assist you in pulling together this group and running meetings. This person should be accepted by all stakeholders and perceived as a “neutral party.”

Regional planners, private consultants, county UW-Extension Educators, or your UW-Extension Basin Educator may be able to offer these talents. These folks can be a great help in laying out a path to follow through the planning process.

Working with Governments and Agencies

On some lakes government bodies and agencies may have an interest in your plan, and have their own priorities or mandates to deal with. Become aware of these roles and what regulations or ordinances may already be in place. Each organization will have a role. It may be a lead role, an advisory role or supportive role.

Setting the boundaries or jurisdiction of local and county level agencies on a map may be helpful in understanding which agency is responsible for specific aspects of your plan. This is most useful for large lakes that may span several jurisdictions. Maps and other graphical tools may help you visualize the extent and type of plant community and lake uses present, plus provide a pictorial representation of the major elements of your plan.

Reaching and Listening to People

One significant question that we need to ask is, “What are the best ways to find and reach the people that need to provide input?” The best ways are varied and depend on the number of people you need to reach, the complexity of the issue, size of lake and the assets available to your group. Typically, you will use a number of different approaches and techniques. Here are a few techniques for gathering public input:

- Open public informational meetings
- Workshops/focus groups
- Nominal group processes
- Scoping papers
- Presentations to groups
- Ad Hoc and advisory groups
- Contacts with key persons
- Web sites
- U.S. mail
- Questionnaires and surveys
- News releases and mass media
- Daily contacts

**GATHER
PUBLIC INPUT**

*Contact your county
UW-Extension Educator to
learn more about these
techniques.*

To gather information on the perceptions of the local community and lake users, many pieces of data may be helpful. Begin by collecting any existing information from government agencies like Wisconsin Department of Natural Resources (DNR) or University of Wisconsin-Extension (UWEX), including both social data and physical information about the lake.

STEP 1

Setting Goals...Why are we doing this?

Developing a Goal Statement

Plans must be based on goals. A goal is a desired state of affairs that is sufficiently broad and diverse to ensure agreement, yet sufficiently focused to infer actions needed to achieve goals. While there should be little argument about a positive goal statement, there may be debate about which goals should be included and which take priority. Unintended negative consequences are usually the result of choosing a set of goals that is too narrow or placing too much priority on one or two goals at the exclusion of the others.

Goals need to be practical. Consider what can be reasonably expected from the particular lake in question. Some lakes are naturally better suited for some management techniques than others. For example, small or shallow lakes may need a different approach to plant management than big deep lakes. All lake plans should explicitly, and by consensus, state which goals are being addressed. APM goals can be broken down into goals for specific types of use or protection.

- Maintain the plant community like it is.
- Monitor for aquatic invasive plants.
- Educate and inform lake residents about APM planning activities.
- Protect aquatic plants in sensitive areas.
- Promote the protection and expansion of diverse native plants.
- Prevent the introduction of nuisance invasive plants.
- Reduce nuisance plant growth in high recreational use areas.

TYPICAL APM GOALS

The key to this effort is setting reasonable expectations. Develop a realistic goal statement that is appropriate for the lake. The planning process is part discovery. As the process proceeds, the specific goals or objectives of the project will tend to shift as more information comes to light. Therefore, it is important that the initial goal statements be fairly broad and inclusive.

A Plan of Work

Once goals have been agreed upon, the rest of the planning process will have direction. Developing a plan will probably incur expenses in direct proportion to the size and the population of your lake. Costs can vary but will normally include items such as mailings, research, surveys, room rental and advertising. You should develop a work plan for your effort that includes written descriptions of all necessary steps and tasks together with reasonable timelines and names of key individuals who are to carry out the work elements. A plan of work should be realistic and fit your needs and your budget.

Grants

Grants are available through the DNR to help lake organizations manage aquatic plants. NR 190 Lake Management Planning Grants can be used to develop APM plans. Small-scale grants may be useful in conducting the first phase of your aquatic plant management planning program, and large-scale grants of up to \$10,000 may be applicable if considerable data collection is needed. NR 191 Lake Protection and Classification Grants are available for up to \$200,000 and can be used to implement plans for improving lakes, restoring native plant communities and other work.

