LAKE MINNETONKA ASSOCIATION

Position Statement – Lake Minnetonka Milfoil Control

Eurasian watermilfoil has been in Lake Minnetonka since 1987. In 1989, the Lake Minnetonka Conservation District (LMCD) initiated a harvesting program to cut and remove milfoil from critical areas of the lake. At that time, mechanical harvesting was probably the best solution to milfoil in Lake Minnetonka. However, at this time, we have more modern technologies and our objectives have changed. Through the 2006 Milfoil Demonstration Project as well as the development of the Lake Vegetation Management Plan, we know there are herbicides that can control milfoil over large areas. We also know these herbicides are protective of native plants, thereby enhancing lake ecological values.

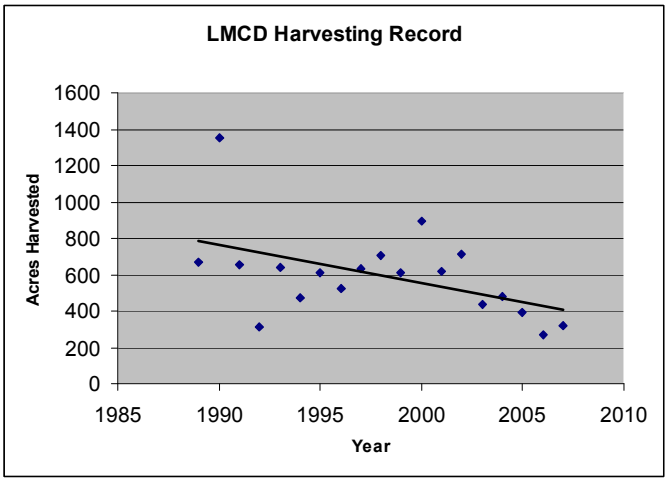
For these reasons, an evaluation of the harvesting program in light of contemporary scientific advances is timely and appropriate.

LMCD Harvesting Program

Harvesting is an operation that uses a mechanical underwater weed cutter, which offloads the cut weeds onto a transport barge, which in turn offloads that to a land-transport truck. The disposed weeds are composted. Harvesting is a milfoil maintenance operation and not a milfoil control operation. Harvesting is akin to lawn mowing – not intended to get rid of the plant only to crop it.

In Lake Minnetonka, the harvesting operation is intended to facilitate navigation and recreation in critical areas around the lake. Except for the accumulation of fragments on the lakeshore, the harvesting operation has largely been effective for its stated purpose.

However, the harvesting operation has become less effective over the years. The chart below shows the harvested acreage has been declining during its 19-year operation.



Indeed, the number of acres has decreased by 50%. More recently, the number of acres harvested since 2000 has decreased 64%.

From the LMCD's 2007 Eurasian watermilfoil harvesting report:

> "The 19th year of the EWM Harvesting Program represents an accomplishment that was only envisioned as a fond dream back in 1989. The investment in equipment and personnel has put the LMCD in the forefront of managing milfoil."

The Lake Minnetonka Association does not believe that the "fond dream" in 1989 envisioned a program with steadily declining acreage of milfoil harvested. As well, mechanical harvesting is no longer considered the state-of-the art in managing milfoil.

Stakeholders in the Three Bay Lake Vegetation Management Plan have also noted the limitations of the harvesting program. Indeed, only 16% of survey respondents thought the harvesting program was effective and 76% thought it is short-term, small-scale or ineffective.

Harvesting has other limitations. Harvesting cannot commence each season until the milfoil has gown to sufficient height. So, harvesting starts by about mid-June. The 10-week harvesting program visits various bays, sequenced on a three year rotation. About half of the harvested areas on the lake are not cut until mid-July or later. The LMCD's harvesting program has invested in capital equipment, which makes their program less flexible in terms of budget and other control options. Simply, the LMCD is committed to this program due to its high capitalization. Finally, harvesting is not considered a milfoil control technique.[1]

Contemporary Technology

Selective herbicides are chemicals that target Eurasian watermilfoil (and sometimes curlyleaf pondweed, another exotic plant in Lake Minnetonka) and offer large-scale, multi-season control without harming native plants, which are good for a healthy lake. The use of these herbicides is designed to be a restorative as opposed to a simple maintenance measure. These herbicides are recommended by the North American Lake Management Society (excerpts):[2]

- The management and control of nuisance aquatic plants using herbicides is most appropriate in the context of a comprehensive or integrated lake management plan.

[1] Restoration and Management of Lakes and Reservoirs, Third Edition. Cooke, G.D., E.B. Welch, S.A. Peterson and S.A. Nichols. 2005. CRC-Taylor and Francis.
[2] North American Lake Management Society Position Statement #4.

