



DRAFT

## PLWMP Cosmetic Fertilizer Survey Results

*Cosmetic fertilizer Use in  
the Pigeon Lake watershed*



*What We Heard*

*Conclusions*

*&*

*Next Steps*

**March 2014**



**Special thanks** to all the **Pigeon Lake watershed community members and interested stakeholders** who have completed the Cosmetic Fertilizer Survey and to those who passed it to their neighbours and friends from around the lake to help ensure a solid representation from watershed community.

**Special thanks** to the **PLWMP Engagement Committee members and contributors** for their work on this report:

- Doris Bell – PLWMP Steering Committee APLM representative, and Mayor of the Summer Village of Crystal Springs
- Susan Ellis – PLWMP Steering Committee member and PLWA President
- Robert Gibbs – Chair of the PLWMP Steering Committee, and PLWA Director
- Leslie Kaun – MaMeO Watershed resident
- Arin MacFarlane Dyer – Executive Director of ALMS
- Ian Montgomerie – IMI Strategics and Expert Consultant
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- Sarah Skinner – BRWA Watershed Planning Coordinator

Comments are welcome and any about the Pigeon Lake Watershed Management Plan and/or the Cosmetic Fertilizer Survey and/or this report can be sent to [plwmpinfo@gmail.com](mailto:plwmpinfo@gmail.com).

## Executive Summary

This report shares the **highlights and key messages** from the respondents to the **Pigeon Lake Management Plan's (PLWMP), Cosmetic Fertilizer Survey**. The survey asked residents, and those interested in Pigeon Lake, about their; perceptions, uses, and suggestions for the use of Cosmetic Fertilizers in the watershed.



**There were 344 surveys completed on behalf of at least 740 people.** 74% of these people are owners or family members of people with shoreline properties. Only 2% were not from the watershed. 79% of the survey responders are part-time residents and 17% are full-time residents. Just over half of the responders are Pigeon Lake Watershed Association (PLWA) members.

**The response to this survey was both strong and significant.**

**75% have a “sense of concern and urgency” to reduce the levels of cosmetic fertilizers** going into the lake, followed by 22% who have a “moderate sense of concern and urgency”. Many people are astounded that more has not been done on this front.

### What We Heard About Current Cosmetic Fertilizer Uses

1. **What Uses?** Of the 80% of the responders involved with decisions or the maintenance of their properties 53% do not use fertilizers; 33% use in containers/planters; 27% use on their lawns and 15% use in the flower gardens.
2. **Types?** A range of fertilizers is being used: 11% with phosphorus and 26% without. A wide variety of organic fertilizers are being used, and still some fertilizers containing a weed killer.

### Perceptions About Cosmetic Fertilizers

77% of all responders believe that cosmetic fertilizers are a contributing factor to the lake's water quality; 65% believing that they feed the algae and aquatic plants. 52% believe that gravity will ensure that eventually any unused fertilizer will end up in the lake and 48% understand that small applications of cosmetic fertilizers do add up and can impact the water quality.

**48% believe that no cosmetic fertilizers / nutrients should be used anywhere in the watershed.**

While over half of the responders with a moderate or lower sense of urgency believe all nutrients feed the algae and aquatic plants, a number of them also believe that cosmetic fertilizers without phosphorus does not impact the water quality.

**98% of those that believe in regulations (N = 265) want them consistent throughout the watershed.**

**Responses were split almost 50/50 between bringing in regulations in a staged approach and those wanting to move straight to regulations.**

## Recommendations for Change

The desire for bans / bylaws was very strong with close to half the respondents calling for consistent, local level regulation. This was just slightly stronger than the call for Provincial regulations.

While a number of comments suggest that enough education and awareness has been done: *“This has been discussed since 1970, nothing has happened, let’s get right to a bylaw with huge fine enforcing no cosmetic fertilizers”* more people see the need for a combination of education and regulations

People cited a range of reasons for using fertilizers that stand in the way of the adoption of better cosmetic fertilizer practices such as:

- *“We all want our landscape to look alive and some people prefer a more manicured look”.*
- *“Habit and pride of ownership”*
- *“Priority given to having a beautiful weed free lawn over concern for the lake.”*
- *“Lack of information regarding products that would be safe but effective.”*
- *“The belief that other sources of nutrients have more impact on the lake.”*
- *“Availability of cheap fertilizers”, “Organic fertilizer is much more expensive.”*
- *“Lack of education and a failure to understand the impact of cumulative effects.”*
- *“No effective bans at the local municipal or Provincial levels.”*

The watershed community made a number of welcome suggestions to help hone the communications including: ways to reach more people; things municipalities could do; give hope; and methods such as signage and imaginative messages.

## Support Needed to Make Changes

The two most popular **communication methods** were:

- 1) A series of seasonal “Caring for you Lawn” emails sent out on how best to help your lawn without harming the lake.
- 2) A brochure with an overview of information.

The more **in-depth education methods** people liked were:

- 1) A lawn and soil-maintenance hand-book of recommended practices - 70%
- 2) Local examples / demonstration sites – 41%
- 3) Community workshops with “how-to’s” – 41%

## **KEY CONCLUSIONS** (See the full list in the report)

1. Many people see the reduction of cosmetic fertilizers as an urgent action item for the health of the lake.
2. Frustration, disappointment and concern with the lack of action is reflected in many comments.
- 3.