The NR 198 Aquatic Nuisance Species Control Grants can provide 50% cost-sharing for a variety of projects specific to the prevention and control of aquatic invasive species. The NR 7 Recreational Boating Facilities Program provides cost-sharing for the purchase of aquatic plant harvesting equipment and limited funding for the chemical control of Eurasian water milfoil. Work with your regional DNR lake coordinator or environmental grants specialist to select the best grant options based on your specific situation.

For more detail on these Natural Resources administrative rules, go to the Wisconsin Legislature: Infobases at <http://folio.legis.state.wi.us/> and click on *Administrative Code* then find the specific rules under the *Natural Resources* heading.

Communication and Education Strategy

Successfully implementing your lake APM plan is likely to mean that some people will change their perceptions of the lake and gain an understanding and appreciation for other needs and concerns. Essential to success is a broad public recognition of the issues behind the need for the plan. One element of planning is an ongoing education and communication effort to inform people about why the plan is needed, as well as what progress is being made along the way. After all the work is done, you will want to be able to demonstrate broad public support for the plan. Involvement of news media may be part of this strategy. Include in the plan a clear statement of what methods you will use to communicate with others.

STEP 2

Inventory...Gathering Information

At this point you should have a group of people committed to working on the plan, a general statement of the goals or issues to be addressed, a work plan, and an education and communication strategy. *Now it's time to roll up your sleeves and begin the "real" work.*

We can only look objectively at the situation when we have information in which everyone is confident. If little information is available regarding the lake and its aquatic plants, investment of time and resources for additional study may be required. Once again, the amount of effort will be in proportion to the size of the lake and the task.

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This step in the planning process is essentially an attempt to document or characterize the existing conditions of the lake. A description of the natural resources of the lake and its social surroundings including uses, issues and existing management policies and strategies are examples of the types of data you will need. In this "discovery" phase you will further identify and clarify issues and may unearth information that may redirect your efforts or modify your goals. This information will certainly determine the outcome of your plan.

Find Existing Information

The first place to start is to collect as much of the existing information as you can about the lake and the issues that you are facing. This will include:

- Existing plans and studies of the lake
- Aquatic plant, fish, wildlife and water quality data
- Citizen surveys
- Maps and historical documents about the lake and traditional uses
- Aerial photos
- State and local regulations and ordinances
- Technical information/research on topics of concern
- Examples of other lake APM plans

**FIND EXISTING
INFORMATION**

For existing information contact your area DNR Lakes Coordinator, DNR APM coordinator, DNR fish and wildlife specialists, county UW-Extension Educator, regional planning offices, town clerk, county zoning and land and water conservation offices. Ask these initial contacts for other names of individuals or organizations that might be of assistance.

Conduct public meetings to get a handle on how lake users see the aquatic plant community. Meetings can be an effective way to collect information quickly. Using a large map of the lake divided into sectors, citizens can tag plant related areas of concern. Use different colored stickers to denote specific uses or areas.

If some of the information you need is missing, you will need to develop ways to collect it. You may want to split your planning committee into teams to collect specific pieces of information. It is always helpful to keep a record on the particulars about the person that collected the information for future reference.

STEP 3

Analysis...Synthesis of the Information

The analysis phase is the key to the entire process. This phase is where we compare existing conditions to desired conditions. Sometimes groups feel that once they have completed the research or inventory step they are ready to proceed directly to decision making. While there is tendency to analyze while you collect the data, it's necessary to step back and thoroughly consider the information you have collected.

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Once all of the information on the waterbody is in hand, the steering committee should evaluate the data. Historical data and overlay maps, which can be produced via GIS methods, provide the basis for delineating aquatic plant communities. These communities are generally identified as areas of difference in the grouping or assemblage of specific aquatic plant species. An initial commitment to use digital mapping methods that convert data into GIS information will greatly assist in analysis and assure previous conditions can be readily compared to current conditions.

At this point, the committee will be able to assess whether the initial issues voiced match the facts.

- Note the proximity of aquatic plant concerns to desirable habitat areas and beds of native plants.
- Have invasive or rare species been identified that will alter the priorities for control or methods?
- Are control measures proposed in areas where no control is desired or warranted?
- Is it possible to restore the lake to an earlier condition?
- Should management efforts be aimed at managing lake plants in a different way?

