

**Proposed Aquatic Plant Management Rule Changes  
Minnesota Department of Natural Resources**

**January 7, 2008**

This report is provided to satisfy the requirement of Laws of Minnesota, 2007, Chapter 131, Article 1, Section 91.

## **Executive Summary**

The DNR has regulated control of aquatic plants since the 1940s. The original purpose of the program was to allow shoreline property owners to remove aquatic plants where it was necessary to gain access to open water, while protecting the habitat and water quality values that aquatic plants provide.

### **The aquatic plant management program has been challenged by increased shoreline development and the spread of invasive aquatic plants:**

- Shoreline development has increased dramatically on Minnesota's lakes. The number of aquatic plant management permits administered by the DNR has risen continually since the early 1990s, when about 1,100 permits were issued, through 2007 when over 4,600 were issued.
- Invasive aquatic plants are spreading to more lakes each year, crowding out native aquatic plants and creating recreational nuisances.
- As lakeshore development has increased, the desire to remove aquatic plants to clear shorelines is increasingly confused with the desire to control invasive aquatic plants for ecological benefit.

The DNR's proposed rule changes will provide more protection for native aquatic plants and better guidance for control of invasive aquatic plants, and will improve, update, and clarify existing language.

### **The proposed rule changes that have resulted in the most discussion among stakeholders are:**

- Reducing the amount of submersed aquatic plant control allowed adjacent to an individual's shoreline from a maximum of 100 feet of shoreline, to a maximum of 100 feet or half a person's shoreline, whichever is less; and
- Eliminating the "grandfather clause," which allows lake-wide limits on pesticide control of aquatic plants to be exceeded on seven metro-area lakes and two bays of Lake Minnetonka.

### **The DNR has addressed specific concerns with the proposed changes by:**

- Providing an exception to limits on submersed aquatic plant control adjacent to an person's shoreline if the control is selective for invasive aquatic plants;
- Providing a five-year sunset for the grandfather clause, instead of eliminating it outright, and providing an opportunity for affected lake groups to work with the DNR to develop lake vegetation management plans; and
- Providing more guidance in the variance and permit decision-making provisions to facilitate control of invasive aquatic plants.

### **There is a strong scientific basis for providing increased protection for aquatic plants:**

- Aquatic plants provide habitat for fish and wildlife as well as water quality benefits.
- Loss of aquatic plants can affect the entire lake eco-system.
- Near-shore aquatic plants, which are the most frequent targets of control efforts by shoreline owners, are particularly important as habitat for young or small fish.
- Many species of wildlife depend on aquatic plants for food and nesting.

- Aquatic plants help to improve and maintain water clarity.
- Scientific studies indicate that aquatic plants decrease as human development increases.

**Large-scale control of invasive aquatic plants is still a developing science:**

- Lake-wide chemical control does not eradicate invasive aquatic plants, but has temporarily reduced the abundance of Eurasian watermilfoil and helped native plants to increase in some moderately fertile lakes.
- In some fertile lakes, lake-wide chemical control has led to algae blooms and decreased water clarity with no increase in native aquatic plants.
- In lakes where control has been successful, repeated treatments have been necessary within 1 to 3 years to keep Eurasian watermilfoil at a low level.
- The long-term efficacy of chemical control to manage invasive aquatic plants is still being studied.

**DNR's proposed rules are necessary and reasonable:**

- Changes will prevent long stretches of shoreline from being denuded of critical near-shore habitat.
- Exceptions to limits allow more control when it's selective for invasive aquatic plants.
- Grandfather lake groups will have an opportunity to develop a lake vegetation management plan with the DNR before the grandfather clause is terminated.
- Variance and permit criteria provisions will provide better guidance for large-scale control of invasive aquatic plants.
- Changes will better fulfill the overall program goals to allow lakeshore residents to get access to open water, while protecting the habitat and water quality benefits of aquatic plants.

Pursuant to Minn. Stat., sec. 3.197, the cost of preparing this report was \$1,900.

