



May 23, 2017

Madhu Malhotra  
Manager  
Ministry of the Environment and Climate Change  
Climate Change and Environmental Policy Division  
Land and Water Policy Branch  
40 St. Clair Avenue West, Floor 10  
Toronto, Ontario M4V 1M2

Dear Ms. Malhotra,

Re: EBR Registry Number 012-9971: Canada-Ontario Action Plan for Lake Erie

The Beef Farmers of Ontario (BFO) appreciates the opportunity to provide comments on the Canada-Ontario draft action plan, *Partnering in Phosphorus Control: Achieving Phosphorus Reductions in Lake Erie from Canadian Sources*. BFO represents the 19,000 beef producers across Ontario by advocating in the areas of policy planning, industry development and research, and domestic and export market development.

BFO is a member of Grow Ontario Together, a collaboration of agriculture organizations working together to provide leadership on reducing the phosphorus load to Lake Erie. We are committed to being part of the solution.

Recommendations from BFO for the Canada-Ontario Action Plan for Lake Erie are expanded upon below and include the following:

- Provide clear links between stated guiding principles and policy and program recommendations, especially regarding economic sustainability.
- Address the potential policies or programs that could incentivize forage and beef production and the conversion of crop acres to forage acres.
- Place more emphasis on the importance of soil health and erosion control.
- Distribute future cost-share funding for environmental projects in a transparent and equitable manner that reflects the potential impact of projects.
- Weigh potential policies and programs in proportion to the magnitude and significance of the issue in contributing to the overall Ontario phosphorus load.
- Modify any reference to “non-growing season” to “frozen and snow-covered ground”.
- Pursue an industry-led resolution process to manure spreading concerns that is focused on education, awareness and behavioural change among producers.



- Review the current Nutrient Management Strategy and Nutrient Management Plan documentation, training and certification requirements.
- Improve the market mobility of nutrients, enabling the movement of nutrients from geographic areas of high supply to areas with fewer self-generated nutrients.
- Accompany any potential expanded regulation on manure spreading with 90% cost-share funding for manure storage.
- Provide financial support in an equitable manner province-wide, if new regulatory expectations broaden beyond an initial target area.
- Establish a comprehensive water quality monitoring network in Ontario, with processes and protocols similar to those being established in Ohio.
- Clarify that any proposed adaptive environmental management trigger will be based on the best available science.
- Distinguish and identify performance- and activity-based evaluation metrics.
- Develop activity-based evaluation metrics and targets at the beginning of the 5-year implementation plan with meaningful input from agricultural stakeholders.

### **Guiding Principles**

BFO is supportive of the draft action plan's four guiding principles (science based, continuous improvement, shared responsibility, economically sustainable) and the adaptive management approach. However, while the principles are sound, the links between the stated guiding principles and the policy and program recommendations are not always clear. There is especially little linkage or content on economic sustainability, with limited recognition or commitment to funding within Ontario's proposed action plan. In contrast, Ohio's draft plan is explicit in the state's past investments and in the need for both short-term and long-term funding commitments, especially for water quality monitoring and certain ongoing nutrient reduction practices.

### **Complex Challenges**

BFO appreciates the recognition throughout the draft action plan of the complex challenges facing Lake Erie. The source of algal bloom in Lake Erie is not exclusively tied to the phosphorus load, nor is the issue solely an Ontario problem. Approximately 84% of the total phosphorus load originates from U.S. tributaries and, based on the provided data, the average load per acre from Canadian tributaries (+/- 0.57 lbs/acre) is about half the average load per acre from U.S. tributaries (+/-1.07 lbs/acre). We also appreciate that the draft action plan includes mention of the multiple sources of phosphorus loading to Lake Erie, such as lake ecology, climate change, and changing agricultural production systems and land use, specifically the reduction in beef and forage production.