To answer these and other aquatic plant management questions, it is necessary to consider the data and their implications in a systematic, objective way. Identifying specific criteria that relate to your management objectives can work well. These criteria should relate to goals from the first step and address the three main categories: resource protection, habitat maintenance, and recreational experience/human use of the lake. Some basic questions to be asked during this analysis phase include the following:

- What is the nature of people's concern?
- Where do conflicts occur?
- Has the problem changed over time?

What is the Nature of People's Concern?

Do people feel that the aquatic plants limit the use of the shore for swimming or mooring of boats? Do high levels of aquatic plants limit access to central parts of the lake? Are there concerns about aquatic plants interfering with human use or public safety? Are there habitat-related concerns that affect the fishery or aesthetics of the lake? Appropriate aquatic plant management measures should address these concerns to the extent possible, within the law and without causing "collateral damage" that will lead to other in-lake problems. In this regard, it is important that the community be aware that a certain level of aquatic plant growth in a lake has value in sustaining other human uses, such as wildlife viewing and water quality.

Where do Conflicts Occur?

Understanding the basis of people's concerns, in conjunction with the aquatic plant map, should help determine areas where disagreement in proposed uses may occur. A common area of disagreement may be in areas that anglers would like left alone or nesting areas that conservationists would like to protect, that coincide with places that water skiers want to use. It will be important to consider how a proposed aquatic plant management program will affect the desired lake uses. For example, will a harvesting program schedule overlap with heavy boating days? In each of these cases, recommended APM measures may need to be specifically tailored to the conditions on your lake.

Has the Problem Changed Over Time?

It is not unusual for aquatic plant communities to change as climatic and watershed conditions change, or with the implementation of APM measures.

Questions that should be asked include:

- Has the volume of aquatic plants increased over the years?
- Have complaints of too many plants increased over the years?
- Have the types of plants growing in the lake changed over time?

In assessing the responses to these and similar questions, you should consider the time period over which you have records. There are a number of statistical measures that can be used to determine changes in the aquatic plant community over time. The statistics outlined in *Appendix F* or the Floristic Quality Index in *Appendix D* can help compare plant data from two different surveys.

Inventory and Analysis Report

The result of these inventories should be a characterization of the lake's condition, its natural features, recreational uses, community values, problems and opportunities to resolve any concerns relating to conflicts between these attributes. Organize and list your conclusions and findings according to the need for management intervention.

<ul style="list-style-type: none">• No action• Selective management• Nuisance relief• No restrictions• Restoration	IDENTIFY POSSIBLE ACTIONS
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To aid in the interpretation and analysis, capture the information in tables and on base maps. If aquatic plant removal or control is an anticipated management action, this report will be essential in serving as a foundation for justifying the need for the work, or the adoption of appropriate regulations.

STEP 4

Alternatives...Providing Choices

Bringing It All Together

The degree of work here will depend on the complexity and size of your lake and intensity of aquatic plant management needed. At this point, the planning committee needs to convene and synthesize the information, compare the results of each analysis, generate alternatives, and consider their ramifications. The interpretation and integration of information from *Step 3* into a management action plan should be based on a range of possible actions. In many cases, there are various ways to achieve an objective. With respect to aquatic plant management, common choices include; doing nothing, harvesting, using an aquatic herbicide, using biological control agents or placing physical interventions. Consequently, this is the point where the influence of various stakeholder groups will tend to surface. Now is the time to go back to the public for their input on the alternative management scenarios.

The degree of work here will depend on the complexity and size of your lake and intensity of aquatic plant management needed.

For many lake communities in Wisconsin, agreement may be reached that the current aquatic plant populations are at tolerable levels. In this case, the overall goal of the plan becomes one of “holding the line” to prevent a transition to intolerable levels. In other words, the community may wish to implement actions that will limit future increase in plant numbers. Shoreland and littoral zone management can be a key tool in aquatic plant management. This is especially true on smaller and mid-sized lakes, in more urban areas, and at tourist and resort locations. Over-development or inappropriate shoreland development can impact plant growth, degrade habitat, and increase demands for more plant removal. Replacement of native vegetation with lawns, or complete removal of

aquatic vegetation in the lake, can lead to repercussions that include shoreland loss, near shore algal blooms, or loss of aesthetic appeal as shoreland wildlife are driven away by lack of habitat.