***NEXT STEPS***

1. **Continue**
2. **Start**
3. **B**
- 4.
5. **Increase**



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## Background

### About The PLWMP

The Pigeon Lake Watershed Management Plan (PLWMP) was initiated to provide the lake community with focus and guidance for what and how to improve the watershed's natural environment and water quality by recommending action-oriented watershed policies, plans and best practices to support the long-term health, protection and restoration of the watershed.

The PLWMP identified ten topics, to be addressed. These topics are to be addressed by the watershed community, guided by the recommendations of the PLWMP committees. The committees include a range of people including experts, and representatives of the interests of the watershed community and relevant Provincial government departments. As each topic is undertaken, part of process includes reaching out and getting input from the watershed community members.

### PLWMP Topic Process

There is a four phase process for each topic. Depending on the topic, can these phases can include different steps:

1. Collect key input:
  - a. Science: The most current science on the topic and what is working elsewhere, and,
  - b. Social: Perspectives, considerations & concerns on the topic.
2. Develop draft recommendations:
  - a. Practices and/or policies and/or plans,
  - b. For Individuals, regulators and organizations such as the PLWA, and,
  - c. Content as appropriate can include: regulations, education, communications and implementation considerations.
3. Collect and develop recommendations for implementation considerations; this may include:
  - a. Going back to certain groups for further input,
  - b. Getting feedback on the draft recommendations, and
  - c. Finalizing and communicating the recommendations.
4. Implementation of the recommendations\*

The 4<sup>th</sup> phase is to be implemented by the leaders, organizations and people around the lake.

The topic process enables the recommendations to be based on an in-depth understanding of the topic and it's the potential impact of the recommendations on both the watershed and ultimately the lake water quality. While the environmental considerations are essential, the input from the watershed community is also essential to form the recommendations as the committee needs to understand what recommendations will be supported and the barriers to change. Pigeon Lake is a recreational lake that is important in many different ways to numerous residents, Albertans and other stakeholders.

## About The Cosmetic Fertilizer & Soil Management Topic

“Cosmetic fertilizers and soil management” was one of the first topics that the Steering Committee decided to tackle. A list of the people who have participated on the Cosmetic Fertilizer and Soil Management Committee (CF Committee) may be found on the website [www.plwmp.ca](http://www.plwmp.ca).

**Cosmetic fertilizers were defined as: Fertilizers used on residential properties to promote lawn and plant growth. They are not the fertilizers used for the purpose of agriculture or maintenance of golf courses.**

The Topic Objectives include:  = Completed  = Not yet completed.

- 1. Gather current research on the impacts of nutrients on water quality.
- 2. Identify current practices which could have a positive or detrimental effect on lake health and water quality.
- 3. Identify specific questions related to the topic.
- 4. Research current public attitudes and perceptions about current practices, their connection to lake health and the need for changes (in conjunction with engagement program)
- 5. Research and provide clear scientific rationale and justification for linkages between behaviours and lake health and the need to change behaviours and practices, and the relative importance for the changes identified.
- 6. Research a range of available beneficial management practices (BMP's) and their success in different jurisdictions/watersheds.
- 7. Research mitigating factors such as legislation, legal, technological changes, industry changes (e.g. development standards) that would influence the development of best practices.
- 8. Investigate the feasibility for implementing alternative strategies locally in the watershed, or provincially or industry wide.
- 9. Develop recommendations for Beneficial Management Practice's (BMPs) or alternate practices for different watershed stakeholder groups in the watershed.
- 10. Recommend indicators and monitoring and evaluation for success. Determine any required change in behaviour and risk profile.
- 11. Develop recommendations for targeted strategies to engage individual stakeholders or groups with outreach, education, technical support or legislation.

The full Cosmetic Fertilizer & Soil Management Terms of Reference (ToR) and further information on this topic can be found on [www.plwmp.ca](http://www.plwmp.ca) website along with a complete list of topics.



## About the Cosmetic Fertilizer Survey & Report

Input from residents is essential for a topic regarding the use of cosmetic fertilizers, in order to form recommendations on what if anything to change, and how best to make the changes. The research on the science provided the information on why there is a need to make changes.

### What Was Done

A number of public engagement opportunities on this topic have been undertaken to date. Presentations have been made on the Cosmetic Fertilizer and Soil Management topic and findings of the science research. A presentation was made to the Association of Pigeon Lake Municipalities in the spring of 2013 and presentations were made at the Alberta Lake Management Society's 20<sup>th</sup> Annual conference held at Pigeon Lake in September of 2013.

The Cosmetic Fertilizer survey was developed by the PLWMP Engagement committee (with guidance from an expert, IMI Strategics Principle, Ian Montgomerie) as an initial means of gaining feedback from the watershed community on this important topic.

In particular, the PLWMP's Cosmetic Fertilizer and Soil Management Committee (CF Committee) was interested in learning more about the social aspects of cosmetic fertilizer use, including:

- Beliefs about the use and impacts of cosmetic fertilizers,
- Current cosmetic uses: types, timing and frequency,
- Potential for changing the practices and shifting the social norms in the community regarding the use of cosmetic fertilizers, and,
- Desire and ideas for bringing about changes.

The survey was also used to convey the key findings of the research conducted by the researcher hired by the CF Committee, Dora Berry, the Principle of Nature's Elements - Landscape Design & Environmental Consultation, and from the presentations of various experts to the CF Committee.

It was hoped that the survey would act as a constructive community stimulant to think about the range of cosmetic fertilizers use and to consider the actions that could be taken, to minimize their impacts.

