



LAKE MINNETONKA CONSERVATION DISTRICT

EWM / CLP Harvesting Program

2018 Final Report

Update 12-31-2018

Harvesting is the removal of lake vegetation using mechanical equipment. The goal of harvesting is to ensure safe navigation for lakeshore owners and the general public, reduce the amount of AIS available to spread by boaters and other means throughout the busy season, and reduce biomass in the lake. Harvesting provides an alternative to other AIS management methods where they are not feasible or desired. It includes removal of vegetation that is cut in addition to removing nuisance vegetation that is loose or in mats in the area where harvesting for EWM/CLP occurs. The LMCD Harvesting Program began harvesting has been operating since 1989.

This report summarizes the program's outputs, as well as highlights notable events and trends observed during the LMCD harvesting operation in 2018.

I. EXECUTIVE SUMMARY

The Lake Minnetonka District (LMCD) Harvesting Program (Program) for the 2018 season is complete. The LMCD has permits to remove curly-leaf pondweed (CLP) in addition to Eurasian watermilfoil (EWM). Below is a brief summary of the program's highlights, outputs, and expenses for 2018.

Outputs

97 truckloads of EWM and CLP were harvested and removed from Lake Minnetonka. The trucking company estimates that each truckload is a minimum 7 to 7.5 tons of vegetation in the 2018 season. These 97 truckloads amount to more than 679 tons over more than 254 acres that were harvested.

This year, as part of the operation, a continued emphasis was made to monitor for atypical or suspect types of vegetation and aquatic species in the bays. Staff from Minnesota Department of Natural Resources (MN DNR) and other agencies were periodically consulted and/or briefed about findings.

Reports of both nuisance AIS and native vegetation were received with potential causes outside the realm of the LMCD harvesting operations, e.g., general boat traffic, other AIS treatments and activities, weather, etc. To add more value to the program, staff often removed or reported floating hazards and lost objects to ensure public safety, in addition to cleaning up vegetation that was found illegally deposited at some of the offload sites.

Staff worked proactively with residents, organizations, businesses to focus harvesting in the areas most dense with AIS vegetation to ensure safe navigation. In addition, pilot projects were underway to provide lakeshore owners additional opportunities for disposing aquatic vegetation safely through a state permit. In addition, private companies could use our trucking operation for a fee where feasible to reduce costs and transport redundancy.

Expenses

2018 Expenditures	Amount
Personnel Services	\$26,098
Trucking Services*	\$15,938
Other ⁺	\$38,346
Total	\$80,382

* – Contracted through Curfman Trucking

+ – Includes maintenance, supplies, fuel, insurance, phone, etc.

II. PROGRAM DETAILS

A. Harvesting Season Data and Conditions

1. Harvesting Season Start and End

The 2018 season consisted of approximately eight weeks, starting on June 14 and ending on August 9. Active harvesting took place on 27 days, with partial days lost due to adverse weather and mechanical issues.

A full crew was recruited prior to the beginning of the season and commenced with several days of training prior to the harvesting schedule. The crew operated two LMCD harvesters and a transport barge four days a week, 10 hours a day for the majority of the season.

2. Water Level

Lake water levels were not a significant factor during the 2018 harvesting season. According to the Minnehaha Creek Watershed District’s “Water Levels: Lake Minnetonka and Grays Bay Dam” webpage, lake levels (measured at Grays Bay Dam) stayed between 929.6 and 929.0 feet for the duration of the harvesting season.

3. Truckloads and Acres Harvested

Truckloads

In 2018, a total of 97 truckloads of vegetation were harvested. These outputs are comparable to other seasons (2016 and 2017) in which the LMCD operated two harvesters instead of three due to budget reductions.

Three key output metrics – truckloads of aquatic vegetation harvested per day, truckloads per season, and acres per season – are shown below for the LMCD Harvesting program 2010-2018 operating seasons.

Year	Truckloads per Day	Total Truckloads	Estimated Acres Harvested
2018	3.46	97	254-278*
2017	2.94	91	238-261*
2016	3.13	97	254-278*
2015	5.00	155	576
2014	4.91	162	391
2013	4.38	114	267
2012	5.17	181	412
2011	3.52	74	268
2010	4.25	136	384

* Estimations based on recorded values for harvested areas in 2010-2015.

Acres Harvested

Staff have estimated that between 254 and 278 acres of vegetation were harvested during the 2018 season. The amount of acreage harvested is estimated based on recorded values of acres harvested and truckloads recorded in prior years.

In the future, it would be recommended to use GPS equipment on each harvester to map the path of the harvesters to allow for a more specific estimation of the acreage harvested.

