



FERTILIZER CANADA
FERTILISANTS CANADA

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August 28, 2015

The Honourable Leona Aglukkaq, P.C., M.P.
Minister of Environment, Minister of the Canadian Northern
Economic Development Agency and Minister for the Arctic Council
10, rue Wellington
Gatineau, Quebec K1A 0H3

Re: Response to consultations on *Proposed Binational Phosphorus Load Reduction Targets for Lake Erie*

Dear Minister:

On behalf of Fertilizer Canada (formerly the Canadian Fertilizer Institute) and our members, thank you for the opportunity to respond to the *Proposed Binational Phosphorus Load Reduction Targets for Lake Erie*.

Fertilizer Canada supports the need to protect the ecological health of Lake Erie, ensuring it remains drinkable, swimmable and fishable. As a non-point source of phosphorus loading, Canada's fertilizer industry has already undertaken work to reduce phosphorus losses to Lake Erie and other lakes and rivers, and is committed to continue to work with governments, watershed groups, scientists, agri-retailers, farmers and stakeholders.

In order to reduce phosphorus levels in Lake Erie, Fertilizer Canada promotes the adoption and implementation of 4R Nutrient Stewardship - using the right fertilizer source, at the right rate, at the right time and in the right place. Canada's fertilizer industry believes that the voluntary adoption of these principles is the best approach towards reducing the negative environmental impacts of unwanted nutrient loading.

Fertilizer Canada has engaged with a number of stakeholder partners to develop a wide range of national and regional 4R-based programs for farmers and homeowners. Engagement in Ontario includes a Memorandum of Cooperation with watershed groups, Ontario farmers and the Ontario government; supporting 15 demonstration projects to show the effectiveness of science-based best management practices to growers; rigorous training programs for Certified Crop Advisers and agri-retailers to support the foundation of voluntary 4R standards; and funding several phosphorus research programs in Ontario to quantify the environmental benefits of 4R Nutrient Stewardship.

Additional research has been endorsed by the Government of Canada, who recently invested \$1.1-million matched by industry to further quantify the outcomes of 4R Nutrient Stewardship application.

The Government of Canada has a unique opportunity to take advantage of advancements made by our industry, and to develop a strategy that balances environmental and economic



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performance. The Government of Canada should contemplate the following when considering final Phosphorus Load Reduction Targets:

- Adopt and support science-based decision-making on matters affecting Lake Erie and other water systems.
- Consider the legislative and regulatory authority already in place to achieve the objectives of protecting and restoring the ecological health of Lake Erie.
- Recognize the voluntary actions undertaken by the fertilizer industry, farmers and homeowners to promote the principles of 4R Nutrient Stewardship across Canada and specifically in Ontario.
- Recognize and promote the implementation of 4R Nutrient Stewardship across Canada.

Our detailed response to the *Proposed Binational Phosphorus Load Reduction Targets for Lake Erie* is attached. While Fertilizer Canada is committed to funding research, programming and awareness-building initiatives, there is more that can be done. We would appreciate the Government of Canada's thoughts on our current programming and how we can work together to ensure the sustainability of the agriculture industry while protecting Lake Erie.

I look forward to the opportunity to further discuss this with you at your convenience.

Sincerely,

Garth Whyte
President
Fertilizer Canada

cc: The Honourable Gerry Ritz, P.C., M.P., Minister of Agriculture and Agri-Food
The Honourable Kathleen O. Wynne, M.P.P., Premier and Minister of Intergovernmental Affairs
The Honourable Glen R. Murray, M.P.P., Minister of Environment and Climate Change
The Honourable Jeff Leal, M.P.P., Minister of Agriculture, Food and Rural Affairs
Gordon Walker, Commissioner, Canadian Chair, International Joint Commission



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Fertilizer Canada - Response to consultations on *Proposed Binational Phosphorus Load Reduction Targets for Lake Erie*

Fertilizer Canada represents manufacturers, wholesale and retail distributors of nitrogen, phosphate and potash fertilizers. The fertilizer industry is a significant contributor to Canada's manufacturing economy, with the production of ammonia and nitric-acid based fertilizers in Ontario at CF Industries' Courtright facility. Additionally, countless large and independent agri-retailers support Ontario's farmers, helping them to feed Ontarians and the world.