Depending on the size and complexity of the task at hand, it may be appropriate to break your committee into subgroups to look at specific elements or areas of concern. Additional stakeholders and interested citizens can be invited to participate in the subgroups and their meetings, to broaden input, and to help build consensus. Each subgroup can focus on a specific issue, debate an alternative or set of alternatives, and propose a course of action. It is important that these subgroups be clearly informed that their advice will be consolidated with that of other subgroups prior to the formulation of the management plan. This will help limit misunderstandings later in the process, especially if the consensus is that an alternative other than that investigated by a particular subgroup is selected for implementation.

The final plan should be as complete and detailed as possible. At this point, you will want to include enough detail on the various alternatives to allow fair comparison and informed decision-making. Your goal statements and findings from the analyses that document or justify the need for action should accompany presentations. Discussions on the various management alternatives should occur as they are transformed into management recommendations.

The planning committee should have the task of listing and evaluating all the management recommendations, based on the inputs from the subgroups. As a reminder, a list of the original goals should be placed conspicuously so the committee can compare them to the recommendations of each subgroup as they start to list conclusions and reactions. Facilitation tools like opportunities and constraint analysis or SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) can help bring ideas and strategies to light.

As you generate alternative actions consider:

**COMMITTEE
RECOMMENDATIONS**

Effectiveness

- Will it protect the resource?
- Will it promote the stability of the ecosystem?
- Will it improve the recreational experience?

Cost

- Does it stay within your budget?

Legality

- Does it have regulatory approval? Are permits needed?
- Have the proper permits been obtained?

Community Acceptance

- Will it satisfy the concerns of the majority of lake users?
- Do the lake users feel “ownership” of the process?

Institutional Capacity

- Are enough human resources available to make it happen?

Some of this activity should be conducted in a public setting and have extensive public involvement. At some point, the committee will have to decide it has enough input to develop its final recommendations and preferred management plan based upon the alternatives considered. It is important that this process be conducted openly and honestly to avoid hurt feelings or perceptions that the committee has simply endorsed a preferred alternative regardless of the facts!

Determining Appropriate Levels of Management

The level of sophistication and detail in the plan will generally increase with the level of usage, number of conflicts and lake sensitivity. Typically there is a progression of alternatives available to Wisconsin lake managers that range from *simple strategies* (basic provisions that all lakes should consider) to *more complex strategies* (dependent upon greater investments and commitments of resources). These strategies should build upon one another, and be appropriately scaled to the lake and its conditions. In other words, *Level 3* activities should not be contemplated unless *Level 1* activities are in place. See *Chapter III* for more details.

<p>Level 1</p> <ul style="list-style-type: none">• Periodic monitoring of the plant community• Enforce existing AIS laws• Develop educational and informational programs• Implement watercraft boat launch inspection programs• Encourage lake residents to create natural shorelines• Encourage removal of nuisance plants near private docks with hand or manual methods <p>Level 2</p> <ul style="list-style-type: none">• Manage specific, “localized” problems areas• Place waterway markers in sensitive areas <p>Level 3</p> <ul style="list-style-type: none">• Purchase a plant harvester or contract for aquatic herbicide application• Institute a lake-wide integrated plant removal or control program• Institute biological controls of purple loosestrife at boat launches	<p>LEVELS OF MANAGEMENT</p>
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STEP 5

Recommendations...Completing the Plan for a Formal Decision

Once public input has been gathered on the various management options, it is time to select the preferred alternatives and draft a detailed plan for eventual adoption.

Review the plan

1. Goals and objectives...purpose and justification
2. Existing conditions (inventory)
 - a. Natural resources
 - b. Aquatic plants
 - c. Description of problems
3. Analysis...setting direction to reach goals
4. Management alternatives
5. Recommended or preferred alternatives - list policies and strategies in priority order and include at least one measurable performance objective for each recommendation
6. Implementation
 - a. Action elements
 - b. Who does what, when
7. Monitoring and adjusting the plan

**REVIEW THE
PLAN**

The inventory data, maps, results of analysis, and alternative scenarios should all be referenced and either included in the plan or placed in appendices. The main body of the document should summarize and incorporate the main findings within the recommended APM plan.