For more information read more about the topic and see the survey pdf on [www.plwmp.ca](http://www.plwmp.ca) under the Cosmetic Fertilizer & Soil Management Topic.

The survey was ready to be sent out when the holidays were upon us, so with the use of the PLWA database it was initially sent out December 29<sup>th</sup>, 2013 to 761 people including the emails to the:

- Association of Pigeon Lake Municipality Representatives and administrators
- 4 Band First Nations Coordinators
- Leduc County Mayor, Councillor and Administrators
- Pigeon Lake Regional Chamber of Commerce (PLRCC) executive and administrator
- Pigeon Lake Watershed Association (PLWA) Members

- Pigeon Lake Watershed Association (PLWA) Subscribers
- Pigeon Lake Watershed Management Plan (PLWMP) Committee Members
- Pigeon Lake Watershed Management Plan (PLWMP) Distribution List
- Summer Village Councillors
- Summer Village Administrators
- The County of Wetaskiwin, Reeve, Councillor and Administrator

354 people opened this email that gave them the option to go directly to the survey or to the survey via the [www.plwmp.ca](http://www.plwmp.ca) home page. 149 recipients clicked on the survey link, 34 went to the website.

The first reminder was sent to the same list of people on January 10<sup>th</sup>. 280 recipients opened the email and 69 clicked on the survey link.

All Summer Villages posted the survey link on their websites and 3 Summer Villages sent an email about the survey to the emails that they have.

The Pipestone Flyer edition that came out on Thursday January 16<sup>th</sup> had an advertisement in it and a final reminder was sent around on the 16<sup>th</sup> as well.

The survey was closed at 10 pm on January 18<sup>th</sup>.

## About This Report

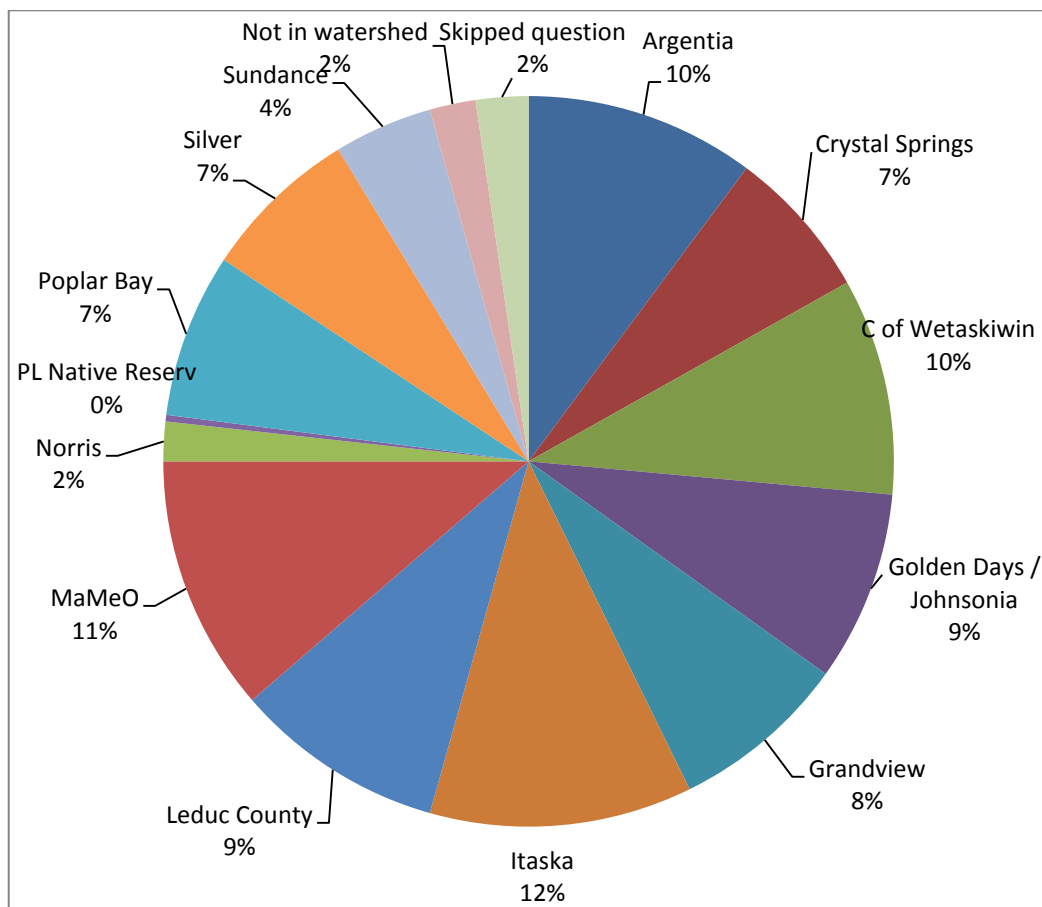
The purpose of the report is to share the results of the PLWMP Cosmetic Fertilizer & Soil Management survey and to provide some conclusions and next steps based on the responses received.

## Survey Results: What We Heard

### Who Responded

With the Engagement Committee wanting to share with each of the Pigeon Lake municipalities a report of responses from their municipality and concerned about missing any of the watershed locations, the committee decided to keep the location options to each of the municipalities and Pigeon Lake Native Reserve.

