

What You Told Us

Proposed Approaches to Reducing Nutrient Contributions From Urban and Rural Residential Sources: Phosphorus in Fertilizers and Household Cleaning Products



EXECUTIVE SUMMARY

During September 2007, Manitoba Water Stewardship consulted with the public through a series of open houses and requested comments on proposed approaches to reducing nutrient contributions to surface waters from urban and rural residential areas. Proposals were put forward to reduce the nutrient contribution from fertilizer application and automatic dishwashing detergents. Excessive levels of nutrients, such as phosphorus and nitrogen, fuel the production of algae and aquatic plants. Extensive algal blooms can cause changes to aquatic life habitat, reduce essential levels of oxygen, clog fishers' commercial nets, interfere with drinking water treatment facilities and cause taste and odour problems in drinking water. In addition, some forms of blue-green algae can produce highly potent toxins. Studies have shown that since the early 1970s, phosphorus loading has increased by about 10 per cent to Lake Winnipeg. Nitrogen loading has increased by about 13 per cent. A similar phenomenon has also occurred in many other Manitoba streams, rivers and lakes.

Over 200 Manitobans attended the six open houses. Many others provided comments by e-mail or regular mail. In general, Manitobans were overwhelmingly supportive of the proposed approaches for reducing nutrient contributions from fertilizers applied to lawns and household cleaning products. Most participants suggested that action was required as proposed, and should proceed as quickly as possible. Many excellent suggestions about the specifics of the two approaches were received. Specific suggestions included the need to consider low phosphorus content lawn fertilizers and requests for expansion of the automatic dishwashing detergent restrictions to other cleaning products. Comments were also provided about the need for education, communication, enforcement and resources to adequately implement the proposed regulations. The role of other jurisdictions in reducing nutrients, both upstream and locally, was highlighted. The need to maintain good communication with these groups was emphasized. Many suggestions were received about other ways to reduce nutrients across the watershed including through improved wastewater treatment and changes to agricultural practices. Finally, a number of general suggestions and comments were received about water quality and the environment. Discussion of these additional ideas and comments will further guide the development of the proposed regulations as well as help other programs underway across the province.

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INTRODUCTION

As part of a number of initiatives to address the issue of nutrients in surface and ground waters, the Manitoba Government through Manitoba Water Stewardship, has proposed two measures to reduce nutrient contributions from urban and rural residential sources. It is proposed to restrict the application of phosphorus to lawns in urban and rural residential areas and, similar to measures enacted in the 1970s for laundry detergents, restrict the phosphorus content of household cleaning products. To ensure valuable input from the public and stakeholder groups was incorporated into the strategy to reduce nutrients, a series of public open houses was held across Manitoba.

BACKGROUND

In February 2003, Manitoba announced the Lake Winnipeg Action Plan — a commitment to reduce nutrient loads to Lake Winnipeg by about 10 per cent. Studies conducted by Manitoba Water Stewardship indicate that nutrients are contributed by a large number of relatively small sources across the vast Lake Winnipeg watershed that stretches from Alberta through Ontario and south into the United States. Since 2003, Manitoba Water Stewardship has introduced a number of initiatives aimed at reducing nutrients and improving water quality in Lake Winnipeg. Initiatives have addressed sources from municipalities, industry, agriculture and upstream jurisdictions. In the meantime, the Lake Winnipeg Stewardship Board, appointed to assist Manitoba in identifying ways to reduce nutrients, released two reports to government that included a wide range of recommendations. The board encouraged everyone to do their part to reduce nutrients. This message is consistent with work underway in other jurisdictions to reduce nutrients not only from agriculture, municipal wastewater and industry, but also to reduce nutrients contributed by individual citizens. In particular, action is underway elsewhere to reduce nutrients from fertilizer application and household cleaning products including automatic dishwashing detergents.

In the summer of 2007, the Manitoba Government launched a public education campaign urging Manitobans to seek alternatives to phosphorus-based products to reduce nutrients in the province's waterways. Information was provided on the Seeing Green website at www.gov.mb.ca/seeinggreen and in a series of billboards and media advertisements. In August 2007, a series of open houses on reducing excess nutrients from fertilizer application and household cleaning products were announced. Manitobans were invited to attend the open houses and/or to provide comments by mail, e-mail or in person to Manitoba Water Stewardship by September 21, 2007. A background document was released that outlined the proposed approaches for reducing nutrients from fertilizer application and household cleaning products. The document is available on the Manitoba Water Stewardship website at www.gov.mb.ca/waterstewardship/fertilizer. Information on the open houses was also listed in the public registry (www.gov.mb.ca/waterstewardship/water_info/public_registry) and placed in libraries across Manitoba (www.gov.mb.ca/conservation/library/pr-list).