## Introduction

Aquatic plants growing in public waters are owned by the state (Minn. Stat., sec. 84.091, subd. 1) and their control has been regulated by the DNR since the 1940s. The original purpose of the aquatic plant management (APM) program was to allow shoreline property owners to remove aquatic plants where it was necessary to gain access to open water, while protecting the habitat and water quality values that aquatic plants provide. In the early years of the program, lakeshore development was more limited and rustic than it is today, making it relatively easy to balance the needs of shoreline owners with the need to protect aquatic plants. In addition, invasive aquatic plants had not yet become a major natural resource issue, even though curly-leaf pondweed and other nonnative species were already present and likely spreading throughout the state.

Development pressures have increased on Minnesota lakes, with more dwellings per lake each year (Kelly & Stinchfield 1998). As Minnesota's lakes have been more impacted by increased shoreline development, watershed alterations, and invasive species, APM issues have become increasingly complex and balancing the desires of shoreline property owners with the need to protect aquatic habitat has become more challenging.

The 2002 legislature directed the DNR to develop a proposal for reviewing its APM program by October 15, 2002 (Laws of 2002, Chapter 351, Sec. 31) in response to increasing concerns regarding lakeshore development. The DNR delivered the proposal by the required deadline and conducted the review for about 18 months starting in 2003. In conducting the review, the DNR met with a broad cross-section of stakeholder groups, contracted with the University of Minnesota to survey other groups, reviewed APM practices in other northern-tier states, and summarized the current literature on the role of aquatic plants in lake ecosystems and how their distribution in some Minnesota lakes is changing. More information on the results of this review can be found at:

<http://www.dnr.state.mn.us/input/rules/apm/background.html>.

As a result of the program review the DNR proposed a number of rule changes including:

- 1) Reduce the amount of submersed aquatic plant control allowed adjacent to an individual's shoreline to protect near-shore aquatic habitat;
- 2) Eliminate the "grandfather clause," which allows lake-wide limits on pesticide control of aquatic plants to be exceeded on seven metro-area lakes and two bays of Lake Minnetonka, and work with the affected groups to develop lake vegetation management plans; and
- 3) Improve variance and permit decision-making provisions to facilitate control of invasive aquatic plants.

The DNR started the formal rulemaking process in December 2005, when it published a request for comments on possible amendments to rules governing aquatic plants and nuisances in the *State Register*. At the time of this report, the DNR has drafted the proposed rules and Statement of Need and Reasonableness and is in the process of getting approval to publish a notice of intent to adopt the rule with a public hearing in the *State Register*.

## **The Scientific Basis for Protecting Aquatic Plants**

It has long been known that aquatic plants provide habitat for fish and wildlife as well as water quality benefits and there is a growing body of scientific evidence to support this. Studies have consistently shown that fish abundance is greater in vegetated habitats than in unvegetated habitats (Dibble et al. 1996; Pratt and Smokorowski 2003; Wei et al. 2004). Aquatic plants provide fish and wildlife with food, spawning, and nesting habitat, and cover from predators (Dibble et al. 1996; Petr 2000; Valley et al. 2004)). In addition, aquatic plants anchor sediments and sequester nutrients like phosphorous and nitrogen, thus reducing turbidity caused by sediment and algae blooms (Petr 2000).

Loss of aquatic plants can affect the entire lake eco-system (Engel 1990; Wilcox and Meeker 1992). The cumulative loss of aquatic plants coupled with nutrient loading can lead to drastic ecological changes in lakes characterized by turbid water, little to no rooted aquatic plant growth, and disturbance-tolerant fish species such as bullhead and carp (Scheffer and Carpenter 2003; Egertson and Downing 2004). Lakes in this state are common in agricultural regions of southwest Minnesota and are becoming increasingly common in the Twin Cities metropolitan area.

Near-shore aquatic plants, which are the most frequent targets of control efforts by shoreline property owners, are particularly important as habitat for young or small fish (Poe et al. 1986; Bryan and Scarnecchia 1992; Weaver et al. 1997). Ongoing DNR surveys show that shallow vegetated bays have greater species diversity of nongame fish and amphibians than other habitat types (personal communication, Pam Perry, DNR nongame wildlife biologist). Surveys have also documented functional extirpations (i.e., absence of species in targeted surveys) of blackchin shiners, blacknose shiners, and banded killifish in several metro-area lakes that have likely suffered aquatic plant habitat degradation (personal communication, Ray Valley, DNR fisheries research biologist).

