

The floating wetland concept will reduce nutrient buildup in waste water ponds but could also benefit livestock farmers

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Limoges - A man-made "floating wetland" is being promoted as the chemical-free natural approach to reducing nutrient buildup in wastewater collection ponds.

What's believed to be the first such system in Eastern Ontario was literally launched at a gathering in this Ottawa hamlet last week.

With the help of an MOE grant and \$2,000 from La Nation Municipality, the Limoges project is being coordinated by South Nation Conservation. Total cost is \$30,000.

A connected series of manufactured cells or modules, the floating wetland will help cleanse a stormwater pond in the hamlet. Its makers, C & M Aquatic of Owen Sound, say there are obvious on-farm applications as well, some of which are underway in the U.S.

SNC chair Bill Smirle, a Morewood dairy farmer, said the concept in different configurations could work in farm manure and milk house wastewater

Free-floating pollution control



La Nation Mayor Francois St. Amour comments on the floating wetland behind him which has yet to be seeded.

ponds. SNC environmental technologist Jason Symington said if funding can be found, an agricultural pilot project might be introduced.

C & M co-owner Josh Clark said that, to his knowledge, the floating wetland in question is the first one to be deployed in Eastern Ontario. Several have been installed in the GTA and further west.

As to how the wetland is expected to over-winter, Clark said there's a system in Fort McMurray, AB, that survives that harsh climate and regenerates in the spring.

La Nation Mayor Francois St. Amour, a member of the SNC board of directors, said his municipality is proud to be hosting the green alternative to combating algae growth nourished by nitrogen and phosphorus loads in the pond.

Not only is it unsightly, but when temperatures rise in mid summer, decomposing

algae creates bothersome odours disturbing residential neighbours, St. Amour explained.

"Aeration helps but doesn't control the problem," he explained. "Last year, we used chemicals that work, but we'd rather avoid them. We were just about to go with chemicals again this season, when Jason let us know the floating wetland was approved."

Floating wetlands mimic nature in delivering similar water quality improvements, Symington explained. And they provide a highly efficient means to buffer habitats against surges in nutrients and pollution. They can remove from water up to 80 per cent of Total Suspended Solids.

The wetlands are constructed from durable, non-toxic recycled plastics and vegetated with native plants, providing a surface area for

growing large amounts of microbes in a short period of time. Nutrients in the water circulating around a floating wetland come in contact with the plant roots and microbes and are consumed by them.

Each wetland pod costs about \$300 to assemble, Clark explained, including the frame, floating devices, growing pads and anchor rings. Various plants are used, depending on local conditions.

Symington said the Limoges site is considered an ideal study location as there are known nutrient overload issues and the pond's discharge watercourse, South Indian Creek, will benefit from the more environmentally friendly storm water released into it.

Once the floating wetland is fully up and running, Symington will monitor and report on its performance.



Josh Clark and Jason Symington inspect a used floating wetland module borrowed from Mississauga.