FORMAT FOR PUBLIC OPEN HOUSES

Public open houses were held between September 4, 2007 and September 13, 2007 at six locations across Manitoba (see schedule below in Table 1). Sessions were held from 2:00 p.m. to 5:00 p.m. and from 7:00 p.m. to 9:00 p.m. at each location. Open houses were relatively informal and consisted of a format where participants had the opportunity to view information posters and ask questions of Manitoba Water Stewardship representatives. Sufficient numbers of knowledgeable staff from Manitoba Water Stewardship were available at each session to ensure that all those present could ask questions and express their views. The information posters are available on the Manitoba Government website at www.gov.mb.ca/waterstewardship/fertilizer. Manitobans were encouraged to provide verbal comments at the open houses or complete comment cards that could be left with staff or mailed. Written comments were encouraged and participants were informed of the September 21, 2007 closing date.

Table 1. Dates and locations for public meetings and workshops

Date	Community	Location
September 4, 2007	Dauphin	Banquet Hall, Parkland Recreation Complex (200 1st Street SE)
September 5, 2007	Brandon	Royal Oak Inn (3130 Victoria Avenue)
September 6, 2007	Lac du Bonnet	Lac du Bonnet Community Centre (25 McArthur Avenue)
September 10, 2007	Thompson	Ramada Inn Burntwood (146 Selkirk Avenue)
September 12, 2007	Winnipeg	Holiday Inn Airport West (2520 Portage Avenue)
September 13, 2007	Winnipeg	Club Regent Canad Inn (1415 Regent Avenue)

SUMMARY OF MAIN COMMENTS IDENTIFIED DURING THE PUBLIC OPEN HOUSES AND WRITTEN SUBMISSIONS

Over 200 interested Manitobans attended the open houses and many others sent in comments by regular mail or e-mail. Those that attended the open houses took the opportunity to provide verbal comments and ask a variety of questions. Questions were not only on the proposed approaches but also on other issues related to water quality or reducing nutrients. Questions of clarification identified areas of the proposed regulations that require better communication. Manitobans that attended the open houses were well informed, keen to learn more and offered many valuable suggestions. The importance of protecting and maintaining water quality not only in Lake Winnipeg but across the province was mentioned by many participants.

Concept and Underlying Principle

In general, Manitobans were overwhelmingly supportive of the proposed approaches for reducing nutrient contributions from fertilizer application and automatic dishwashing detergents. Most participants suggested that action was required as proposed and should proceed as quickly as possible. It was suggested that Manitoba has

an opportunity to be a leader in Canada on these issues and should step forward with a combination of regulation and education. In fact, one reviewer suggested that Manitoba should pursue international standards for phosphorus in lawn fertilizers and automatic dishwashing detergents and therefore, be a leader beyond our country's borders. However, two participants preferred a voluntary approach to reducing nutrients in urban and rural residential areas. While support was generally positive, many excellent suggestions regarding the specifics of the two approaches were received.

Household Cleaning Products

While most Manitobans supported pursuing a national approach to reducing phosphorus in household cleaning products and, in particular, automatic dishwashing detergents, some suggested that Manitoba should move forward with its own legislation. Many participants pointed to cleaning products used in commercial dishwashers, car washes, hospitals and industry. They suggested the proposed regulation be expanded to include phosphorus limits for more than just household automatic dishwashing detergents. However, one reviewer mentioned the need to understand the effectiveness of alternatives in special situations such as hospitals. Others suggested that the Manitoba Government should lead by example by reducing the use of detergents containing phosphorus in its own facilities. Questions were asked about the phosphorus content of other cleaning and personal use products such as liquid dish detergent, shampoo and bathroom cleaners. Some wondered if these should also be regulated. It was also suggested that some of the terms used in the background document were not consistent (Ex: cleaning products versus automatic dishwashing detergents or dishwashing detergents) making it difficult to interpret which products were proposed to be regulated. Some participants questioned the need to reduce phosphorus content in automatic dishwashing detergents given their relatively small proportion of the total nutrient load to Lake Winnipeg as well as the lack of attention given to automatic dishwashing detergents in national reports on nutrients. Many others understood that there are many small sources of nutrients to Lake Winnipeg and that each source must be reduced to begin to improve water quality.

Most reviewers accepted that some transition time would be required before a regulation about the phosphorus content of automatic dishwashing detergents could come into effect. As such, many had suggestions about better labelling of phosphorus content on products and a general request to work with retailers to improve the availability of phosphorus-free products. Many Manitobans requested information on the phosphorus content of commonly available automatic dishwashing detergents to help in decision-making. Many Manitobans also reported to have used phosphorus-free automatic dishwashing detergent and that they are satisfied with its performance.