Action Plan

Once the main management recommendations are developed, consider how they will be implemented. Your management actions need to be translated into work items. The action plan describes “who will do what, by when.” It identifies and sets priorities within a range of actions to be taken. Actions provide both the guideposts for implementation and a barometer of success. An action should state a quantity and a timeline. For example, “launch an educational program on the benefits of native aquatic plants on cable TV and newspapers by May 1st.” This section may be part of the plan or developed after adoption of the management recommendations.

Actions provide both the guideposts for implementation and a barometer of success.

Administration

Consider what to do if the recommendations require staff, equipment or enforcement. Most small lake organizations will have to depend on local government (town/city/village) assistance with aquatic plant management tasks or enforcement issues. Conversely, community members and students from area schools may be available to serve as volunteers in boat launch monitoring for invasive plants. Programs such as Adopt-A-Lake and Clean Boats Clean Waters may provide guidance in integrating public initiatives across generations. Volunteer programs still require scheduling and administrative actions that should be identified and addressed in the action plan.

Legal

Do we have regulatory approval for our plan? Do we need and have the proper permits? Changes may be needed to carry out the recommended management techniques within the regulatory framework applicable in your community. For example, formation of a public inland lake protection and rehabilitation district or incorporating a lake association may be a desirable step in creating a legal body responsible for implementing the APM plan. Liability and liability insurance should be carefully considered.

Financial

Consider your costs and how they will be met. Prepare a budget that addresses the costs of implementation. Revenue sources should also be identified. The availability of funding may limit the timing and number of recommendations that can be implemented. For example, if your community wishes to access state cost-share funding through grants, grant application dates may limit the ability of a project to be conducted at a specific time. High priority actions may be those that are least expensive. These actions, which frequently include sharing information to empower individual landowners, should be scheduled first. For more information on grants, go to <http://www.uwsp.edu/cnr/uwexplakes/law/>.

Information and Education

A good information and education plan should be in place from the beginning of the process. It should deliver detailed information to those that need it, and it should have an awareness-building (public relations) component. The information and education plan will describe a process that gives the major details of the APM plan to the public and lake users. It will also be a quick reference to those responsible for implementing the APM plan.

Your information and education plan may use the World Wide Web, local media, agency speakers, workshops and direct mailings. Diverse public relations and training techniques should be considered. Various user groups, such as personal watercraft and water-skiing or fishing clubs, may team up to deliver an educational message. Partnering with existing awareness initiatives may provide an avenue for disseminating your message. The scope of your campaign depends on the size of your lake and the scope of your project. Youth education programs may add a youth educational element to the plan.

Lake residents and users can “turn over” rapidly. Every year there may be people “new” to the lake that will be unaware of the work you have done. An effective information and education plan will help orient these new users to the APM plan. However, bear in mind that your plans will also need to be periodically updated as your community changes.

STEP 6

Implementation...Taking Action

Who Adopts the Plan?

A plan can be adopted as a guide by a local lake association or lake district. Plans adopted by lake associations can serve as guidance and informational vehicles targeted to your specific community. Local governments (towns/villages/cities) also can develop both informational programming and enforceable ordinances governing aquatic plant management in communities under their jurisdiction. They may strengthen the enforcement of plant removal at landings or set aside sensitive areas on the lake. Work with legal professionals versed in municipal or governmental law if you determine that developing new ordinances or amending existing laws is necessary to implement your plan.

The plan, or parts of it, can be incorporated into the permits issued for conducting the plant management on your lake. A plan that meets the regulatory requirements for necessary permits can serve as the basis for receiving a multiple year permit that authorizes the actions recommended in the plan. Consistency and direction of a plan will help reduce annual permitting requirements and reduce the cost of permit fees. In effect, your plan will be adopted as part of the permits required by the state statutes.

Prioritizing and Scheduling Actions

An action plan may cover a short time span of two to five years. In contrast, a comprehensive lake management plan may include components that will be ten or twenty years away from implementation. Aquatic plant management plans, because they deal with the constantly changing conditions of the lake, should be updated more frequently than comprehensive lake management plans, and it is recommended that they be reviewed and updated on a three-year to five-year schedule.

An action plan may cover a short time span of two to five years.

