

**Subject |** Aquatic Vegetation Harvesting Program Review

**Date |** 11/15/2019

**To / Contact info |** Vickie Schleuning, Executive Director; Bill Cook, Board Director

**Cc / Contact info |**

**From / Contact info |** Jason Naber, Camilla Correll, Steve McComas, Joe Pallardy

**Regarding |** 11/21/19 TAG Meeting Discussion Topic

## Background

Per the Scope of Services for the Lake Minnetonka Vegetation and AIS Master Plan, EOR and BWS were to prepare an Aquatic Vegetation Harvesting Program Evaluation report prior to completing Master Plan. A draft of this report was released for comment on October 11, 2019. Comments were received by the following entities/persons:

- ✓ Three Rivers Park District
- ✓ Lake Minnetonka Association
- ✓ Minnehaha Creek Watershed District
- ✓ Minnesota Department of Natural Resources
- ✓ Tonka Bay Marina
- ✓ City of Greenwood
- ✓ City of Orono
- ✓ Private parties/lakeshore owners

The purpose of this memorandum is to:

- 1) Provide a summary of comments received pertaining to the Draft Aquatic Vegetation Harvesting Program Evaluation report dated October 9<sup>th</sup>, 2019;
- 2) Provide recommendations for the LMCD mechanical harvesting program as one tool in an overarching integrated aquatic plant management approach.

## General Issues/Concerns from Comments Received

The LMCD received a number of comments on the draft Aquatic Vegetation Harvesting Program Evaluation report. All comments have been recorded and tracked so that they can be addressed in a clear and transparent manner. To facilitate this process, EOR/BWS organized the comments into the following categories:

### Scientific Support:

Concerns surrounding the scientific support behind the report and the focus on organizational issues as opposed to the effectiveness of harvesting. Also comments were offered regarding the limited science on other topics that were of concern to stakeholders. These included use of herbicide, use of biocontrol tools such as weevils to control EWM, harvesting effects on fishery and nutrient removal associated with vegetation management tools.

### Financial Evaluation:

Concerns about the limitations to the evaluation, with specific concerns regarding equipment expenditures and comparisons between different treatment options such as herbicide.

### Compatibility/Congruity with the AIS Master Plan:

The draft Aquatic Vegetation Harvesting Program Evaluation report did not provide context as to the roll mechanical harvesting plays in an overarching aquatic plan management plan.

Planning Process:

Some parties felt there was a lack of transparency/clarity, issues with goals and the allocation of responsibilities. Some positive comments have been received from the public on the process to date.

Lake Use & Navigation:

Public comments were received noting severity of weed related issues in 2019. Suggestions were made to include a summary of how harvesting or not harvesting affects navigation on the lake. Some comments related to navigability should be summarized. .

Solutions:

A number of solutions to the lake weed issue on Lake Minnetonka were offered. In terms of the LMCD harvesting program suggestions included ranged from stopping completely to continuing with some suggested beneficial modifications. Herbicide was offered as an alternative to harvesting.

**Discussion Item:** The LMCD is looking for feedback on the following proposed revisions to the pre-2019 LMCD Harvesting Program. This item is on the agenda for the November 21, 2019 Technical Advisory Committee meeting.

## **Mechanical Harvesting**

The draft Aquatic Vegetation Harvesting Program Evaluation report focused on an evaluation of the existing program (pre 2019). Input received through the process will be used to finalize the report. Following are potential changes to the program that will be discussed with the TAG and stakeholders.

Proposed Pilot Study:

Beginning in 2020, the LMCD should initiate a 1 to 3 year pilot program in which mechanical harvesting efforts will be contracted out to private contractors on a project-by-project basis. After running a pilot, the LMCD could consider selling harvesting equipment if the pilot program is successful. It is recommended the LMCD hire an aquatic plant/lake management specialist who will be responsible for clearly defining when and where mechanical harvesting is to take place based on results from an annual pre-treatment survey and continued communication with vested stakeholders.