Position Statement – Lake Minnetonka Milfoil Control

- Native rooted aquatic plants are important to aquatic ecosystems and their control and destruction should be avoided or minimized. Once a lake is infested with a non-native species, its impact on native plants should be considered in its overall control.

- More aggressive controls, including the use of herbicides, may be necessary to control non-native aquatic plants.

Selective herbicides were the only technique considered appropriate to address the goals for the Three Bay Lake Vegetation Management Plan. A significant basis for this conclusion was the results of the 2006 milfoil demonstration project, which showed up to 99% reduction in Eurasian watermilfoil density and no harm to native plants. The advantages include:

- Selective herbicides are safe and a restorative.
- Selective herbicides will actually control milfoil over large areas and for multiple seasons.
- Selective herbicides are applied early in the season.
- There are no capitol investments.
- Significant reductions in lakeshore cleanup are expected.
- With a systematic and comprehensive approach, the use of herbicides diminishes over time.

Costs/Financing

The costs and financing for a transition from the harvesting program to a comprehensive milfoil control program on Lake Minnetonka will be sustainable. According to our analysis, the LMCD can divest in its harvesting equipment and shift its harvesting budget to the comprehensive control program over a 9-year period with no new additional funds. At that time, the comprehensive control program will cover approximately 1,620 acres on Lake Minnetonka sustained within the LMCD's current harvesting budget.

The fiscal analysis and assumptions are as follows:

1. The three bay 5-year budget is used as a baseline.
2. The project costs for each bay will be constant after year 5.
3. Three additional bays are added in years 3 and 5.
4. Bay lakeshore owners through the LMA will contribute 50% of the project costs (except year 1).
5. The MN DNR grant funds are assumed to be $40,000 for years 1 – 3, then $0 after that.
6. LMCD will divest and discontinue its harvesting program in year 3 (assume $100k).
7. Save the Lake funds will provide a bridge for years 1-3, then will not be needed.
8. LMCD's harvesting budget ($110 per year) will be applied to the comprehensive program beginning in year 3 (when the harvesting is discontinued).

LAKE MINNETONKA ASSOCIATION

Position Statement – Lake Minnetonka Milfoil Control

Costs and Funding Scenario

The total project costs for only the use of selective herbicides are included below. The LMCD's harvesting program is assumed to operate in years 1 and 2 with their current budget and funding sources, then be divested and rolled into the comprehensive milfoil control program beginning in year 3. This is one of several possible funding scenarios.

Year	LMA	LMCD (STL)	LMCD (Harvesting)
1 (3 bays)	$130k	$30k ($40k from DNR)	$0
2 (3 bays)	$100k	$60k ($40k from DNR)	$0
3 (6 bays)	$180k	$25k ($40k from DNR)	$100k (divest + harvesting budget)
4 (6 bays)	$140k	$0	$110k
5 (9 bays)	$205k	$0	$205k
6 (9 bays)	$165k	$0	$165k
7 (9 bays)	$130k	$0	$130k
8 (9 bays)	$90k	$0	$90k
9 (9 bays)	$75k	$0	$75k

* The total LMCD cost is $985k and can be covered by:
  - Save the Lake (years 1-3), $115k
  - Divesting in harvesting equipment, $100k
  - Annual harvesting budget @ $110/year, years 3-9, $770k

Related Concerns

Unfortunately, Eurasian watermilfoil is not the last invasive plant to threaten Lake Minnetonka. Other exotic plants that could be introduced into the lake include hydrillia, Brazilian elodea, water hyacinth and water chestnut. Of these, hydrilla is the closest and most concerning. Hydrilla is so invasive, it has been know to out-compete and crowd out milfoil.

Unfortunately, there is no early detection or rapid response plan in place. As well, preventative measures are inadequate.

LAKE MINNETONKA ASSOCIATION

Position Statement – Lake Minnetonka Milfoil Control

Recommendations

1. The LMCD should divest and phase out its harvesting operation.

2. The LMCD should transition into a comprehensive milfoil control program for Lake Minnetonka.

3. The Lake Minnetonka Association and the LMCD should expand the Three Bay Lake Vegetation Management Plan to include the entire lake and serve as a guide for lake-wide vegetation management that includes the use of selective herbicides.

4. An equitable funding formula that balances private and public funding should be used to pay for the management of plants in Lake Minnetonka according to this plan.

5. A comprehensive aquatic invasive species prevention plan should be developed and implemented.

6. Early detection monitoring and a rapid response plan for new invasive plants should be developed and implemented.

* Adopted by the Board of the Lake Minnetonka Association, February 25, 2008.