Many species of birds and mammals are likewise dependent on aquatic plants for food and nesting sites. Waterfowl eat the seeds and tubers produced by various water plants (Bellrose 1976). Aquatic plants support numerous insects and other aquatic invertebrates, which are eaten by waterfowl (Krull 1970) and are important sources of food (protein) for laying females (Batt et al. 1992:7-9). The reproductive success of waterfowl is closely tied to available aquatic plants, which provide food and cover for laying hens (Bellrose 1976).

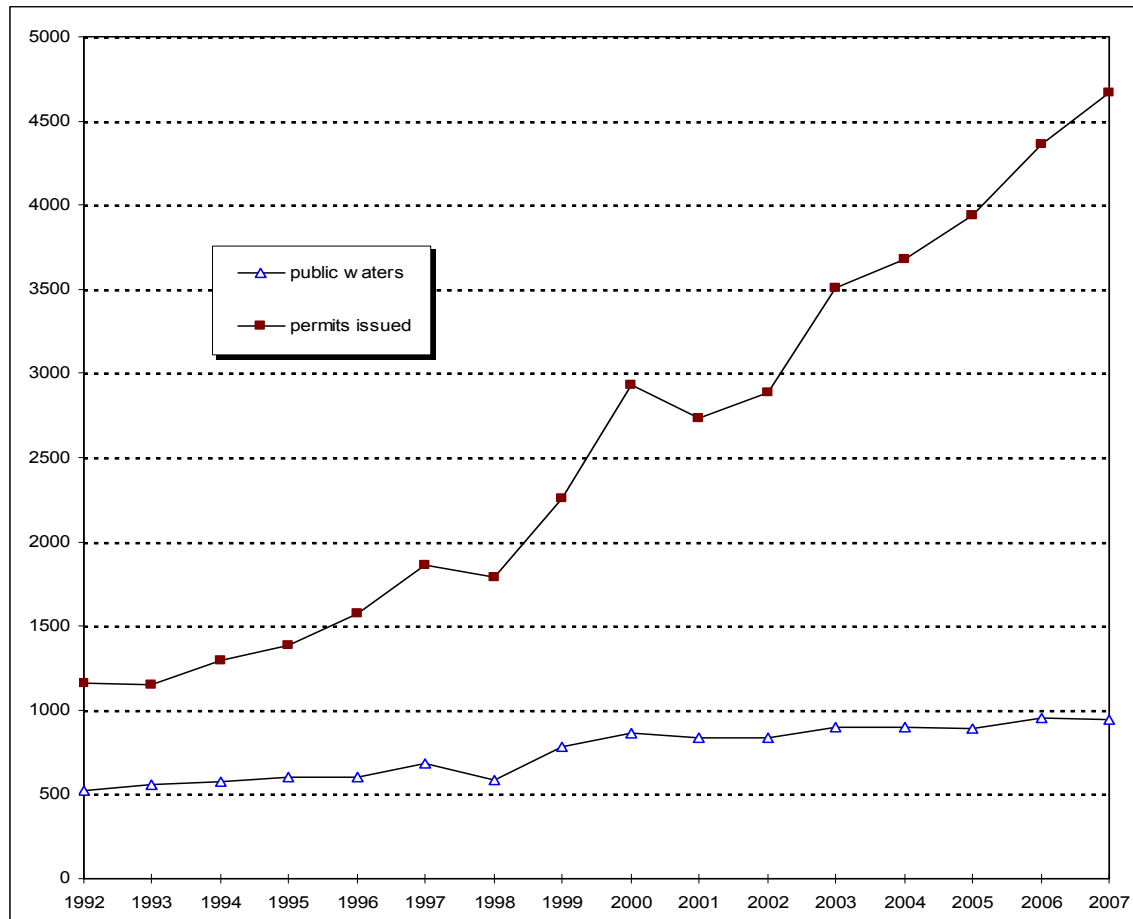
Emergent aquatic vegetation provides nesting cover for a variety of waterfowl, shorebirds, wading birds and songbirds (Bellrose 1976). The muskrat, an important furbearer, is almost entirely dependent on aquatic vegetation for food and shelter (Errington 1941).