Simply put, fertilizer is food for plants. It is responsible **for nearly half of the world's food supply** and it is the most important crop input used by Canadian farmers. In addition, healthy lawns provide strong environmental benefits to urban centres. When the right fertilizers are applied at the right rate, time and place, the impact on water quality is minimal. The primary nutrient found to cause the growth of algae and aquatic weeds in streams and lakes is phosphorus, which has many sources other than fertilizer. Phosphorus from properly applied fertilizers rapidly binds with the soil following application. When applied at the right rate, as determined by a soil test, and at the right time and in the right place, its losses in drainage water are minimal.

Water quality is a vital issue in Ontario, which also holds some of the country's most viable and productive farmland. Land use and water quality concerns are a shared priority in Ontario and the agriculture industry. Fertilizer Canada supports the need to protect the ecological health of the Great Lakes, including Lake Erie, by continuing the industry's extensive research, programming and awareness-building initiatives.

Supporting More Efficient use of Fertilizer Products

Canada's fertilizer industry is committed to working with governments, watershed groups, scientists, agri-retailers and farmers nationally and within Ontario to improve fertilizer application to reduce phosphorus losses to Lake Erie and other lakes and rivers. Our industry is science-based, and is committed to research and innovation to ensure environmental stewardship when fertilizer products are being used. We encourage the Government of Canada to adopt and support science-based decision-making on matters affecting Lake Erie and other water systems.

Sustainability can be achieved by balancing the economic, social and environmental goals of our stakeholders, including farm groups, homeowners, researchers, conservationists, governments, industry members and communities. Environmental stewardship and sustainability are not new ideas for our industry, nor for our customers who have long embraced best management practices (BMPs) in their farms, yards and business operations. But, as we move forward, it is increasingly important to demonstrate our successes in measurable ways and also to identify areas of potential improvement.

Protecting the Great Lakes and Lake Erie: 4R Nutrient Stewardship

4R Nutrient Stewardship is an internationally recognized BMP system with four key pillars for fertilizer application: **Right Source @ Right Rate, Right Time, Right Place®**. This science-based approach helps farmers and homeowners understand how efficient fertilizer application improves



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profitability while reducing nutrient losses into the environment:

- The **Right Source** means ensuring a balanced supply of essential plant nutrients including granular or liquid fertilizers or manures.
- The **Right Rate** is applying just enough fertilizer to meet the needs of the plant while accounting for nutrients already in the soil. Farmers and homeowners can use soil tests to identify nutrient shortfalls.
- The **Right Time** means applying fertilizer when the plant will get the most benefit and avoiding times when fertilizer can be lost to the environment.
- The **Right Place** is applying fertilizer where the plants can easily access the fertilizer and where it is less likely to be lost to the water or air. An example on the farm would be sub-surface banding in the soil near the seed row rather than surface application. Farmers may also need to establish buffer strips near streams, rivers, lakes or wells to prevent unwanted nutrient movement into surface or groundwater.

Every farm and every field is different. 4R Nutrient Stewardship promotes the use of Certified Crop Advisers to help farmers assess soil and environmental conditions to develop a customized nutrient management plan that is site-specific. Based on feedback, adjustments in practices, research and extension programming is made to further enhance sustainability.

The principles of 4R Nutrient Stewardship are also applied to lawns and gardens. Fertilizer Canada's Greener World program teaches home gardeners how best to fertilize lawns and gardens using the 4R principles. Healthy grass makes several important contributions to our environment. It reduces pollution, absorbs the greenhouse gas carbon dioxide and supplies oxygen. Lawns also clean water through filtration, reduce soil erosion and reduce water run-off.

Phosphorus specifically, is important for establishing new lawns because it promotes the development of strong, healthy roots, vibrant flowers, seeds, early maturity, and a normal healthy green colour. Within Canada, Fertilizer Canada members have kept phosphorus in its starter-fertilizer products for new lawns, but have voluntarily eliminated phosphorus from mature lawn fertilizer products.

Working with Stakeholders

The fertilizer industry's work to improve application practices and thereby enhance the health of Lake Erie and other water systems is only enhanced by the support of government and non-government stakeholders.

4R Nutrient Stewardship has been endorsed by the International Joint Commission. In the 2014 report on the Lake Erie ecosystem, *A Balanced Diet for Lake Erie: Reducing Phosphorus Loadings and Harmful Algal Blooms*, 4R Nutrient Stewardship was identified for accelerated implementation:

"The 4R program – the right fertilizer source, right rate, right time and right place – provides a useful framework for guiding fertilizer application in the Lake Erie Basin and beyond. The



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4Rs can be effective in reducing nutrient export from fields, while meeting plant nutrition needs and therefore maximizing crop yields.”