Fertilizer Application

As with household cleaning products, many specific suggestions about fertilizer application were received. It was particularly encouraging to hear that many landscaping and lawn care companies have already recognized that most lawns in Manitoba do not need additional phosphorus and they have modified fertilizers accordingly. However,

some raised an important point regarding how other products containing nutrients such as compost and manure would be addressed. Some suggested that instead of a zero phosphorus approach, a low phosphorus limit would increase flexibility to use alternatives such as corn gluten and be more sustainable in the long-term. One participant suggested that a technical working group consisting of industry and government representatives could work to establish a science-based standard for low phosphorus fertilizer. Specific support was received for the requirement to demonstrate, through soil tests, that a lawn required additional phosphorus. Others pointed out the need for additional education and information on where, and how, soil tests can be conducted.

Some comments were also received about the component of the proposed regulation that requires golf courses to prepare nutrient management plans. While some suggested less fertilizer should be used on golf courses, others suggested that areas such as golf courses, parks, cemeteries, sports fields, driving ranges and playgrounds should be exempt from the proposed regulations. A proposal was also received to expand the regulation to gardens and flower beds. Others understood that phosphorus applied to gardens and flowerbeds is used for plant growth and is most often removed when the fruit, vegetables or flowers are harvested.

Many Manitobans also supported the concept of buffers along waterways where application of nutrients would be prohibited. However, others noted that buffer widths specific to situations and waterbodies might make compliance complex. On the other hand, some suggested that the concept should be expanded to include buffers for application of pesticides and to restrict livestock pasturing. Others recommended that restrictions about pesticide application should be pursued, not only adjacent to waterways, but throughout urban and rural residential areas. Finally, one participant noted that while buffers were proposed for rivers, streams, lakes and drains, no setbacks were proposed from storm sewers that may lead directly to waterways.

Comments were also received about the need for better lawn care communication and education. Many participants suggested that part of the problem is caused by a lack of information about how to care for lawns. Several commentators pointed out that increased nutrient runoff can be caused by improper application and over-spraying. They suggested that people applying fertilizers should be trained and well educated. Some indicated that the general public is unfamiliar with the differences between slow release and all purpose fertilizers and that more information on how to apply fertilizers would be beneficial. A healthy, well-established lawn can reduce nutrient runoff by increasing infiltration - in particular as compared to paved surfaces. Others suggested that a healthy lawn is more than a cosmetic benefit but can contribute to property values, control soil erosion and keep the area safe for children to play. The same reviewers suggested that proper fertilizer application should be encouraged to maintain the benefits of a healthy lawn. Many believed the proposed regulation would not limit the ability of Manitobans to maintain a healthy lawn.

Differences of opinions emerged about the value of lawns. Some suggested that lawns should be replaced by more natural, prairie landscaping and that fertilizer application should be prohibited completely. Many Manitobans recognized that different

tastes and preferences about what makes an attractive yard will undoubtedly exist. The priority is to ensure that the impact on water quality is minimized, whatever type of landscaping is preferred.

Nitrogen versus Phosphorus

Some Manitobans wondered why the proposed approaches described for urban and rural residential areas focus only on phosphorus, when nitrogen is also a key nutrient contributing to eutrophication in prairie lakes and rivers. Others were aware that nitrogen is not a key component of automatic dishwashing detergents, so it does not require regulation. In contrast to phosphorus, which is available in sufficient quantities in most Manitoba soils, nitrogen is often required to maintain healthy lawn growth. In addition, if too much nitrogen is applied to lawns, negative effects such as burning can occur. Similar effects do not occur when too much phosphorus is applied to a lawn.

Availability of Phosphorus-Free Products

Many Manitobans, while supportive of the proposed approach, stressed that phosphorus-free products need to be made more widely available across Manitoba at a competitive price. It was recognized that the key to successful implementation of the proposed regulations would be working closely with the retail sector to ensure that the market is dominated by phosphorus-free products.

Education

The need for education was a reoccurring theme at each of the open houses and in submitted comments. Many Manitobans appreciated the information provided in the background document and storyboards. A consensus was that education was a critical component of reducing nutrient loads, not just from urban and rural residential areas but from all sources. Specific suggestions regarding education included:

- targeting cottage associations and residents living near water
- recognizing and supporting the role of retailers in education
- focusing on short and easy to remember tips that could be readily passed along rather than distributing volumes of information
- increasing distribution of the *Water Protection Handbook* (www.gov.mb.ca/waterstewardship/water_guide/index.html)

As mentioned in the section on fertilizer application, some reviewers felt there was a need for additional education on how to properly maintain green spaces. Many suggestions were received about the need for education on alternative products that can be used for cleaning and maintaining lawns and gardens. It was stressed that education needs to go beyond naming alternatives. Education should also include supporting information that demonstrates the effectiveness and additional benefits that may be obtained from using alternatives. Finally, it was recognized that efforts to provide education on these issues needs to continue long after regulations have been put into force to ensure compliance and understanding.