There seems to be an overall positive effect of submersed aquatic plants on water clarity in lakes. Scheffer et al. (1993:275) showed that lakes with abundant submersed plants tend to have higher clarity than lakes with similar levels of nutrients in which vegetation is sparse or absent. Carter et al. (1988) documented higher Secchi disk transparencies within a bed of submersed plants by comparison with a location in open water without plants. The importance of submersed plants in maintaining water clarity is reflected in observations of decreased water clarity following lake-

wide reductions in submersed plants resulting from treatment with herbicides (O'Dell et al. 1995:314; Welling et al. 1997; Valley et al. 2006).

Impacts to aquatic plants have clearly increased with the increase in lakeshore development. Radomski (2006) documented historical decreases of emergent and floating-leaf aquatic plants on developed lakeshores in Minnesota. Alexander et al. (2008) correlated an increase in human development with a decrease in aquatic plant abundance in lakes in Vilas County Wisconsin. The number of permits issued to control aquatic plants has risen dramatically since the early 1990s and is continuing to rise each year (Fig. 1). In 1992, the DNR issued about 1,100 APM permits. This number increased from about 3,600 in 2004 to over 4,600 in 2007. A lot of this increase has been from the use of automated aquatic plant control devices, also know as “weedrollers.” In 2007, over 1,800 permits were issued for these devices.

Figure 1. Number of aquatic plant management permits issued and number of public waters with permits issued from 1992-2007.



While the science documenting the habitat and water quality value of aquatic plants is strong, the relationship between aquatic plants and the abundance of fish and other wildlife is complex and studies point to the difficulty in defining a precise threshold in aquatic plant abundance at which habitat quality declines. As a result, the DNR has historically taken a “precautionary management approach” in setting limits for aquatic plant control (Rosenberg 2002; Valley et al.

2004). This approach acknowledges that aquatic plants are important habitat and that control limits need to be conservative to avoid negative impacts to the state's public waters. This rationale was supported in a 1996 administrative law judge's report, when the DNR defended the current rule, which limits pesticide control of submersed aquatic plants to 15% of the littoral area, even though scientific research had not documented that 15% was the best limit for all lakes.

It is important to keep in mind that the primary purpose in allowing shoreline property owners to control aquatic plants is to provide access to open water. In virtually all cases, this can be done without exceeding the control thresholds in the existing rule and proposed rule changes.

Therefore, it is unnecessary to push the safe limits of aquatic plant control and risk degradation of the state lakes when issuing APM permits.

### **Invasive Aquatic Plant Control**

Invasive aquatic plants, particularly Eurasian watermilfoil and curlyleaf pondweed, have presented additional challenges to the APM program. These species can out-compete native aquatic plants and form mats on the water surface that hinder recreational use (Smith and Barko 1990; Madsen et al. 1991). Curlyleaf pondweed dies or senesces in the early summer, after which increases in phosphorous and algae blooms may occur (Bolduan et al. 1994; James et al. 2002).

As a result, there are times when it is beneficial to exceed the standard limits of aquatic plant control to help manage invasive aquatic plants. At the same time, large-scale control of invasive aquatic plants is still a developing science (Skogerboe and Getsinger 2006) and the results of this approach vary considerably between lakes. Lake-wide chemical control does not eradicate invasive aquatic plants, but has temporarily reduced the abundance of Eurasian watermilfoil in some moderately fertile (mesotrophic) lakes and helped native plants to increase (Madsen et al. 2002; Bremigan et al. 2005; Crowell et al. 2006; Wagner et al. 2007). Nevertheless, this approach has led to algae blooms and decreased water clarity with no increase in native aquatic plants in fertile (eutrophic) lakes that had sparse populations of native aquatic plants prior to the chemical treatment (Welling et al. 1997; Valley et al. 2006). Even in cases where lake-wide chemical control has been successful, repeated treatments have been necessary, usually within 1 to 3 years, to keep Eurasian watermilfoil at a low level (Crowell et al. 2006). As a result, the long-term efficacy of chemical control to manage invasive aquatic plants is still being studied.