Ontario is a leader in encouraging farmers to use nutrient management plans in crop production. The province has embraced 4R Nutrient Stewardship as an important tool to meet the agricultural and environmental goals, referenced in government publications such as *A Phosphorus Primer* and *Soil Fertility Handbook (OMAFRA Publication 611)*.

This support is amplified by our partners, who have undertaken extensive efforts to adopt and promote 4R Nutrient Stewardship in Ontario specifically:

- The second joint action cited in the *Interim Joint Action Plan for Lake Erie* encourages adoption of the 4R Nutrient Stewardship Certification program or other comprehensive nutrient management programs. Fertilizer Canada is currently working with the Ontario Certified Crop Adviser Board on development of a 4R Specialty Study Guide in Ontario, to complement the International Certified Crop Adviser Board’s efforts via a pilot 4R Specialty accreditation.
- Fertilizer Canada is funding several research programs to quantify the environmental benefits of 4R Nutrient Stewardship. In March 2015, Agriculture and Agri-Food Canada announced \$1.1 million in funding for Fertilizer Canada’s project entitled “A Canadian Research Network to Improve 4R Nutrient Stewardship for Environmental Health and Crop Production.” Fertilizer Canada and its members are providing an additional \$1.1 million to the project over the next three years. Under this project, 10 leading Canadian researchers will quantify economic, social and environmental benefits resulting from 4R Nutrient Stewardship. We expect additional economic and environmental outcomes such as reductions in greenhouse gas emissions, nitrogen losses to the atmosphere and groundwater, phosphorus losses to surface waters and improved productivity, efficiency and profitability of production.
- Fertilizer Canada is currently working with the Ontario Agri-Business Association and the Government of Ontario to negotiate a Memorandum of Cooperation recognizing that voluntary use of 4R Nutrient Stewardship, based on sound science, expert advice and public education is the best approach towards reducing the negative environmental impacts of unwanted nutrient loading in Lake Erie.
- To show the effectiveness of science-based BMPs to growers, Fertilizer Canada has implemented 35 4R Nutrient Stewardship Demonstration farms in Alberta, Prince Edward Island, New Brunswick and Ontario representing thousands of acres. In Ontario specifically, there are 15 demonstration farms through a Fertilizer Canada agreement with the Grain Farmers of Ontario (GFO) funded through the Growing Forward 2 program. This agreement supports activities for GFO’s project entitled, *Expanding marketability of agricultural products through the Roundtable for Responsible Soy*, developing nutrient management benchmarks and stewardship program piloting for soybean growers in Ontario.
- The 4R Designation program helps to ensure that this voluntary approach to nutrient management is having the desired effect to reduce phosphorus in the Lake Erie Basin. 4R



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Designation recognizes that agri-retailers are a key influencer to assist and guide growers in addressing this concern while maintaining sustainable and productive systems. Once a grower has completed a plan, the 4R Designation program allows Fertilizer Canada to count their acres and demonstrate the tangible commitment being made by the Canadian agricultural industry to the environment. Piloted in Manitoba, Fertilizer Canada is currently working on implementing this program across Canada.

- In 2012, Fertilizer Canada and Ontario Centres of Excellence Social Innovation Program created a network to promote 4R Nutrient Stewardship. This urban-rural partnership included work by conservation leaders, scientists, farm leaders, fertilizer industry representatives and the Government of Ontario.
- Additionally, Fertilizer Canada has developed training programs for farmers and Certified Crop Advisers.

Recommendations

Fertilizer Canada supports the need to protect and restore the ecological health of Lake Erie. However, the Government of Canada should contemplate the following when considering final Phosphorus Load Reduction Targets:

- Adopt and support science-based decision-making on matters affecting Lake Erie and other water systems.
- Consider the legislative and regulatory authority already in place to achieve the objectives of protecting and restoring the ecological health of Lake Erie.
- Recognize the voluntary actions undertaken by the fertilizer industry, farmers and homeowners to promote the principles of 4R Nutrient Stewardship in Ontario.
- Promote the recognition and implementation of 4R Nutrient Stewardship across Canada.