

Lake Quality Management Improvement Project

Background

For a number of years the Half Moon Lake Residents Association (HMLRA) has been actively working to clean up Half Moon Lake routinely sponsoring lake clean up initiatives. The Lake when it was first developed for Residential development in the 1950's was not well managed and people use to dump garbage into the lake including cars, residential garbage, water heaters and tires. The Association has sponsored ongoing cleanup of the lake and has dragged the lake of the debris to ensure its removal. Associated with this the Residents host an annual residential cleanup and an annual lake clean up. The County of Strathcona has been very supportive of these initiatives. Providing waste bins in support of these efforts and waste removal.

In 1991 The Half Moon Lake Residents Association was formed and one of its first projects was the development of a sewage system for the community. The Residents Association was able to secure a federal grant to develop a strategy for lake clean up and as a result of these efforts in conjunction with the County of Strathcona a sewage system was built in the Hamlet, which went a long way to improving water quality in the lake. The sewage system was paid for by a levy being placed on residents municipal taxes to cover the costs.

Despite the Residents best efforts Lake Quality continues to be a challenge and annually the Alberta Government Health Department routinely issues an advisory on Half Moon Lake with regards to Blue Algae and on some occasions Ecoli.

The HMLRA is a member of the Alberta Lake Management Society (ALMS). A Society whose primary goal is to improve Alberta lake water quality. We are donating time and equipment to the ongoing monitoring of the health of the lake. We also recently supported the County of Strathcona monitoring of the lake for Zebra Muscles.

The HMLRA in our efforts to improve lake quality have been approached by third parties with an interest in selling their technologies to improve lake quality. These proposed options are ranging up to as high as \$600,000 in Capital Investment and ongoing Operating/Maintenance costs of \$50,000 per year. These technologies do not seem to be proven based on scientific fact and represent a significant cost to residents for unproven technology. Some of the technologies involved include lake treatment with chemicals or bacterial treatment and the residents are concerned these types of treatment will have a detrimental effect on the birds and minnow fish species that live on the lake.

In the 1980's, the Alberta Government studied lime treatment of lakes and Half Moon Lake was one of the lakes involved in the study. The lime treatment proved to be an effective means of controlling Blue Algae in the lake but the Alberta Government never really concluded whether this should be an ongoing initiative or not and the study was never followed up on.

Project Purpose

The purpose of this Project is to hire a consultant the cost of this consultant would be shared equally between the County of Strathcona and the Residents, which is projected to cost \$20,000. The Residents will hire a consultant recommended by the ALMS with no vested interest in selling something to advise the Residents on what can be done to further improve lake quality.

The Consultant will look at current lake quality data, previous historical studies conducted by the Alberta Government and advise Residents on a recommended path forward. The analysis and final report is to include further guidance on property management adjacent to lake, evaluation of long term lake treatment options for the lake that are environmentally effective, approved by all levels of government and what are the long term costs of these options including up front and long term operating/maintenance costs.

Associated with this project will be an education portion for the Residents from the Consultant as to what are the attributes of Blue Algae in the lake and its real impact to lake usage.

In addition to contributing to the Consultant Study, Report and Findings Presentation. The Residents will also donate their time and equipment to the lake monitoring effort in support of this study, which is envisioned to include 300 hours of donated time, boats and boat gas.

The ultimate goal of this project would be to educate residents on how to manage their properties properly, so as to not degrade water quality and what can be done by lake residents to improve lake quality.