Mechanical Harvesting Acreage:

The overall scope of the mechanical harvesting program is recommended to be reduced during this pilot program to be less than 100 acres. Mechanical harvesting should be considered as a secondary treatment option in areas not suitable/appropriate for herbicide use. One important objective of the harvesting is to collect fragmented, floating vegetation, which remains a persistent problem on Lake Minnetonka for recreational boaters, primary contact recreation (swimming/diving), and anglers alike. The aquatic plant/lake management specialist will also be responsible for collecting and maintaining spatial information on the LMCD website or via Social Pinpoint that clearly shows where mechanical harvesting efforts take place along with before and after pictures and data collection of the harvested areas.

Distance from Shoreline:

At this point in time, it is recommended that the LMCD harvesting program focus squarely on managing problematic, submergent aquatic plant growth in areas 150 feet or greater from the shoreline. Additionally, mechanical harvesting can be used to enhance navigational access in connecting channels and/or to collect floating, fragmented vegetation at public access locations to minimize the spread of invasive species like EWM. The LMCD will set up a contractor's short list and assign aquatic plant harvesting where it is needed. The most likely areas in which mechanical harvesting will be applied include:

- Areas that are not being targeted through herbicide treatments.
- Open water areas 150 feet or further from shore where dense native plant growth is impeding navigation and an immediate solution is required to provide recreational access to open water from riparian areas.
- Navigational channels from one bay to another.
- Areas where genetic composition of EWM/Hybrid EWM suggests resiliency to herbicides.
- Skimming of rafts of floating plant fragments in open water based on feedback received from Social Pinpoint or other social media.
- Removal of floating/nuisance aquatic plants and debris at public access points in an effort to help prevent the spread of AIS.

#### Herbicide Treatments:

During this pilot study (and potentially beyond) the LMCD will not conduct any of its own herbicide treatments. Homeowners wishing to treat aquatic plants within 150 feet of the shoreline should continue to work the LMA, private contractors, bay captains, or representatives from Lake Improvement Districts (e.g., [North Arm Bay Homeowners](#)) to secure the necessary permitting to conduct the treatment.

#### Prioritization of Harvesting Areas:

The prioritization of areas to target via mechanical harvesting will begin each year with a lake-wide pre-treatment, meander survey conducted between May 15<sup>th</sup> and June 15<sup>th</sup> annually. If CLP is a target for harvesting, earlier survey dates may be necessary. The meander survey could incorporate biomass-sampling techniques via the use of sonar units capable of recording aquatic plant biomass. Annual pre-treatment surveys estimates are required because aquatic plant growth can change from year to year. As aquatic plant growth changes from year to year and within a given year, the role of each management tool will also need to change accordingly.

Results from the pre-treatment survey will be made publicly available via the LMCD website, social media, and/or Social Pinpoint. Subsequently, a meeting will be held with the LMA, bay captains, DNR, and other vested stakeholders to determine where aquatic plant management is proposed, determine site priorities, and determine the appropriate control tool. This exercise will begin with a review of previously managed areas. Ultimately, all areas within the lake will be mapped and prioritized for management actions. The end goal of this exercise will be a bay-by-bay map showing all areas of the lake to be treated and the proposed method of control.

#### Evaluate Return on Investment:

Regardless of the treatment method used, having a quantifiable goal is therefore useful in determining if results from treatment efforts are worth the cost over broad temporal and spatial scales. As part of documenting progress towards established goals, EOR recommends graphing the total surface area of EWM, CLP, and native species present before and after treatments on a bay-by-

bay basis and engaging vested stakeholders in each bay in a goal-setting discussion. Graphing this type of information on an annual basis is useful in demonstrating the Return on Investment (ROI), this data is currently lacking in Lake Minnetonka, which is currently managed by multiple entities operating with disconnected agendas.

All harvesters will be outfitted with GPS so the LMCD can track their time on the water, where they are harvesting and the loads (total amount of aquatic vegetation) being hauled out of the lake. Based on an average harvesting rate of 20 hours/week for 15 weeks (300 total hours). In terms of the scale of the harvesting operation, mechanical harvesters operate at a rate of 3 hours/1 acre of harvest or cutting channels at about 2 mph. Using these estimates the contracting fee for the mechanical harvesting program is expected to be approximately \$60,000 based on an industry standard rate for contracted mechanical harvesting services of \$200/hour. The \$60,000 fee is significantly less than the average cost for mechanical harvesting from 2008-2018. This does not include transportation services to offload the aquatic vegetation or administrative personnel responsible for program oversight.