B. Operation Highlights

Harvesting priorities were based upon impediment to boat navigation on the lake, with higher priority given to areas of the lake where EWM / CLP had formed a floating mat. Although there were some areas of the lake with significant vegetation growth that was not aesthetically pleasing, these areas were not harvested. The vegetation growth was less than the significant amount of vegetation growth experienced in 2017. Staff worked proactively with many lakeshore owners, businesses, and bay captains to focus efforts in areas in most need.

For 2016, 2017, and 2018, the harvesting schedule for bays continued to be more fluid to accommodate higher-priority areas, resulting from changes in types and density of vegetative growth observed. Some of the main factors in determining the harvesting areas are: historical growth and locations; scouting of the areas at the beginning of and throughout the boating season to assess vegetation types and levels; and feedback from lakeshore owners and other customers regarding needs and timing, e.g., residents, bay captains, businesses, special event coordinators, agencies, etc.

These higher-density areas are locations at which vegetation posed a hazard or public nuisance for the safety of boaters and/or property by hindering navigation. Significant changes in scheduling are problematic due to the size of the Lake and slow commute time

of the harvesters. Additional contacts for future communications were gathered to help with scheduling and establishing expectations.

A heavy emphasis was placed on recovering harvested EWM / CLP that was not collected by the harvesters when initially cut. This was accomplished by occasionally using one of the harvesters to skim loose vegetation off the water's surface or a 180-degree back track. The harvesters were sometime operated in tandem, near each other, to better capture loose vegetation where dense vegetation existed. The wind and weather variables were also considered. Monitoring the speeds and operation of the harvesters based on the type of vegetation also appeared to improve the capture of vegetation.

Similar to past seasons, a combination of clear-cutting and limited channel-cutting was utilized to address impediments to navigation caused by vegetation. Areas that were in the most need of harvesting were cut at least once, with some areas being harvested twice to address significant navigational blockages.

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Staff worked proactively with residents, organizations, businesses to focus harvesting in the areas most dense with AIS vegetation to ensure safe navigation. In addition, pilot projects were underway to provide lakeshore owners additional opportunities for disposing aquatic vegetation safely through a state permit. In addition, private companies could use our trucking operation for a fee where feasible to reduce costs and transport redundancy. The harvested vegetation was transported to sites for composting.

C. Public Comments and Perceptions

Throughout the season, LMCD staff received requests to harvest in certain areas across the lake. Where feasible, the Executive Director coordinated with the Site Supervisor to incorporate requested areas into the harvesting rotation. The harvesting was coordinated with bay captains and an integrated approach was utilized for these bays. Many positive comments were received from lakeshore owners and lake users about the harvesting program.

The LMCD website was updated regularly with information regarding the estimated path the harvesters would take throughout the lake. Other information about harvesting activities was also made available through the LMCD website and social media.

Towards the end of the season, the LMCD received some concerns regarding fragmented vegetation washing up on shore. The City of Orono and the Lake Minnetonka Association passed resolutions requesting that the LMCD terminate its harvesting program. The LMCD Board and staff, in cooperation with staff from the MN DNR, MCWD, TRPD, OSHA, Hennepin County, members of the LMA, and other interested

parties, have been reviewing the program and AIS management efforts over the past few months. This report is not intended to summarize the review process or status. More information about the review is or will be available through other documents.

D. Personnel

In 2018, Tom Elmer served as the Harvesting Site Supervisor for the fifth year. The Site Supervisor oversaw five employees who were hired for the 2018 season. These five seasonal employees rotated between harvesting and administrative work at the LMCD office in order to provide assistance during the staffing vacancies. Expenses for personnel activities not related to the harvesting program are reported in a separate program, not as part of the harvesting budget.

E. Equipment Maintenance

The LMCD contracted with Curfman Trucking and Repair, Inc. to provide maintenance services for the harvesting equipment. The aging equipment appears to have resulted in increased costs for maintenance in recent years. Continued assessment of equipment was made and resulted in some additional preseason maintenance, as well as ongoing maintenance throughout the season. In 2018, fewer mechanical issues were experienced during the season than in recent years.

F. 2018 Harvesting Program Expenses

For 2018, the personnel services expenses associated with the LMCD's Harvesting Program totaled \$26,098. Expenses for contracted trucking services (Curfman Trucking) totaled \$15,938. The Harvesting Program also incurred \$38,346 in other expenses – maintenance, supplies, fuel, insurance, etc. The expenses totaled \$80,382 for the 2018 season.

The funding source for this program is a combination of levies from the LMCD's 14-member cities. The program budget has decreased over the years, and the availability of grants has greatly diminished. Harvesting is a tool in the management of AIS.