Many people have asked why rules do not allow more liberal control limits for invasive aquatic plants. The DNR considered this approach when developing the proposed rule changes, but ultimately determined that it was problematic due to the variety of lake types, complexity of relationships between native and invasive aquatic plants, and risks to water quality and habitat posed by liberal control measures. Where invasive aquatic plants are present, they often occur with native plants and the relative abundance of each varies considerably. In some lakes, Eurasian watermilfoil or curly leaf pondweed may be present but may not reach the problem levels often associated with these species. Excessive control in these situations could create the type of disturbance that allows invasive plants to increase at the expense of native plants (Moyle and Light 1996; Chase and Knight 2006). This and the potential for varying results depending on lake fertility make it preferable to look at each lake individually when determining if high levels of aquatic plant control would be beneficial. As a result, the proposed rules use standard

control thresholds that are conservative and appropriate for most Minnesota lakes, and provide for variances and an exception to limits for individual shoreline properties to address higher levels of control for invasive species where its warranted.

### **Proposed Rule Changes**

The proposed rules include the following changes (refer to appendix 1 for specific proposed rule language):

- Reduce the maximum amount of submersed aquatic vegetation control allowed for an individual property;
- Sunset the “grandfather clause” in five years and provide opportunity for affected lake groups to work with the DNR to develop a lake vegetation management plan;
- Allow skimming of duckweed and filamentous algae without a permit;
- Establish criteria for approving, denying, and limiting APM permits;
- Prohibit pesticide control of aquatic plants in waters adjacent to special protection districts pursuant to Minnesota Rules, part 6120.3200;
- Specify conditions that may be included on APM permits;
- Specify limits on silt depth for permitting of automated aquatic plant control devices;
- APM permit fee increases;
- Implement \$50 fee for commercial mechanical control permits and commercial harvest permits;
- Specify permit revocation provisions, including the ability to prohibit commercial pesticide applicators licensed by MDA from applying pesticides to public waters for a specified time period as follows -
  - 1) Permit or privileges may be revoked for one year for a conviction,
  - 2) Permit or privileges will be revoked for one year for two convictions in a three-year period,
  - 3) Permit or privileges will be revoked for five years for a conviction subsequent to a revocation,
  - 4) Participation in an APM workshop is a prerequisite to having permit issued after a revocation, and
  - 5) Reinstatement of permits or privileges may be allowed after Commissioner’s review;
- Specify criteria for issuing variances to control invasive species, protect or improve aquatic resources, provide riparian access, or enhance recreational use;
- Specify required information for a lake vegetation management plan; and
- Reduce penalty for violation of rules from misdemeanor to petty misdemeanor.

The proposed rule changes will not increase the cost of APM program administration for the DNR. Program costs are largely driven by the number of APM permits and the proposed changes do not bring activities under APM permitting that currently do not require a permit.

The proposed rules would increase fees for some APM permit activities including offshore control of submersed aquatic plants, control of filamentous algae, chara, and swimmers itch, and lake-wide control of plankton algae. The proposed increases were calculated based on inflation since 1992, which was the last time these fees were changed. For permits to control filamentous algae and snails to prevent swimmer’s itch, proposed increases are more than the rate of inflation because the existing fee of \$4 per hundred feet of shoreline is so low that it does not cover the DNR’s cost to process the money received. The proposed rules would also implement a \$50 fee for commercial mechanical



control and harvest permits. The DNR spent an average of \$1,013,104 per year to administer and enforce the APM permit program during the fiscal year 2006-2007 biennium. Annual APM permit revenues during that same period averaged \$300,606, meaning that current revenues recover only 30% of the program costs. Nevertheless, the proposed fee increases will raise revenues by only about \$3,000/year, because the fee for the most commonly issued APM permit is set in statute.

