



LAKE MINNETONKA CONSERVATION DISTRICT EWM/CLP Harvesting Program 2017 Final Report

Update December 15, 2017

I. EXECUTIVE SUMMARY

The Lake Minnetonka Conservation District (LMCD) Harvesting Program (Program) for the 2017 season is complete. In 2017, the LMCD was issued permits to also remove curly-leaf pondweed (CLP) in addition to Eurasian watermilfoil (EWM). This report summarizes the program's outputs as well as highlights notable events and trends observed throughout the course of operation in 2017. Below is a brief summary of the program's highlights, outputs, and expenses for 2017.

Outputs

91 truckloads of EWM and CLP were harvested and removed from Lake Minnetonka. The trucking company estimates that each truckload approaches 7 to 7.5 tons of vegetation, which translates to approximately **637 tons (or 1,274,000 lbs)** of vegetation harvested for the 2017 season. **An estimated 238-261 acres** was harvested.

This year, staff recorded the type of vegetation and aquatic species found in the bays to identify trends and for potential use in determining future operations and initiatives. Staff reported fielding a higher number of public inquiries and requests this year based on the past four years experiences. Reports of blankets of vegetation were received prior the start of the LMCD harvesting and for approximately one month after the conclusion of the LMCD harvesting. Much of the weed blanket appeared to be associated with Wild Celery (*Vallisneria americana*) and its shallow roots and natural cycle. However, occurrences of other vegetation such as EWM were also reported, with the cause undetermined for some of the reports. e.g. general boat traffic, other harvesting activities, other AIS treatments, LMCD harvesting, etc.

Expenses

2017 Expenditures	Amount
Payroll	\$22,559.52
Trucking Services*	\$15,995.00
Other ⁺	\$37,414.32
Total	\$75,968.84

* – Contracted through Curfman Trucking

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

II. REPORT DETAILS

A. Harvesting Season Data and Conditions

1. Harvesting Season Start and End

The 2017 season consisted of approximately eight weeks starting on Tuesday, June 12th, and ending on Thursday, August 10th. The length of the season was 32 working days, with active harvesting taking place on 29 days, with partial days lost due to adverse weather and mechanical issues. Recruitment of seasonal employees was challenging this year, and a full crew was in place on June 26. The crew operated two LMCD harvesters and the 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 2017 harvesting season. Consistent and moderate rainfall maintained the OHW level during the season. Lake levels during the course of the 2017 season were fairly consistent with average levels.

3. Truckloads and Acres Harvested

Truckloads

In 2017, a total of 91 truckloads of vegetation was harvested, similar to the total of 97 truckloads harvested in 2016 using two harvesters and the transport watercraft (barge). This compares to 2015, the most recent year in which three harvesters and a transport watercraft (barge) were utilized, where 155 truckloads of vegetation were harvested.

For the past five seasons, the average truckloads harvested per day and total truckloads harvested per season are estimated as follows:

Year	Truckloads per Day	Total Truckloads	Acres Harvested
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 previous years' estimated values for harvested areas 2010-2015. Please see section II.A.4 for further information.

These averages suggest an economy of scale is achieved by operating a third harvester: harvesting productivity increased when three harvesters and the transport watercraft (barge) were utilized compared to the productivity of two harvesters and the transport watercraft. There are also certain fixed costs for trucking and supplies.

Acres Harvested

Staff has estimated that between 238 and 261 acres of vegetation were harvested during the 2017 season. The amount of acreage harvested is based on estimated values used over the years. Staff is researching options to identify a more accurate measurement system, such as utilizing GPS on the harvesters themselves during harvesting, potentially the 2018 season.

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 harvesting program did not have sufficient capacity to address the majority of the requests for harvesting additional areas.

For both 2016 and 2017, the rotating schedule of bays to harvest was modified in an effort to accommodate higher-priority areas. This was conducted by “scouting” ahead by the Site Supervisor to identify areas with a higher density of EWM/CLP. 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. Staff opted to prioritize harvesting in some of these higher-density areas, rather than adhere strictly to the rotating schedule. Significant changes in scheduling are problematic due to the size of the Lake and slow commute time of the harvesters. The harvesting needs were higher than capacity primarily since a large number of bays experienced high levels of vegetation. Further, additional time to communicate the harvesting schedule to the public would be helpful in establishing expectations.

In general, many requests were made to harvest areas more frequently and areas not historically harvested in the past including reports from areas being treated separately for AIS.

A heavy emphasis was placed on recovering harvested EWM/CLP that was not collected by the harvesters when initially cut loose. This was accomplished by occasionally using one of the harvesters to skim loose vegetation off the water’s surface. The harvesters were sometime operated in tandem, near each other, to better capture loose 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 only a couple of areas harvested twice due to equipment capacity, equipment breakdowns, and initially fewer personnel. Equipment malfunctions did not appear to be the result of operator errors.

The harvested vegetation composted at three sites in order to manage the quantity of vegetation. LMCD staff continues to work closely with TRPD to utilize Gale Woods Farm and Noerenberg Gardens as primary compost sites because of the close proximity to Lake Minnetonka and subsequent trucking efficiencies. The Minnesota Arboretum site was used since the Gale Woods site could only accommodate a limited amount of vegetation, and because the Noerenberg Gardens site was inaccessible for long periods due to weather conditions. The private harvesting companies have used the Arboretum site since 2010.

C. Public Comments and Perceptions

Public response to the harvesting was generally encouraging, with a historically large number of telephone inquiries requesting service in their areas. Staff often worked with individuals to resolve any concerns, most successfully when reported while harvesting was occurring in that area. Some concerns about vegetation trailings were also reported, including prior to harvesting and after harvesting was concluded. More review of this issue, causes, and options is needed.

C. Personnel

In 2017, Tom Elmer served as the Harvesting Site Supervisor for the fourth year. The Site Supervisor oversaw five employees who were hired for the 2017 season. Two of the five seasonal employees periodically rotated between harvesting and administrative work and Fridays 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 the harvesting budget.

D. Equipment Maintenance

The LMCD contracted with Curfman Trucking and Repair, Inc. for the 16th year, providing maintenance services for the harvesting equipment. The aging equipment appears to have resulted in increased costs for maintenance over the past couple of years.

E. 2017 Harvesting Program Expenses

For 2017, the payroll expenses associated with the LMCD's Harvesting Program totaled \$22,559.52. Expenses for contracted trucking services (Curfman Trucking) totaled \$15,995.00. The Harvesting Program also incurred \$37,414.32 in other expenses – maintenance, supplies, fuel, insurance, etc. The expenses totaled \$75,968.84 for the 2017 season.

The funding source for this program is a combination of levies from the LMCD's 14 member cities and a grant of \$4,999.00 from the MN DNR. The program budget has decreased over the years, along with the reduction of grants.

2017 LMCD Harvesting Program (EWM/CLP) -- Harvested Areas (estimated)