**Q1: If you or your family own property in the watershed please tell us in which municipality you reside?** These percentages are based on the number of responders. N = 324 (20 Skipped)



**Some people shared** the location there property resides in their municipality:

- The Village at Pigeon Lake on Ravine Creek, Viola Beach and Village Lane Condos
- Mission Beach, Moonlight Bay, Sundance Estates, South of Pigeon Lake and Sandholm

The majority of people are residents from the beach communities of the watershed, and a few people noted that they care about the lake, but do not own property in one of the municipalities or live in the Pigeon Lake Native Reserve. These people noted locations of the City of Wetaskiwin, Lacombe and even one person stated Ontario.

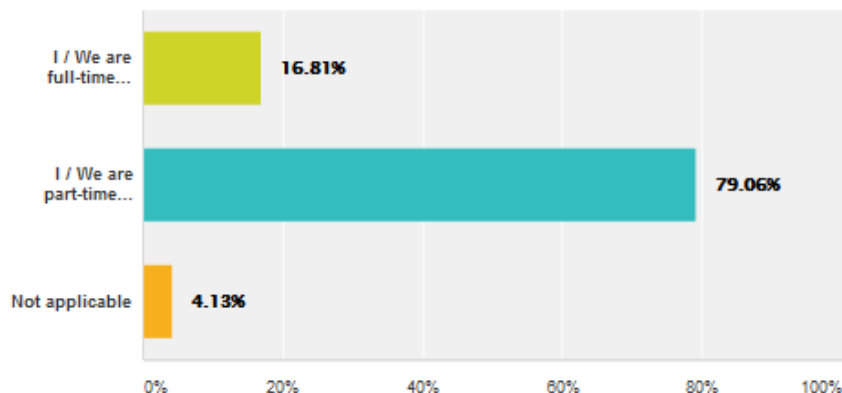
**Q2: How many people are you submitting this survey on behalf? N = 341 (3 Skipped)**

Of the people who filled in the survey, some filled it on for themselves and many filled it out on behalf others.

- a) 80 x 1 = 80 people filled out the survey on behalf of themselves.
  - b) 132 x 2 = 264 people filled out the survey for themselves and their spouse/partner
  - c) 123 x 3 = 369 people filled out the survey for themselves and 3 or more others
  - d) Other = 34 as per the comments
- Total = 747

This survey represents the voices of at least 747 people interested in the lake. “At least”, because the third option stated “3 or more” people.

**Q3: Are you a full-time or part-time resident? N = 339 (5 Skipped)**



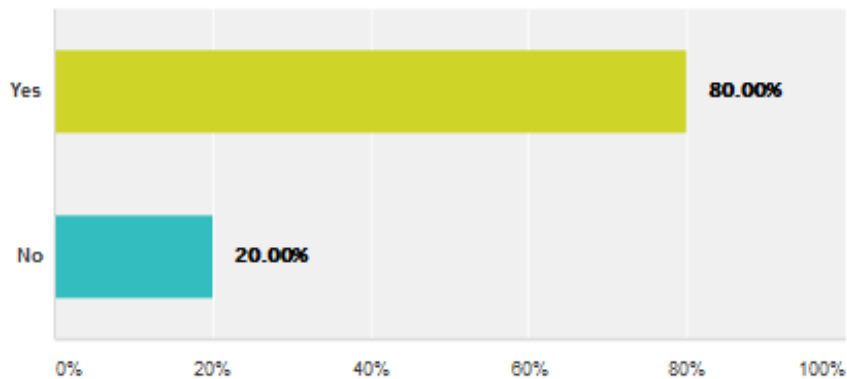
**Q4: What are your connections to the Pigeon Lake? N = 340 (4 Skipped)**

Answer Choices	Responses
1. I / We run a farm operation	0.88% 3
2. I / We live on an acreage or in an estate neighbourhood in the watershed	4.41% 15
3. I / We live in the Pigeon Lake Native Reservation	0.29% 1
4. I / We own a business in the watershed	1.47% 5
5. I / We have shoreline property	72.65% 247
6. I / We live in a beach community but do not have shoreline property	17.94% 61
7. I / We work in the Pigeon Lake watershed	1.47% 5
8. I / We are PLWA members	57.35% 195
9. I / We camp at Pigeon Lake	2.35% 8
10. I / We recreate at the lake (any season)	41.76% 142
11. I / We are annual visitors to Pigeon Lake.	15% 51
12. I am on one or more of the PLWMP committees	3.24% 11
13. I work for a water/lake organization, Provincial or Federal government dept involved with Pigeon Lake	1.76% 6
14. None of the above	1.47% 5
Total Respondents: 340	

**Question 4 responses and comments** told us that people have multiple connections with Pigeon Lake. People told of their work at the lake and work for the lake. We heard about neighbourhoods and camps; places and connections, some across decades. It is obvious people have had special times at Pigeon Lake, with people important to them, and have special memories. A lot of living has happened over the years, showing us how incredibly important it is to do what we can to ensure it continues to be a special place and to pass a healthy Pigeon Lake to the next generation. One comment also reminded us that water quality is important for all people everywhere; that we the stewards of Pigeon Lake are also protecting the lake for many people beyond the watershed.