The proposed changes that have resulted in the most discussion and debate are reducing the maximum amount of submersed aquatic vegetation control allowed for an individual property and the sunset of the “grandfather clause.” The following explains the rationale for these changes.

### **Reducing Submersed Aquatic Vegetation Control for Individual Properties**

Current rules have two quantified limits for submersed aquatic plant control. First, there is a lake-wide limit on the total amount of control that can occur, which is 50% of the littoral area (area that is 15 feet deep or less) for mechanical control and 15% of the littoral area for pesticide control. Second, there is a limit for individual properties of up to 100 feet of shoreline for pesticide control of submersed aquatic plants. These lake-wide and individual property limits are intended to work together to prevent excessive control of aquatic plants and negative impacts on habitat and water quality.

The DNR believes that the existing lake-wide littoral area limits are sufficient; therefore, no changes are proposed for them. The DNR believes that the existing limit for control adjacent to individual properties is not adequate to protect habitat and water quality, and in excess of what is needed to provide shoreline owners recreational access to the water. Existing rule language is also deficient in that a limit for mechanical control adjacent to individual properties is not specified. As a result, the DNR is proposing changes in aquatic plant control limits adjacent to individual properties.

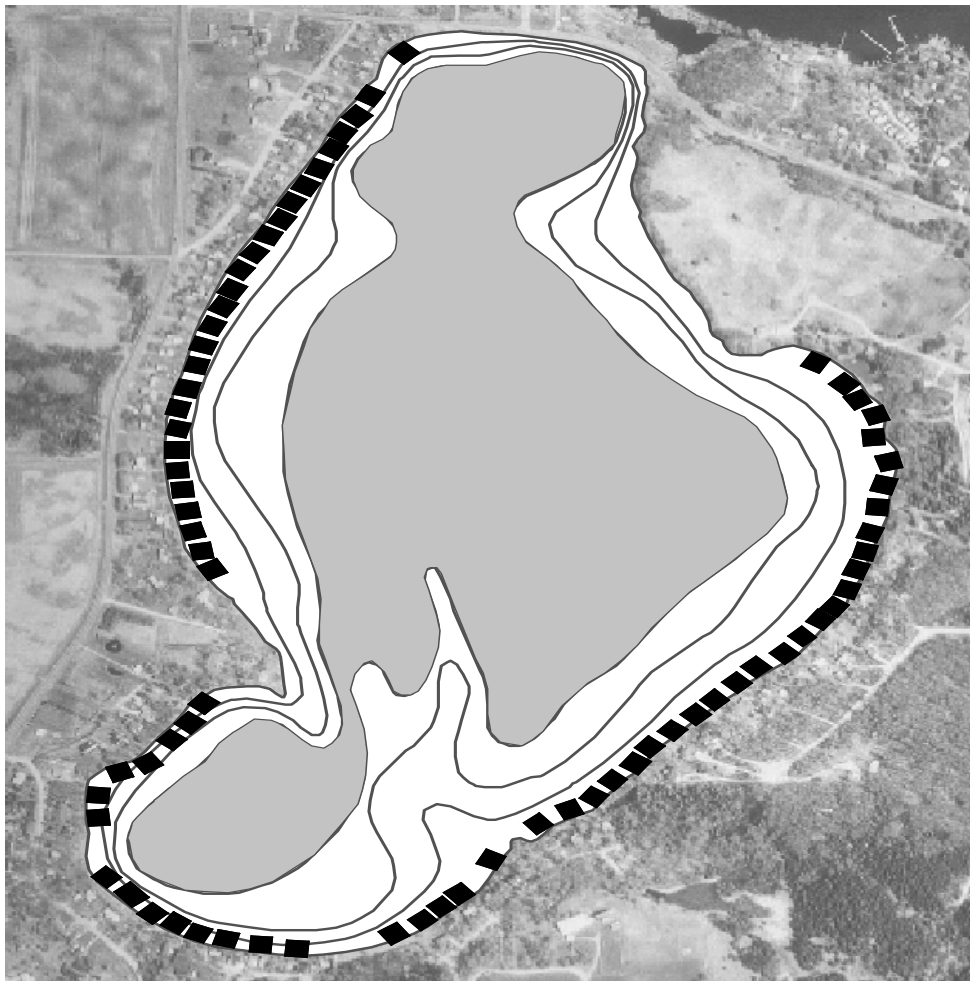
Current rule language allows submersed aquatic plants to be controlled on a maximum of 100 feet of shoreline per site belonging to an individual riparian property owner, with exceptions for resorts, apartments, condominiums, public swimming beaches, and marinas. The proposed change is to allow control of submersed aquatic plants on up to 100 feet or half of a person’s shoreline, whichever is less, with similar exceptions to allow more control for larger owned entities. In addition, there are proposed exceptions to allow up to 35 feet of shoreline control for properties with less than 70 shoreline feet, and to allow control on up to the entire shoreline if it is selective for invasive aquatic plants. The proposed language applies these limits and exceptions to both pesticide and mechanical control.