### **Forages and Soil Health**

The Lake Erie basin has experienced a shift in agricultural land use from forage acreage to crop acreage over the last 30 years, and while the erosion-control benefits of forage and beef production are mentioned in the draft action plan, there is no mention of policies or programs that could encourage forage and beef production. Forage production, pasture-based cropping systems and grasslands managed by Ontario beef farmers do more than produce beef – they play an integral role in the health of Ontario's agricultural soils and nutrient run-off management. The presence of cows on agricultural land improves soil structure, provides erosion control from fencerows and windbreaks, and promotes



soil ecosystem health through the production of perennial forage crops that minimize tilling and soil disruption.

The maintenance, enhancement and creation of forage and pasture land play an important role in reducing the phosphorous load to Lake Erie. As such, BFO recommends that Ontario's action plan address the potential policies or programs that could incentivize forage and beef production and the conversion of crop acres to forage acres. BFO has been working on multiple projects and initiatives to increase the cow herd in all regions of Ontario, and is willing to work with government and other stakeholders to increase forage-based acreage in the Lake Erie basin. Examples of policies and programs that would encourage forage and beef production in the region include cost-share funding for perimeter fencing, a no-cost government guarantee for the Breeder Loan Program (similar to the guarantee provided under the Feeder Cattle Loan Guarantee Program), and increased investment in the Ontario Risk Management Program.

Further to this, BFO recommends that the action plan place more emphasis on the importance of soil health and erosion control. When considering best management practices for soil health, it should be noted that government policy can have significant influence on production practices in Ontario, and there are wide-ranging benefits that stem from increasing cow-carrying capacity of existing farmland and expanding Ontario's cow herd. Diverse crop rotations that include perennial crops for forage production, cover crops that protect the soil and provide feed for livestock, and fencing that acts as both an erosion control measure and critical infrastructure for beef production speak to the need for better integration of livestock into crop production.

### **Voluntary Initiatives**

Ontario's draft action plan speaks to the success of the Environmental Farm Plan in implementing on-farm projects that address environmental risks. BFO recommends that future cost-share funding made available through this program for environmental projects and best management practices, including nutrient management, should be distributed in a transparent and equitable manner that reflects the potential impact of projects. Manure storage, fencing and windbreaks are key infrastructure and funding priorities for beef operations that will support the shared goals of the action plan.

An increased regulatory burden on manure application will discourage forage-based production in the Lake Erie basin, the decline of which is identified in the draft action plan as a contributing factor to phosphorus load. Ontario's existing voluntary programs, such as the Environmental Farm Plan, have a proven track record that illustrates their effectiveness, as evidenced by the lower rates of phosphorus load per acre from Canadian tributaries in comparison to U.S. tributaries.

Voluntary participation in agricultural and rural stewardship programs has a long history of success because these programs combine education with incentives to adopt best management practices, resulting in changes in land management that provide sustained environmental benefits over time. Voluntary stewardship through education, community engagement and cost-share incentives helps foster an improved understanding of the shared responsibility for environmental protection. Promoting collective, cumulative actions and behavioral changes can help reduce phosphorus loading over the long term.



### **Livestock Agriculture's Role**

Policies and programs, whether voluntary or mandatory, must be proportional to the magnitude and significance of the issue in contributing to the overall Ontario phosphorus load. The draft action plan provides an assessment of the characterization of the Lake Erie basin, which was divided into 65 watersheds, with each classified in 1 of 9 categories (Urban, Agricultural-Crop, Agricultural-Livestock, Natural Heritage, or a combination of the above). Presumably, this assessment was done in order to determine if there is any correlation between land use and water quality. The finding within the draft action plan is that there is no clear pattern in the watersheds and no conclusion can be drawn, but it is BFO's contention that this assessment shows that there is no correlation between livestock agriculture and higher phosphorus load. In fact, as stated in the draft action plan, the decline in forage-based livestock agriculture in the Lake Erie basin has actually contributed to higher phosphorus load.

Looking at the land use categories within the assessment, there are 13 watersheds classified as Agricultural-Livestock, 15 watersheds classified as Agricultural-Crop and 4 watersheds classified as Urban, plus watersheds that are classified as Natural Heritage or a combination of the above. Of the 6 total watersheds that are classified as having a phosphorus concentration of less than 30 ug/L, Agricultural-Livestock watersheds account for 3. Of the 13 Agricultural-Livestock watersheds, only 2 (15%) are classified as having a phosphorus concentration greater than 90 ug/L.