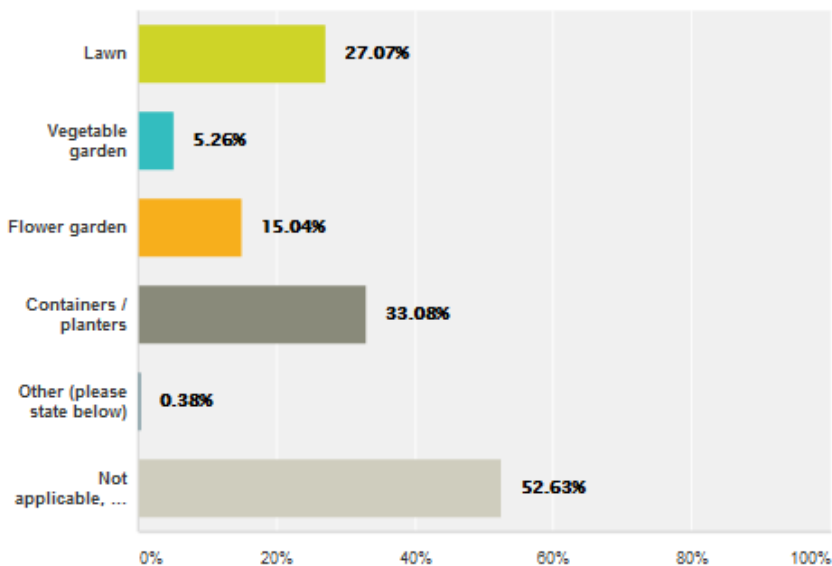
### Current Cosmetic Fertilizer Uses

**Q5: Are you or your family involved in decisions or actions to do with gardening or lawn maintenance in the Pigeon Lake watershed?** N = 340 (4 Skipped)



**Note:** The people who answered No, they were not involved in decisions or actions to do with gardening maintenance, were automatically skipped to the next section. That left 275 responders, a significant number, to complete the section.

**Q6: What are all the places that cosmetic fertilizers are applied on your property?** N = 266 (69 Skipped due to Q5 No answer, and 9 others skipped)



**Comments:**

Some people expanded on the circumstances in which they use fertilizers:

- *“applied when planting trees”*
- *“...land re-landscaped with depleted soil and NOTHING will grow without fertilizer ...”*
- *“planters self-contained”*
- *“[The beach] allows fertilizers without phosphorus.”*

A few people missed the cosmetic fertilizer definition on the first page of the survey.

Comments from some responders who fertilize their lawns, told us that they fertilize because they do not believe that stopping would make much difference or because they feel that other actions are more important for the lake than stopping the use of cosmetic fertilizers.

Of the 27% who fertilize their lawns, when asked in Question 13 about the level of their sense of urgency to reduce the use of cosmetic fertilizers in the watershed;

- 42% have a moderate concern / sense of urgency, and,
- 48% have a high concern / sense of urgency.

**Q7: What type(s) of cosmetic fertilizer is used on your lawn and gardens?** Note: The fertilizer labelling scheme presents three numbers separated by dashes (e.g. 16-4-8). The first number represents the percentage of nitrogen in the product, the second number, phosphorus, and that third, potassium. N = 243 (69 Skipped due to Q5 No answer, and 32 others skipped)

Answer Choices	Responses
Fertilizers containing phosphorus	10.70%
Phosphorus free fertilizers	25.93%
Organic fertilizers (please state below what type)	10.70%
Fertilizers containing a weed killer	4.12%
None - we do use fertilizers	57.20%
Total Respondents: 243	

**Comments included:**

It appears that the people who use fertilizers, try to be responsible users: *“ Only use in limited amounts as recommended”; “We try to use as little fertilizer as possible on our garden and in our containers”*

A range of different types of organic fertilizers was mentioned:

- Bone meal
- Manure (sheep, cow and llama)

- Corn gluten
- Mulch
- Actisol, Daniels organic
- Water soluble fish fertilizer
- Compost
- Alphalpha pellets
- Weed-Out
- Ash from the fire pit
- Evergreen fertilizer spikes

**Q8: How often are cosmetic fertilizers applied to your lawn?** N = 259 (69 Skipped due to Q5 No answer, and 16 others skipped)

Answer Choices	Responses
We do not use cosmetic fertilizers	69.11%
Fertilizer is applied once a year	21.24%
Fertilizer is applied twice a year	7.72%
Fertilizer is applied 3 or more times a year	1.93%
Total	

**Q9: When are cosmetic fertilizer applied to your lawn?** N = 241 (103 Skipped) (69 Skipped due to Q5 No answer, and 34 others skipped)

Answer Choices	Responses
Spring before the ground is thawed	0.41%
Spring after the ground is thawed	23.24%
Summer	7.88%
Fall	6.64%
Cosmetic fertilizers are not used	68.88%
Total Respondents: 241	

## Current Perceptions

**Q10: Please select from the following statements any that reflect your current views about the use of cosmetic fertilizers in the Pigeon Lake watershed.** N = 326 (18 Skipped)

Answer Choices	Response
Cosmetic fertilizers are a contributing factor to the lake's water quality.	76.99%
Cosmetic fertilizers without phosphorus do not impact the water quality.	10.74%
Organic fertilizers do not impact the water quality.	8.28%
All nutrients feed the algae and plants in the lake.	65.34%
The soil around Pigeon Lake generally does not need additional nutrients.	31.90%
Cosmetic fertilizers used far enough away from the shore do not go into the lake.	6.75%
Gravity will ensure that eventually any unused cosmetic fertilizer will end up in the lake.	51.84%
If applied at the right times of the season the plants use the nutrients and so nothing goes into the lake.	5.83%
Cosmetic fertilizer use is okay as long as there are lots of plants with deep roots between where it is used and the lake.	4.91%
If people apply the cosmetic fertilizer amounts as per the instructions, it does not end up in the lake.	2.76%
Cosmetic fertilizers are okay if used in containers.	22.70%
Cosmetic fertilizers are okay for use in a garden.	2.76%
The amount of cosmetic fertilizers is insignificant and not the source of the water quality problems.	5.52%
No cosmetic fertilizers/nutrients should be used anywhere in the watershed.	48.47%
The numerous small applications of cosmetic fertilizers do add up and can impact the lake water quality.	47.55%
Total Respondents: 326	