The effect of the proposed change would be to reduce the maximum amount of submersed aquatic plant control allowed for people who own or control less than 200 feet of shoreline. Under current rules, a person who owns 150 feet of shoreline could control a maximum of 100 feet, but under the proposed changes that person would only be able to control up to 75 feet.

The proposed changes are necessary to provide adequate protection for aquatic plants. Under current rules, aquatic plant removal can occur on long continuous stretches of shoreline, especially on heavily developed lakes where most lots are 100 feet wide or less. This can happen despite the lake-wide limit on pesticide control of 15% of the littoral area (Fig. 2). Near-shore aquatic plants, which are the primary target of control on individual shoreline properties, are

particularly important as habitat for non-game and juvenile fish (Poe et al. 1986; Bryan and Scarnecchia 1992). While existing rules give DNR the discretion to reduce the amount of control below 100 feet of shoreline, DNR staff are under increasing pressure on developed lakes to allow the maximum of 100 feet of control. This has made it difficult to administer APM permits consistently across the state. Decisions to reduce the amount of control below the maximum amount allowed are increasingly being appealed to the Commissioner. The DNR received 7 of these appeals in 2005, 11 in 2006 and 24 in 2007. In addition, it is generally unnecessary to allow the maximum control of 100 feet of shoreline to provide recreational access for swimming or boating.

**Figure 2.** Hypothetical example on George Lake in Kandiyohi County, showing potential result of current rules, which allow shoreline property owners to control submersed aquatic plants with pesticides on up to 100 feet of shoreline, with a lake-wide limit of 15% of the littoral area (area that is 15 feet deep or less). The light-shaded area with contour lines represents the littoral area. The black squares represent aquatic plant control areas of 100 feet by 100 feet, which is a typical size treatment area. The total area of the black squares combined is 15% of the littoral area. The diagram illustrates that the current individual shoreline limit does not provide adequate protection for near-shore aquatic plants, because over half of the shoreline could be treated before reaching the 15% limit.



The DNR addressed concerns that the proposed changes were overly restrictive for invasive aquatic plants by allowing control on up to an entire shoreline property if it is selective for invasive aquatic plants. Allowing more liberal control of invasive aquatic plants at the individual property scale will not help stop their spread within a lake, nor will it reverse lake-wide ecological trends such as loss of native plant diversity and abundance. Nevertheless, in some cases it will help to prevent these plants from becoming a nuisance to an individual property owner.

The proposed change would reduce habitat loss for non-game and juvenile fishes by requiring shoreline property owners to leave half of their shoreline untreated, thereby limiting removal of critical near-shore vegetative cover (Poe et al. 1986; Bryan and Scarnecchia 1992). In addition, for aquatic plant removal that extends to deeper water, the proposed changes may actually enhance fish habitat by creating edges for game fish to patrol for prey (Olson et al. 1998). The proposed changes would, therefore, help mitigate the impacts of aquatic plant removal on aquatic habitat.

In summary, the proposed reduction in the amount of submersed aquatic plant control allowed on individual properties will:

- 1) Prevent long stretches of shoreline from becoming denuded of critical near-shore habitat;
- 2) Improve consistency in how APM permits are issued across the state;
- 3) Allow exceptions for larger-owned entities including resorts, apartments, condominiums, public swimming beaches, and marinas and for property owners with narrow lots; and
- 4) Allow exceptions for control that is selective for invasive aquatic plants.