In comparison, no Agricultural-Crop or Urban watersheds are classified as having a phosphorus concentration of less than 30 ug/L. Five of the 15 Agricultural-Crop watersheds (33%) and 2 of the 4 (50%) Urban watersheds are classified as having a phosphorus concentration greater than 90 ug/L.

Based on these watershed assessments and other available research, there is no data to support a link between tributary phosphorus load and livestock density. The available modeling and data on phosphorus reduction estimates from improving manure management (timing and incorporation) also indicate that livestock agriculture is not a significant contributor to phosphorus loading. Based on published data and the relatively small potential impact of further restricting manure application, BFO is puzzled as to why the draft action plan's proposed policy action for the livestock sector includes "consideration of further restrictions on the application of nutrients during the non-growing season". Shared responsibility is a guiding principle of the document, but it is an abandoned principle when regulations are applied disproportionately.

### **Further Restrictions on Nutrient Application**

BFO recognizes that manure application on frozen and snow-covered ground contributes to phosphorus runoff, and this activity warrants appropriate management. However, the consideration of further regulatory restrictions on the application of manure in the non-growing season is out of proportion with the facts and scientific reality.

Importantly, the term "non-growing season" reflects a change in scope and problem definition from the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). The international Lake Erie Nutrient Targets Working Group defines the manure application issue as *land application on frozen and snow-covered ground (without incorporation)*. Defining the issue as land application in the "non-growing season" is concerning, as most manure is applied either pre-planting or post-harvest. BFO recommends that any reference to "non-growing season" be modified to "frozen and snow-covered ground", in order to more accurately define the issue that is being addressed.



Ontario's *Nutrient Management Act* already regulates manure spreading on frozen and snow-covered ground, and with the existing phase-in process, all livestock agriculture will eventually be regulated. Adding further restrictions and requirements would add undue burden to beef operations, especially in light of the fact that other jurisdictions have only in recent years started to implement standards similar to Ontario's. The *Nutrient Management Act* regulation and restrictions are risk based and outcome focused, with determining factors based on soil conditions and proper application methods rather than a rigid timeframe.

Further manure application restrictions should only be considered if the best available science indicates that current activity is resulting in a significant proportion of the Ontario agricultural source phosphorus load. There must also first be consideration of non-regulatory, cooperative measures, such as an industry-led resolution process that is focused on education, awareness and behavioural change among producers, which would satisfy the goals of the action plan. BFO's recommended model for an industry-led resolution process is a peer-to-peer regional advisory committee that will allow industry leaders and OMAFRA to conduct targeted communications to individual producers about nutrient management technical standards, best practices and agriculture's commitment to reducing the phosphorus load.

Manure spreading on frozen and snow-covered ground can and should be deterred, and we should be given the opportunity, in partnership with OMAFRA, to implement a peer-to-peer advisory committee approach before expanded regulation is considered. The peer-to-peer engagement model could be designed for all nutrient sources, including manure, bio-solids and fertilizer, and it would provide the following benefits:

- Allows for a respectful and productive dialogue and education about the environmental risk factors associated with nutrient application on frozen and snow-covered ground.
- Provides a channel for targeted dissemination of resources and tools that would enable producers to address the area of concern in their individual nutrient management practice, including information about technical standards, best management practices, and available cost-share funding and technical support.
- Enables collection of information on the gaps and obstacles in the way of full adoption of best practices, e.g. storage capacity, soil health impacts from compaction.
- Provides a forum to discuss solutions to emergency scenarios, e.g. storage overflow due to excessive precipitation, and potential contingency plans.