Before the following questions, there was a page in the survey with a few key points about what is now known about the use of fertilizers: [The Science & Community Views](#). A copy of the survey has been posted in the Cosmetic Fertilizer Topic on the website [www.plwmp.ca](http://www.plwmp.ca).



## Recommendations for Changes

**Q11: What changes, if any, pertaining to the use of cosmetic fertilizers would you like to see adopted?** N = 213 (131 Skipped)

**72 %** of the responses called for **cosmetic fertilizers bans**.

**12 %** called for **consistent regulations to limit the use of cosmetic fertilizers** throughout the watershed.

*“What we really need is to have all of the municipalities around the lake agree on a total ban on cosmetic lawn fertilizers. Otherwise, it will be just business as usual with a few looking after the lake and the rest mowing their over-fertilized lawns.”*

*“Would like to see the use of cosmetic fertilizers banned in the watershed of Pigeon Lake”*

*“Total ban on cosmetic fertilizers. Like in Nova Scotia. Public education and support for chemical free natural landscaping. Must implement quickly at water quality in lake very poor.”*

**10%** called for **penalties**

*“By laws preventing their use and meaningful penalties for ignoring the bylaws”*

*“These should not be allowed at all- enforce with charges/ significant fines - use proceeds to help with clean up/ prevention of further damage”*

**18%** called to step up the **awareness and education** efforts

*“More public education...local posters etc.”*

*“Reduction or bans however policing is impractical. Education, peer pressure & voluntary compliance required.”*

*“Clear education of types of products, if any, that CAN be used for those dealing with noxious weeds and using fertilizers. Then development of guidelines/by-laws to enforce appropriate actions.”*

*“More information distributed door-to-door.”*

*“EDUCATION, it takes a short walk and a nano second to see who uses and who does not - an education campaign needs to be directed to those who obviously use cosmetic fertilizers.”*

*“More awareness as to impact of cosmetic fertilizers on our water quality. I had not thought about the fertilizer I put into my small pots on our deck as contributors to the problem until I took this survey.”*

*“Education relative to safe & lake friendly alternatives to green & weed free lawns & gardens.”*

**5% suggested enforcement of bans**

*“I would like to see them banned and penalties put in place for those who do not comply.”*

*“Ban them totally. Severe fines for people caught using them.”*

*“I would like to see strict enforcement to prevent use of them.”*

### **Some people wanted a multi-pronged approach pertaining to the use of fertilizers**

*“1. Continue to educate the lake residents about the negative effect on the lake that fertilizers have. 2. Work with the lawn service companies/individuals to STOP using fertilizers and even fine them if necessary, 3. Request that each Summer Village talk about fertilizer effect on the lake at their AGM.”*

*“I'd like to see: All the municipalities support the PLWA do major education; AESRD produce for all lakes a brochure on the concerns and science about cosmetic fertilizers used in watersheds and work with the PLWA and municipalities to distribute them; all the municipalities have bylaws and all hire a watershed fertilizer bylaw officer who could take soil samples, test for fertilizers and fine people for using them; the municipalities report the number of people that are given fines on their beaches; and signs around the lake saying we are proud to be a fertilizer free community.”*

*“Please ban use of cosmetic fertilizers at either the Provincial or Municipal level. First help all residents of the Watershed learn the facts re: impact of fertilizers on lake water quality = Education. And do this quickly. Ensure compliance and get everyone on the bandwagon to spread the news about how uncool green grass is! Residents need to embrace a new perspective on property esthetics and how the use of supposed enhancements is killing our lake. All fertilizers need to go. End of story. I see no bargaining or cajoling needed here - our lake is ill now and needs remediation now. I see no other solution to this issue because we're talking hindsight to begin with so sweeping actions are needed immediately.”*

### **Less than 4% of the responses suggested some use of fertilizers and most gave qualifiers.**

*“No fertilizers of any sort be used within 75 feet of the shoreline and only organic otherwise.”*

*“All but organic are against the law”*

**Just over 2 % of the responders suggested fertilizing in containers should be allowed.** Note this % was not part of the 4%

*“No fertilizers of any sort be used within 75 feet of the shoreline and only organic otherwise.”*

*“All but organic are against the law”*

*“Controls on type of fertilizers used and their application.”*

*“Reduction trending towards elimination as final goal”*

*“We don't need lush green lawns at the lake and any reduction of fertilizer and herbicides can only help. Small reductions matter.”*

### **A number of other responses**

*“Try your best to convince people to stop using them. However, that having been said, we are not in favor of having our little bit go lawn turn into a weed patch.”*

*“Mandate change!!!!”*

**Q12: Which one level of action pertaining to the cosmetic fertilizers in Pigeon Lake watershed do you believe will be most important?** N = 303 (Skipped 41)

Note – This question asked each person for the one Level of action but did not limit responses. There were 479 answers, 176 more responses than responders.

