

April 22, 2014 Extension

Mr. Sam Martin
Miner Lake Improvement Board

Re: Miner Lake - Monitoring Program Proposal

Dear Sam:

Per our conversation, I have prepared this proposal to extend the monitoring program of Miner Lake in 2014.

The monitoring program would include the following work elements:

1. Collect water quality samples to evaluate the present condition of the lake. Samples would be collected early spring and summer at 10-foot intervals over the deepest portion of the lake to measure temperature, dissolved oxygen, total phosphorus, pH, and alkalinity. In addition, surface water chlorophyll-a levels and water transparency would be measured during each of the aforementioned sampling periods. During the summer sampling period, ten samples would be collected from near-shore areas of the lake and analyzed to determine *E. coli* bacteria levels.
2. During the summer sampling period, conduct an aquatic vegetation survey of the entire lake. The survey would be conducted in accordance with Michigan Department of Environmental Quality *Procedures for Aquatic Vegetation Surveys*. With these procedures, the lake is divided into individual assessments sites at 300-foot intervals around the shoreline and the type and relative abundance of all plant species are determined within each assessment site.
3. Prepare a written summary of monitoring results in both hard copy and electronic formats, and meet to report findings.

The total cost of the monitoring program will be \$4,000. We will bill for our services on a lump sum basis with \$2,000 due in June and \$2,000 due in September. Annual extensions of the contract would be contingent upon the discretion of the lake board.

If you are in agreement, please sign below and return a copy to me. Thank you.

Sincerely,

PROGRESSIVE ARCHITECTURE ENGINEERING

Anthony F. Groves M.S. Signed for Pages 1 - 1



Tue Apr 22 2014 09:34:31

Anthony F. Groves M.S.
Water Resources Practice Leader

ACCEPTED

BY:



Date:

5/15/14

Samuel A. Martin, Authorized Representative
Miner Lake Improvement Board