

**MINER LAKE IMPROVEMENT PROGRAM
PROPOSED ANNUAL BUDGET
2015 – 2019**

Improvement	Annual Cost
Nuisance Aquatic Plant Control (30 acres at \$500/acre)	\$15,000
Aquatic Plant Control Coordination/Field Surveys	\$5,000
Water Quality and Vegetation Monitoring	\$4,000
Administration and Contingency	<u>\$1,000</u>
Total	\$25,000

Nuisance Aquatic Plant Control

Plant control in Miner Lake is proposed to include aquatic herbicides and/or biological agents for the control of exotic plant species. The amount of herbicide use in any given year would depend on the type and distribution of plants and Michigan Department of Environmental Quality permit conditions. Exotic species of primary concern in Miner Lake include Eurasian milfoil, curly-leaf pondweed, and starry stonewort.



Eurasian milfoil



Curly-leaf pondweed



Starry stonewort

Plant control activities will be coordinated under the direction of an environmental consultant. The consultant would be responsible for preparing contract documents for the plant control program, conducting surveys of the lake to determine the scope of work to be performed by the plant control contractor(s), and performing follow-up inspections to ensure work is performed in a satisfactory manner. The consultant will maintain a written journal of all plant control activities and will provide written recommendations to the Miner Lake Improvement Board regarding payments to the plant control contractor(s).

Water Quality and Vegetation Monitoring

Water samples will be collected at 10-foot intervals from the surface to the bottom over the deepest portion of the lake to evaluate baseline water quality conditions. Samples will be collected during the periods of spring turnover and summer thermal stratification. Parameters sampled will include temperature, dissolved oxygen, total phosphorus, and surface water chlorophyll-a. This data will be compared to historical data and used to evaluate baseline water quality conditions in Miner Lake.

During the summer sampling period, a plant survey would be conducted in accordance with the Michigan Department of Environmental Quality's *Procedures for Aquatic Vegetation Surveys*. With these procedures, the lake is divided into individual assessment sites and the type and relative abundance of each plant species within each assessment site is determined around the entire shoreline.

Project Financing

Improvements to the lake would be financed through the existing lake improvement special assessment district in accordance with Part 309 (Inland Lake Improvements) of the Natural Resources and Environmental Protection Act, PA 451 of 1994. The special assessment district includes all waterfront properties and back lot properties with deeded or dedicated access to the Miner Lake. Waterfront parcels would be assessed one unit of benefit and back lots with access would be assessed one-half unit of benefit.

In addition, contiguous lots in common ownership are proposed to be assessed as a single parcel, provided only one house exists on the parcel. "Contiguous" means parcels touching along a boundary or at a point. Contiguous shall also include accessory lots that have a garage, storage facility, drain field or other improvement appurtenant to, but not physically touching, the primary parcel.

Based on the budget presented above, the annual assessments would be approximately \$116 for a waterfront parcel and \$58 for a back lot.