Answer Choices	Responses
No actions	1.32% 4
Actions to step up the education and resources to support individuals use of cosmetic fertilizer best practices	37.29% 113
Voluntary bans supported by municipal cosmetic fertilizer guidelines	24.09% 73
Municipal by-laws limiting the use of cosmetic fertilizers	48.51% 147
Provincial regulations limiting the use of cosmetic fertilizers	46.86% 142
Total Respondents: 303	

**4 responders chose no actions.** Only one of these responders uses fertilizers containing phosphorus, two use phosphorus free and another person does not use fertilizer. One responder who chose both no action, and also Provincial regulations to limit the use of cosmetic fertilizers. This potential contradictory information could be explained by the fact that the responder was from a beach with current regulations only allowing fertilizers without phosphorus.

Of the **113 responders who want actions to step up the education and resources** to support individuals' use of cosmetic fertilizer best practices:

- 32% also want voluntary bans
- 37% also want municipal bylaws
- 36% also want Provincial regulations

**Comments** included:

- *“Responsible use of cosmetic fertilizers ONLY if the lake will not be further harmed.”*
- *“Education 1st step. If not effective then by-laws with related enforcement.”*
- *“Provide alternatives, many people want attractive yards.”*

Of the **73 who chose voluntary bans** supported by municipal cosmetic fertilizer guidelines:

- 49% also want actions to step up the education and resources
- 42% also want municipal bylaws
- 33% also want Provincial regulations

**Comments** included:

- *“Start by voluntary and proceed from there depending on outcome”*
- *“Education, Information, And cooperation”*

Of the **147 who chose municipal by-laws** limiting the use of cosmetic fertilizers:

- 29% also want actions to step up the education and resources
- 21% also want voluntary bans
- 51% also want Provincial regulations

**Comments** included:

- *“Lawn & Yard Maintenance Companies cease the use of”*
- *“Voluntary bans are not enforceable”*
- *“Must have a way to enforce. Consequences for violators. Replace summer villages as municipal administrators. They have failed to take appropriate actions. They make by-laws but fail to enforce them. The former pristine lakes in Alberta: Gull, Sylvan, and Pigeon deserve Better Governance by their Summer Villages.*
- *“Lake-wide municipal bylaws prohibiting cosmetic lawn fertilizers.”*

Of the **142 who chose Provincial** limiting the use of cosmetic fertilizers:

- 29% also want actions to step up the education and resources
- 17% also want voluntary bans
- 53% also want Provincial regulations

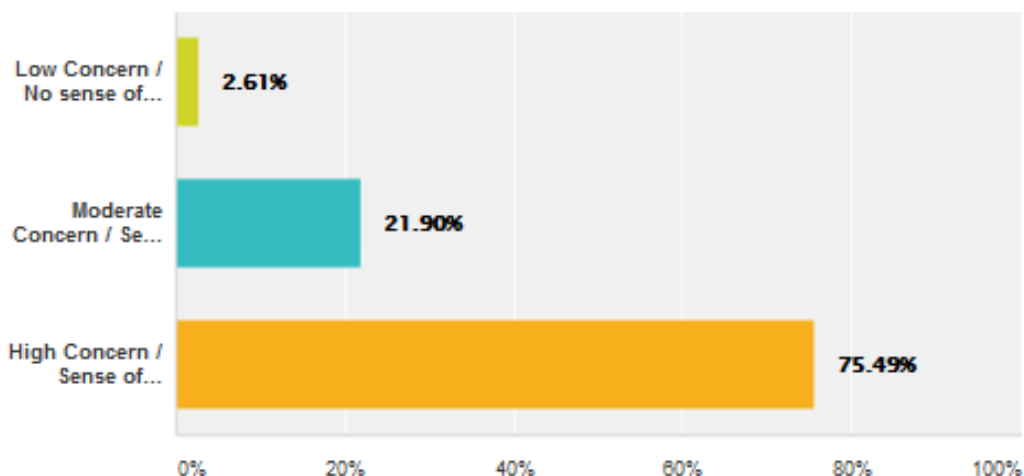
**Comments** included:

- *“Local Bylaws are difficult to enforce”*
- *“Unless there is a fine and or law, those people will continue to turn a blind eye.”*
- *Regulation should include enforcement.*
- *“Most effective but toughest to obtain...local by-laws good but no teeth in enforcement”*
- *“Regulations are nice. I think they need to be provincial. Enforcement is an issue given staff shortages.”*

**Other**

- *“Promote the use of organic fertilizer”*
- *“Make sure there are exceptions for proven need along with a soil rebuilding plan.”*

**Q12: How urgent is the need for reducing the levels of cosmetic fertilizers going into Pigeon Lake? N = 306 (Skipped 38)**



**Comments:**

From one of the few responders who chose **Low Concern/No sense of urgency** – not worth the effort to address: *“Need to focus on commercial use of fertilizers to make a real difference.”*

Comments from those who chose **Moderate Concern/Sense of urgency** – one of many important issues for the lake, for the most part:

- Said the lake needs more help than just no fertilizer,
- Listed what they believe should also be done,
- Stated that it is a “high concern for those who don’t seem to get it”.