### **Grandfather Clause**

Current rules have a provision that allows the 15% littoral area limit on pesticide control to be exceeded on lakes where this was permitted prior to 1976. This provision is commonly known as the “grandfather clause,” and it affects several lakes in the Twin Cities Metropolitan Area including: Sunfish Lake in Dakota County; Cedar Island and Lost lakes and Carson’s and St. Louis bays of Lake Minnetonka in Hennepin County; and Johanna, Owasso, Gervais, and McCarrons lakes in Ramsey County. Since 2002, the percent of the littoral area that has been treated on these lakes has ranged from 11.5% to 65.8% (Table 1). On all other lakes in the state, the variance process is used to determine if aquatic plant control limits should be exceeded.

The DNR had initially proposed to eliminate the grandfather clause to provide more protection for aquatic plants, and more consistency in how aquatic plant removal is regulated in the state. The original reasons for the grandfather clause have been lost over time, nevertheless there is no biological justification to treat the affected waters differently than all other waters in the state. Given the habitat and water quality value of aquatic plants, the continuation of elevated levels of pesticide control in these lakes jeopardizes aquatic habitat and the fish and wildlife species that depend on it. DNR surveys have indicated that one fish species, banded killifish, has been functionally extirpated from Johanna, a grandfather lake in Ramsey County. This species is sensitive to changes in aquatic habitat, including aquatic plants, and has disappeared from several other metropolitan lakes in Minnesota and Wisconsin (DNR unpublished survey data; Lyons 1989). While there is no documentation that the disappearance of banded killifish in Johanna was caused by elevated levels of aquatic plant control, it is likely that habitat

degradation caused their disappearance and that high levels of pesticide control contributed to this degradation.

Table 1. Listing of the “grandfather” lakes showing the percent of littoral area allowed for aquatic plant control and the actual percentage controlled from 2002-2007.

Lake Name	County	Control limit (%)	2002	2003	2004	2005	2006	2007
Sunfish	Dakota	68	65.8	65.8	65.8	65.8	65.8	36.2
Cedar Island	Hennepin	45	45	45	45	45	45	45
Lost	Hennepin	38	37	37	37	37	37	36.7
Carson’s Bay	Hennepin	20	19.4	21.5	20.4	20.2	18.9	16.6
St. Louis Bay	Hennepin	25	23.4	25	25.1	24.2	22.2	24.3
Johanna	Ramsey	43	28.5	30.8	30.8	31.5	28.7	28.9
Owasso	Ramsey	28	23.6	23.5	23.4	23.7	22.1	21.8
Gervais	Ramsey	16	16	16.2	16.2	14.7	14	13.2
McCarron’s	Ramsey	17	15.7	15.7	12.7	12.2	11.9	11.5

The DNR is still proposing to eliminate the grandfather clause, but the proposed rule language would sunset the provision in five years and provide an opportunity for the DNR to work with affected lake groups and others to develop a lake vegetation management plan (LVMP) that would guide future aquatic plant control. The DNR feels strongly that the grandfather clause needs to be eliminated to protect aquatic habitat on the affected lakes. Nevertheless, the DNR also believes that a sunset provision and LVMP process will provide an opportunity for outreach and education, and help address concerns with invasive aquatic plants.

The proposed rules also provide more clarity and direction for determining if a variance is justified to control invasive aquatic plants, protect or improve aquatic resources, provide riparian access, or enhance recreational use on public waters. This will help guide the LVMP process on the grandfather lakes to determine appropriate levels of aquatic plant control.

### Conclusion

Aquatic plant management rules need to be changed to address challenges posed by shoreline development and invasive species. The DNR has sought a broad range of input in developing the proposed rule changes and has addressed specific concerns with invasive aquatic plant control and the grandfather clause. The proposed changes will help protect and improve aquatic habitat and guide control of invasive aquatic plants, while continuing to allow shoreline owners to control aquatic plants where necessary to get access to open water.

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