Actions could be categorized as immediate, short-range, medium-range or longer range. Actions should also include periodic or annual review of the plan and a continuous or ongoing monitoring effort. Prioritization of efforts will help you to allocate resources appropriately and in a timely fashion, and provide direction to assist your community in spending resources wisely. An information and education campaign to advise riparian owners of the benefits of aquatic plants may be implemented immediately, using materials available from the DNR and UW-Extension. Permits for more intensive APM actions and grant applications can be prepared simultaneously. Many grant programs, which could be used for aquatic plant management, have annual submission dates that may result in the funds being awarded in a second or third year of your APM timeline. (<http://www.uwsp.edu/cnr/uwexplakes/law/>)

Roles and Responsibilities

The precise roles and responsibilities of the various agencies and organizations need to be specified to ensure follow through. These responsibilities need to be formally recognized by the organizations and individuals that are to carry them out. This can be accomplished through the formal adoption of the plan by the organization, or by a resolution acknowledging their role.

Once the plan has been formally adopted, and an action plan developed, it will be useful to produce a succinct summary of the most relevant information and make it readily available to residents, interests groups, civic clubs, elected officials, resource management professionals, and the media. It may be necessary to showcase the plan and its implementation annually or on a scheduled basis in order to maintain community interest in the plan and awareness of the proposed actions.

STEP 7

Monitor and Modify...So How are We Doing?

An APM plan is not static. It should grow and change with the times.

An APM plan is not static. It should grow and change with the times. To allow this, the plan should be continuously monitored and reevaluated. What you examine depends on the plan's objectives and milestones. Periodically repeating the surveys and field observations used in the inventory and analysis steps, and establishing and tracking specific management records, can be useful to provide the information needed for effective monitoring. This information will provide a way to measure progress in resolving differing viewpoints on aquatic plant-related issues, or in protecting environmentally sensitive areas of a lake. It will also allow "mid course" corrections, should the actions be ineffective in addressing a specific situation.

The monitoring program will provide information for making on-going decisions concerning changes in plant communities. Monitoring can identify changes in conditions that require adjustments of techniques or call for a whole new approach if the techniques are not working. It can also help detect problems at the earliest stage possible and allow appropriate interventions.

A monitoring program is designed to evaluate the plan under real-life conditions. The data you gather for monitoring will be based on the data you gathered for your plan. Having clear performance objectives for each management action, as described in *Step 5*, will guide effective monitoring.

Your periodic monitoring report can answer these specific questions:

- Was the educational program launched?
- How well were our plant ID workshops received?
- Was the program operational by May 1st?
- What were the reactions to the program by lake users?

**EXAMPLE
QUESTIONS**

Measuring Achievement

Achievement should focus on performance and not necessarily on the level of effort. It's not how much money was spent, or how much time was put into an action, it is what was accomplished. Therefore, monitoring and evaluation should rely on measurable things. Did invasive plants come back after their initial removal? Are the sensitive areas still in good shape?

Evaluation forms or surveys can be used when the objective is more subjective. Here is an example of a hierarchy of questions for objectives.

**ACHIEVEMENT OF
EDUCATIONAL
OBJECTIVES**

Energy Input	Did the instructor prepare for the workshop?
Event Occurrence	Was the workshop held?
Participation	How many people were involved?
Reaction participation	What were the post-event subjective feelings?
Learning	Was there a statistical difference between pre- and post-test knowledge?
Applications	Did participants use the knowledge offered?
Impact	As a result of using the knowledge provided, was an individual, business, family, or community changed?

In addition to evaluating specific objectives, review the entire plan and the whole set of objectives about every three to five years.

Do It Again

No plan is static. Conditions change. Scientific understandings change. Human values and attitudes change. Plans have to change - patiently and systematically. A plan needs to be flexible to changing conditions but not so vague that it simply becomes a record of change. The plan needs to be specific enough to influence change but not so rigid it will lose relevance. Remember APM plans should be updated about every three to five years.

Keeping it Fresh

Overtime, organizations may begin to lack cohesion and the ability to track and implement the plan. A conscious effort is needed to replenish the enthusiasm of its leadership. Lake management organizations should consciously and slowly turn over the organization to the next generation as the planning process is repeated. Planning for the long term stability of your organization - using programs for adult leadership, like the Lake Leaders Institute (<http://www.uwsp.edu/cnr/uwexplakes/lakeleaders/>) - can help instill good stewardship values and keep your organization “fresh” and effective.