Communication

The issue of communication was also raised and included two main concerns. First, there was a recognition that information about nutrients and water quality, proposed approaches for urban and rural residential areas, alternatives, education and other initiatives underway needs to be communicated more widely to Manitobans and their neighbours across the Lake Winnipeg watershed. Second, some participants thought the open houses should have been better attended. They suggested that increased media use, in particular radio, was needed to communicate information about public consultations.

Enforcement

Questions were received about how the proposed regulations would be enforced. Some participants expressed concerns about enforcement given a perceived lack of enforcement on existing regulations. Many were comfortable with the proposed approach which is similar to the Minnesota approach. Minnesota's approach resulted in phosphorus-free fertilizer products dominating the market. This made compliance easy and the requirement for enforcement limited. A recent report by the government of Minnesota suggests that this strategy has been successful to date. The report is available on the Minnesota website at www.mda.state.mn.us/news/publications/protecting/waterprotection/07phoslawrptsumm.pdf.

Resources

Questions and comments about the need for education, communication, monitoring and enforcement led to the need for new resources to accompany implementation of the proposed regulation. Manitobans recognized that legislation should be accompanied by additional resources to ensure successful implementation.

Other Jurisdictions

Manitobans appreciated the information at the open houses and in the background document regarding initiatives underway in other jurisdictions. While they indicated that Manitoba could play a leading role in reducing nutrient loads from urban and rural residential areas, it was clear that learning from other jurisdictions was important. In particular, participants encouraged Manitoba Water Stewardship to place close attention to progress made in Minnesota, one of our neighbours in the Lake Winnipeg and Red River watersheds. Some reviewers also suggested that there is a larger role for municipal governments to play in reducing nutrients from all sources, not only from urban and rural residential areas.

General Comments on the Open Houses

A number of comments were received about the general format of the open houses. Many participants enjoyed the informal atmosphere of the open houses. In particular, many spirited discussions arose among participants as they shared their successes with alternative products. Many wishing to speak and exchange information

with departmental staff indicated they had sufficient opportunity. However, others thought that formal presentations with a question and answer period would have been useful. Many appreciated the educational information provided while others found some of it confusing. Clearly, there is a need to provide information in various formats to ensure that all Manitobans have access and an opportunity to ask questions.

Approach to Reducing Nutrient Loading to Waterways

During the open houses, and in the comments received, many Manitobans presented ideas for reducing nutrients in waterways. One reviewer suggested that nutrient reduction strategies need to be tailored to each sub-watershed within the larger Lake Winnipeg watershed. Some suggested that rather than focusing on urban and rural residential areas, the emphasis should be on reducing nutrients in wastewater or on changing agricultural practices. Others recognized there are many small sources of nutrients and that action will be required across many sectors including urban and rural residential areas. It was also suggested that the ongoing debate about who contributes the most nutrients to waterways could be halted with better education and communication on the sources of nutrients. The many excellent suggestions received will be considered during ongoing efforts to address nutrient sources from all sectors across the Lake Winnipeg watershed.

Additional Matters

At each of the open houses, and in many of the comments received by mail and e-mail, additional matters about water quality and the environment were raised. Comments were received in a number of general areas including:

- halting urban sprawl
- limiting cottage lot development and requiring new cottagers to meet strict environmental standards
- reducing boat traffic
- reducing the use of anti-microbial agents, chlorine and fluoride
- improving wastewater treatment and water conservation including the use of solutions such as composting toilets and grey water re-use
- water management including drainage and lake regulation
- minimizing the impact of pet waste
- improving access and communication about hazardous waste depots
- improving the availability of information on mercury
- incorporating monitoring of the mining sector into the strategy
- reducing storm water impacts
- reducing livestock production and emphasizing vegetarian diets
- increasing availability and use of organic and natural products
- increasing for incentives and support for environmentally friendly products such as composting toilets

Discussion of these additional ideas and comments will further guide the development of the proposed regulations as well as aid in other programs underway across the province.

NEXT STEPS

Manitoba Water Stewardship will now consider the feedback received from the public and interested stakeholder groups as it moves forward to reduce nutrients in surface and ground waters across Manitoba. The many valuable suggestions and comments received by the public will provide considerable input into the next phase of the proposed regulations.