Ensuring responsible nutrient management should also include a review of the current Nutrient Management Strategy and Nutrient Management Plan documentation, training and certification requirements in order to examine possible opportunities to streamline the process, improve the business utility of data generated through nutrient planning, and make the requirements proportionate to the farm size and risk being addressed. There should also be consideration of potential solutions to improve the market mobility of nutrients, enabling the movement of nutrients from geographic areas of high supply to areas with fewer self-generated nutrients, effectively leveraging the soil health potential of manure as nutrient sources for Ontario's cropland.

### **Financial Support with Regulatory Approach**

Any regulatory approach to broadening or expanding restrictions on nutrient application in the Lake Erie basin must be accompanied by 90% cost-share funding programs to help farm families build and refurbish the storage capacity needed to adhere to the restrictions without putting them at a



competitive disadvantage. This will help ensure that agricultural production doesn't leave the region, and will help maintain balance with other regions in Ontario that may not initially face the same level of regulation.

While in general BFO advocates for equal and consistent regulation, programs and financial support for all beef producers across Ontario, we recognize that geographic targeting in the Lake Erie basin may be a necessary approach to reaching the Ontario phosphorus load reduction targets. If regulation and associated financial support are initiated within a targeted region, the financial support must be made available in an equitable manner province-wide if new regulatory expectations broaden beyond the initial target area. An opportunity for financial support must be available to all producers affected by expanded regulatory requirements, and not only to producers in the initial target area.

### **Monitoring Programs**

BFO appreciates that the draft action plan recognizes the importance of monitoring data to support an adaptive environmental management approach, and understands that there are monitoring and data interpretation challenges within the Lake Erie basin. However, the draft action plan makes no recommendations to address these challenges. The Ontario monitoring strategy appears to be a continuation of monitoring programs and data analysis that are already in place, while Ohio's proposed plan places more emphasis on improving monitoring and data analysis strategies.

Ontario is working with Ohio to reach the phosphorus load reduction targets, and we therefore need similar and compatible monitoring programs. We have concerns that we're using different processes to measure progress, and BFO recommends that Ontario establish a comprehensive water quality monitoring network specific to tracking progress, similar to the processes and protocols being established in Ohio.

### **Evaluation Metrics**

Consistent with an adaptive environmental management approach, BFO agrees that there is a need for a 5-year progress report to evaluate whether phosphorus mitigation efforts have been a) effective in meeting targets, b) effective but with a delay in meeting targets due to legacy effects, or c) ineffective at current adoption levels. However, there is a lack of discussion and clarity in the proposed action plan on adaptive environmental management trigger mechanisms. The action plan should be clear that any proposed adaptive environmental management trigger should be based on the best available science.

There should also be a clear distinction between evaluation metrics based on performance and activity. It is currently unclear how performance-based evaluation metrics will be implemented within the proposed monitoring program. For example, will the metrics include the phosphorus concentration and load weighted mean of the March to July tributary flow, or the frequency of Lake Erie algal blooms? Likewise, it is unclear what baseline or criteria will be used for activity-based evaluation metrics. For example, will the metrics include the percentage of livestock farms with a Nutrient Management Strategy or Nutrient Management Plan, or the percentage of cropland acreage with a Nutrient Management Plan or 4-R Certification?

If agriculture is to be held accountable in reaching the phosphorus load reduction targets, we need to know how progress will be measured. Proposed activity-based evaluation metrics and targets should be



developed at the beginning of the 5-year implementation plan with input from the affected stakeholder groups, including agriculture, so there is clarity on what stakeholders will be measured on in 5 years.

### **Conclusion**

In partnership with government and other stakeholders, BFO believes it is possible to improve the ecological health of Lake Erie while also supporting on-farm innovation and our capacity to provide high-quality food to Ontario and the world.

The Beef Farmers of Ontario would like to thank the Ministry of the Environment and Climate Change for the opportunity to provide comments on the Canada-Ontario draft action plan, *Partnering in Phosphorus Control: Achieving Phosphorus Reductions in Lake Erie from Canadian Sources*. We would be pleased to answer any questions on the comments contained in this document, and we look forward to participating in further consultations on this important issue.

Sincerely,



Matt Bowman  
President

cc: BFO Board of Directors

