

**TOPIC: Planning – Integrated Pest Management Decision-Making**

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White Paper Group 2

**BACKGROUND**

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Integrated Pest Management (IPM) is an ecosystem-based decision-making strategy that focuses on long-term prevention or control of species of concern or their damage. It is a science-based decision-making process that combines diverse treatment approaches, consistent monitoring, and adaptive strategies. IPM is intended to ensure the efficacy of management over the long-term while ensuring the lowest-possible risk to beneficial ecological functions.

The most effective, long-term way to manage species of concern is by using a combination of methods that work better together than separately. IPM considers all the available management practices such as: prevention, biological control, biomanipulation, nutrient management, habitat manipulation, substantial modification of cultural practices, pesticide application, water level manipulation, mechanical removal and population monitoring. Decisions are informed thorough planning and monitoring efforts, during which all permissible plant management techniques are considered based on their potential to control target plant species while reducing non-target impacts and risks to human health and the environment. Integrated pest management projects should be informed by current, comprehensive information on pest life cycles and the interactions among pests and the environment.

Over time, a good IPM program should adapt whenever new information is provided on the target species or if monitoring shows changes in control effectiveness, habitat composition, or water quality. Due to waterbody and stakeholder variability, a comprehensive approach involving planning, IPM, and adaptive management can improve control methods, sustain management outcomes, lessen non-target impacts, and reduce tension among stakeholders.

Currently, only activities regulated under NR 109: manual removal, burning, plant inhibitors, mechanical removal or introducing non-native aquatic plants to waters of the state, may have a planning requirement in conjunction with the permitting process. Current plan requirements include: the goals and objectives of the APM activities; a physical, chemical and biological description of the waterbody; the intensity of water use; the location of aquatic plant management activities; an evaluation of chemical, mechanical, biological and physical aquatic plant control methods; recommendations for an IPM strategy; an education and information strategy; a strategy for evaluating the efficacy and environmental impacts of the APM activities; and the involvement of local units of government and any lake organizations in the development of the plan.

**RULE PROPOSAL**

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The department proposes moving a portion of permitting requirements for all permitted activities [excluding private ponds] into a 5-year planning process. The requirements in NR 109 will be updated and incorporated into the new repealed and revised NR 107.

The goal of an APM management plan is to:

- Develop collaborative relationships between waterbody organizations, industry and the department.
- Ensure there is consistent communication between all stakeholders.

- Ensure the data gathered by all stakeholders is shared, discussed and used to set clear goals all parties agree to.
- Ensure any management activities proposed annually are in alignment with long-term goals.
- Ensure any new information gained during monitoring is considered in future decisions, allowing for flexibility over time.

Planning can become a confusing process if there aren't clear guidelines, the department is developing modules to set clear expectations. These modules are designed to democratize the planning process, so an organization can design a plan themselves or in consultation with the department and their consultant, if they have one. Each module together will create a set planning template that all permittees in the state will use, ensuring consistency and conciseness. Several of the modules require information that can be found on DNR webpages and databases, reducing the need for added research. The extent of the information required in each planning module will be dependent upon the goals of management and intended control activities. Together, the modules walk through an integrated pest management decision-making process.

There are eight modules in the planning process. Modules' 1, 2, 3 and 4 will all or in part be completed using information housed on department webpages and databases. This will reduce the total workload for permittees. These modules are preliminary and may be subject to change as the rule development process continues.

Module 1 - Gather baseline data: physical, chemical and biological.

Module 2 – Describe historical management activities, efficacy and goals.

Module 3 - Summarize the species of concern's life cycle and habitat preferences

Module 4: Describe the documented impacts of the species of concern.

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Module 5: Describe the goals of management.

Module 6: Describe all appropriate management options.

Module 7: Describe decision-making plan for future management implementation

Module 8: Describe the education and information strategy

Planning will be considered a four-step process.

1. The group will complete Module 1-4 to understand the basic conditions of the waterbody, the efficacy of past management activities and the extent of the problem on their waterbody. They will be encouraged to take special consideration of input from riparian owners and the broader community.
2. The group will set up a discussion with the department, their consultant (if they have one) and other stakeholders to discuss Modules 1-4. If all parties agree a management plan is warranted based on the current waterbody conditions, the lake group will move on to step 3.
3. The group will complete Module 5-8, with help from the department and their consultant if they deem it necessary. The department strongly encourages that the group hold public meetings on

the proposed management recommendations and considers' all opinions prior to submitting their plan to the department.

4. The group will submit their complete plan to the department for consideration and approval.

Plan Renewal will occur every 5 years, and follow the process outlined above. After a group completes Modules' 1-4 for their renewed plan, they may request an extension for an additional 5 years on Modules' 5-7. The department has the discretion to allow that extension if Modules 1-4 show there are no changes to waterbody condition that warrant a revision to the management strategy.

The department may waive components of Modules 5-7 in specific instances. If a group is utilizing a department approved Best Management Practice (BMP), or a combination of BMP's, they may reference them in their plan. If the department staff who is reviewing a plan agrees the proposed BMP is appropriate for the waterbody, they may waive further analysis and approve the plan.

## **FUNCTIONAL IMPROVEMENTS**

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Over time, with technological advances, the department expects the planning process will become more streamlined. Most of the baseline data necessary for a plan is available on department resources, an application may be developed to pull all the baseline data from department servers into a preset template.

In addition, the department may develop capabilities for a point intercept (PI) survey database, in time this will allow for access to historical and current information. The department may also design a query tool for APM data, this will allow stakeholders to pull historical records from a waterbody.