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**Canada-Ontario Draft Action Plan (DAP) on Lake Erie Phosphorus Reduction:
Partnering in Phosphorus Control (EBR Registration Number: 012-9971)**

Farm & Food Care Ontario is a whole-sector coalition made up of representatives from all farming types and associated businesses, and positions itself as the helpful expert on Ontario agriculture. The common goal is to build public trust in food and farming in Ontario and across Canada. Farm & Food Care Ontario is active in promotion, education, and program development and consumer research.

Healthy soils and clean water are vital to the communities in which we live and work, and to the business of farming. The farming community understands that the ecological health of Lake Erie, and all the Great Lakes, is vital to the health of Ontario and its citizens. Ontario agriculture is proud of its role as a global leader in environmentally sustainable farming practices, while continuing to supply increasing amounts of safe, nutritious and affordable food for our growing population.

The issues with Lake Erie are complicated by nature as they involve complex interactions between nutrients and the biological environment they encounter. There are several forms of phosphorus which change as chemical pathways interact on the soil surface, inside of the soil and in the lake itself, along with some new invasive species (*Dreissenid* and *Zebra* mussels). It is suspected that these invasive species, about which we know little, have the capacity to affect these pathways. Where once nutrients might have settled to the bottom of the lake, lost to the system forever, these new mussel species keep the nutrients in circulation, increasing the contribution of internal loading which is particularly significant in the sensitive “near shore” region.

Phosphorus accumulation comes from the natural landscape, historical sediment loads, and contributions from both urban and agricultural sectors. The drainage area of the entire Lake Erie basin is large at 55,000 square Kilometers, 33% draining from Ontario and 66% from the United States land areas. Three of the four major inflows into Lake Erie are into the shallow Western Basin which makes it most susceptible to algal blooms out of all the Great Lake areas.

Shallow, warm and nutrient enriched inflows into the small area of the Western Basin of Lake Erie make this situation unique from any other in the Great Lakes system.

Governance over the drainage basin is as complicated as the biology. Managed by two federal governments, five US states and the province of Ontario, even if solutions were self-evident, the road to implementation will be complicated.

Phosphorus is a natural element that is required at certain levels to make plants and animals flourish and grow. As managers of these agricultural production systems, there is a growing understanding of how phosphorus moves through the environment, particularly in soil and water. There is also mounting understanding of the potential role in Lake Erie eutrophication (algal blooms) that phosphorus loss from our agricultural systems through erosion, runoff from storm events or during the spring thaw could present to the lake system. Armed with this better understanding of the issues surrounding nutrients, and supported by good science and a framework with participation by all partners, reductions in phosphorus runoff and loading should be achieved.

Phosphorus is found within a number of specific agricultural processes. It is a component of animal feeds and consequently manures. It is required to make plants grow and is a vital component of plant fertilizers. Thus, it is part of all types of livestock production and field crops grains, beans, forages, vegetables, flower and indoor greenhouse production.

Farm & Food Care's Position

- Farm & Food Care is supportive of all farm types as they seek to better understand how their particular use of phosphorus can be better managed through the principles of 4R Nutrient Stewardship: RIGHT SOURCE of plant nutrition, at the RIGHT RATE, at the RIGHT TIME, and in the RIGHT PLACE to improve nutrient use efficiency and reduce potential nutrient losses to the environment
- Farm & Food Care is supportive of funding in the next policy framework to support research and infrastructure for better placement of fertilizers to be applied more precisely (right place), and at the right rate along with technology that might allow placement at the right time (more in growing crops)
- Farm & Food Care has taken an active role in the OMAFRA Agricultural Phosphorus Working Group along with all other commodity associations. The Working Group has spun-off three subcommittees; the Cover Crop, Nutrients, and Research Groups. We believe that these committees provide OMAFRA/MOECC with an invaluable resource and should continue to play an active role in the discussion with governments to identify priority actions and map out an adaptive management and implementation plan
- Farm & Food Care supports infrastructure and funding programs under the next policy framework that supports water and nutrient water reduction and re-cycling to improve nutrient use or eliminate nutrient loss to the environment
- Farm & Food Care supports ongoing research and funding into technologies that improve phosphorus uptake by plants, or decrease their underlying need for phosphorus

and phosphorus recirculation and reuse and capture technologies for greenhouse and other sectors

- Farm & Food Care supports a collaborative approach with government that provides farmers with useful tools to improve nutrient management practices on their farms which includes incentive support for infrastructure, and adapting to any regulatory or Best Management Practice changes
- Farm & Food Care supports monitoring and research activities to better understand BMP practices and to identify those that might have the most meaningful reduction impacts and their economics in farming systems
- Farm & Food Care supports a process that is underpinned by good science and thoughtful governance that will maximize the environmental performance of activities, while minimizing costs/burdens including those associated with, rules, standards, regulations and industry BMP's
- Farm & Food Care supports a progressive compliance regime to maximize the reduction impacts of good practices while minimizing unnecessary burdens on producers

The Draft Action Plan has been developed by five federal and provincial government agencies. Each have been supportive in working with the agricultural sector through either the OMAFRA led Agricultural Sector (Phos) Working Group and/or the Federal, Lake Erie Nutrients Working Group.

The commodity partners, general farm organizations and other stakeholders appreciate being invited to these meetings and to have input into the process. Agriculture has made great advances in supporting healthy soil and clean water and takes its responsibility seriously by providing leadership in addressing further commitments and working collaboratively with governments, NGO's and other interested stakeholders. We hope that agriculture will continue to be an integral partner with government as we develop an adaptive approach to management and governance models.

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