

**RESOLUTION 2015 – 01**

**BOAT MOORING RESOLUTION - SUMMER VILLAGE OF BIRCHCLIFF**

**WHEREAS** the Summer Village of Birchcliff recognizes the changes to the Navigable Water Act;

**WHEREAS** destination lakes in the Province of Alberta currently have no regulations for boat mooring and docking;

**WHEREAS** the Summer Villages of Alberta are greatly impacted by unregistered docks and lifts;

**NOW THEREFORE BE IT RESOLVED THAT** the Alberta Summer Villages Association urge the Province of Alberta to develop Disturbance Standards and Memorandums of Understandings with affected municipalities that will allow lake front municipalities to regulate and enforce docks and lifts adjacent to municipal boundaries.

**RESOLUTION 2015 – 02**

**AQUATIC INVASIVE SPECIES RESOLUTION - SUMMER VILLAGE OF BIRCHCLIFF**

**WHEREAS** the Province of Alberta has an Aquatic Invasive Species program and the Summer Village of Birchcliff recognizes the detrimental impact Aquatic Invasive Species can have on our lakes.

**NOW THEREFORE BE IT RESOLVED THAT** the Alberta Summer Villages Association urges the Province of Alberta to continue to work collaboratively with the local municipalities and organizations toward long term strategies;

- Focus additional resources and strategies toward education and enhanced inspection stations;
- Provide funding and ongoing programs in Aquatic Invasive Species.
- To provide funding for extended hours for Inspection Stations.

## **RESOLUTION 2015 – 03**

### **FEASIBILITY STUDY OF AN ALGAE HARVESTER - SUMMER VILLAGE OF GRANDVIEW (on behalf of the Alliance of Pigeon Lake Municipalities)**

**Whereas** the prevention and remediation of nuisance blue green algae blooms requires a “portfolio” approach involving watershed actions, long term prevention programs and short term remediation actions,

**Whereas** the harvesting of algae has been shown elsewhere to be a viable alternative to removing algae scums from waterbodies, and

**Whereas** there may be benefits in both mitigating further algae blooms and in reducing the negative effects of blooms,

**Therefore, it is resolved that** the APLM acknowledge that a feasibility study should be completed to determine the long and short term effects of removing large quantities of algae through a harvesting operation and further, because of the province wide application of such a harvesting operation, the evaluation should be conducted with the support of the Association of Summer Villages of Alberta.

#### **Background**

Many of Alberta’s prairie lakes routinely experience nuisance blue green algae blooms which often appear as surface scums. Not only is this aesthetically displeasing but it is also a significant health hazard. The subsequent buildup of algae along the shoreline causes the additional problem of the release of gases associated with decaying material. It appears that the problem is becoming more critical each year and has reached the point where a short term remediation program should be considered.

Algae harvesters have been used in many jurisdictions with some success. Perhaps the noteworthy example is the commercial harvesting operation at Klamath Lake in Oregon. This operation uses algae harvesters to gather a specific species of cyanobacteria for commercial value. Although they use various sizes of harvesters, the largest is a float assembly measuring 20’x40’ with processing equipment on board. It is driven by 2x100 HP outboard motors. The pickup is 14’ and the speed is reported to be 2-3 mph. It is mainly a surface accumulation which is being gathered. (Ref. personal conversation with operator) Using these parameters, it appears that if logistical difficulties could be overcome, a meaningful amount of algae could be

recovered. Since algae mass is currently used as a natural fertilizer, the most obvious means of disposing of the dewatered algae would be by surface distribution on agricultural lands. The surface spreading should mitigate the associated problem of release of ammonia gases as it would quickly dry and oxidize rather than simply rot on the shoreline. Also, any toxic effects would be minimized as it would be much safer being oxidized and degraded over a large remote area in an agricultural local as opposed to the near proximity of lakeside properties. These are some of the issues which would be resolved through a feasibility study.

Perhaps the biggest question to be answered other than the financial implications of such a harvesting operation, is whether the removal of a large quantity of algae would have on the annual cycle of nutrients through the water column. It is recognized that there is only a very small amount of phosphorous contained in algae, but what may not be fully understood is how algae recycles phosphorous in support of new growth. The possible effects of removing algae include the elimination of the nitrogen release which is thought to contribute to further blooms and decrease the oxygen depletion from the decomposition process which is thought to contribute to fish kills. It could also minimize the formation of ammonia which has been shown to be toxic to fish.

A rigorous feasibility study is required to answer the many questions pertaining to the harvesting of algae for the purposes of improving water quality and improving the aesthetics of the waterbody. This is a problem which exists in many of Alberta's prairie lakes and should be appropriately be undertaken with the support of the members of the ASVA and other lake municipalities. The scope of the study would focus primarily on the logistics, regulatory matters and operating costs but would also address possible beneficial effects. Should these prove to be reasonable for a lake situation, then the study would continue with emphasis on the implementation phase.

The resolution presented requests the ASVA support in principal the feasibility study of using an algae harvester as a short term project to provide immediate improvements to the lake environment. With this support, specific funding requests will then be made to the Summer Villages and other appropriate municipalities. This project would be undertaken under the guidance of the Alliance of Pigeon Lake Municipalities.