Most of the comments came from those who chose **High Concern/Sense of urgency** – this issue should have been addressed already. A sample follows:

- “Change comes slowly and unless there is a sense of urgency, it will take a long time.”
- “The sooner curtailment is done the better.”
- “Let’s do everything we can to improve our lake quality.”
- “My property could not be sold now due to the water quality of this lake.”
- “Basically the use of the lake is now limited to the beginning of the summer - lake is not usable for at least 2 - 3 weeks of our already short summer. Something needs to be done now.”

## Support Needed to Make Changes

**Q14: What stands in the way of more people adopting better cosmetic fertilizer practices?** N = 244 (Skipped 100)

### City Mindset

- *"What I did in the city (or elsewhere) is OK at Pigeon" Large lawns on lakeshore properties (and those close to the Lake)."*

### Municipalities

- *"Municipalities around the lake must have a common approach of regulations and public education campaign."*
- *"The issue not being policed. It's also as if [the municipality] doesn't care at all about Pigeon Lake and this part of the county."*

### Habits

- *"Habit and pride of ownership"*

### Human Nature

- *"Human nature. They don't see the big picture. Don't realize every person makes a difference."*
- *"We're talking human beings here and many do not or will not listen to the facts regarding Pigeon Lake water quality."*

### Esthetics

- *'Peer pressure to make yards too manicured.'*
- *"Many people have a perception that ultra-green grass and perfect flowers are the way to go in terms of property maintenance."*
- *"People desire green well maintained lawns and do not choose to adopt common sense practices."*
- *"People wanting a showplace instead of a lake property. "*

### Ignorance

- *"Ego and ignorance"*
- *"lack of understanding or don't care"*
- *"Lack of knowledge"*

### Lack of Cumulative Impacts Understanding

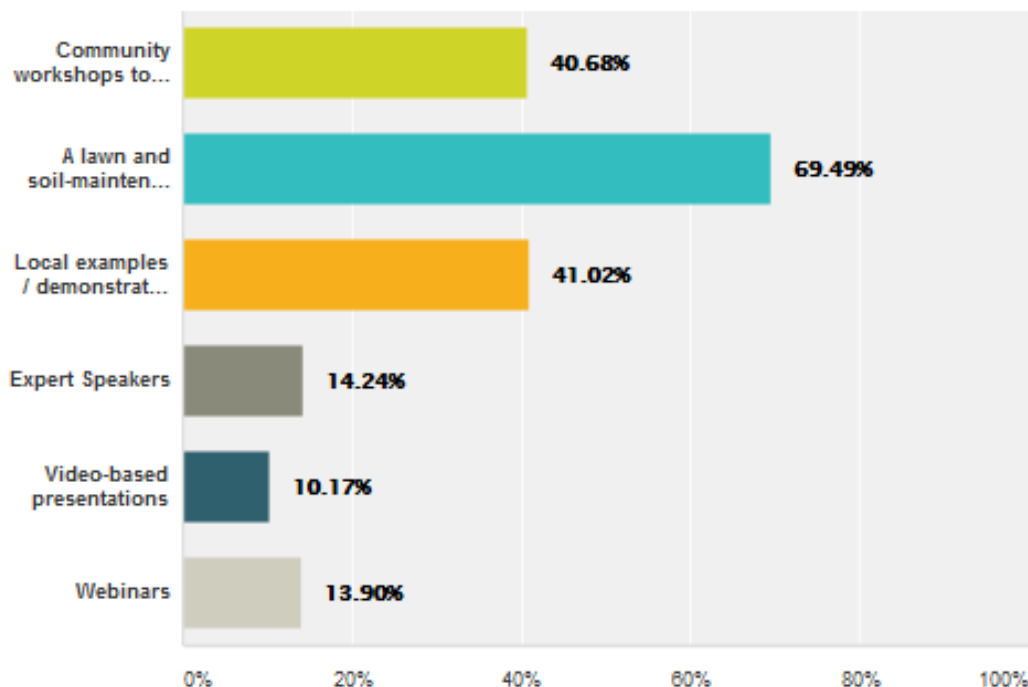
- *"People think their single actions gone matter they don't see the big picture or cumulative effects"*
- *'The concept of "cumulative effect" (i.e., the sense my use will not have an measurable impact)'*
- *"Attitude that they aren't doing any harm"*

**Q15: Please select two communication methods you think would best support people in improving their lawn maintenance practices.** N = 301 (Skipped 43)

Answer Choices	Responses
Brochure with an overview of information	35.22% 108
Website posted information	22.92% 69
Hand booklets: one source for a complete understanding	24.92% 75
A newsletter article or update article sent out via email	23.26% 70
Word of mouth - neighbours to neighbours	28.57% 86
Social Media - e.g. Twitter, Facebook	8.97% 27
Series of "How To" pamphlets	25.25% 76
Resource list with a few options to learn about beneficial watershed lawn and gardening practices.	19.60% 59
A series of seasonal "Caring for your Lawn" emails sent out in Spring, Summer and Fall on how best to help your lawn without harming the lake.	53.49% 161
Total Respondents: 301	

The most responses went to "A series of seasonal "Caring for your Lawn" emails" at 53%, a Brochure came in second with 35% of the responses.

**Q16: Please select two education methods that you think would best help people to make changes.** N = 295 (Skipped 49)



**A lawn and soil-maintenance hand-book** of recommended practices, received a significantly greater number of responses at 69%, with a desire for some local demonstration sites, receiving the second greatest number of responses at 41%, with community workshops following very closely behind.

**Q17: Other suggestions to help hone the communications and/or education efforts.** N = 88 (Skipped 256)

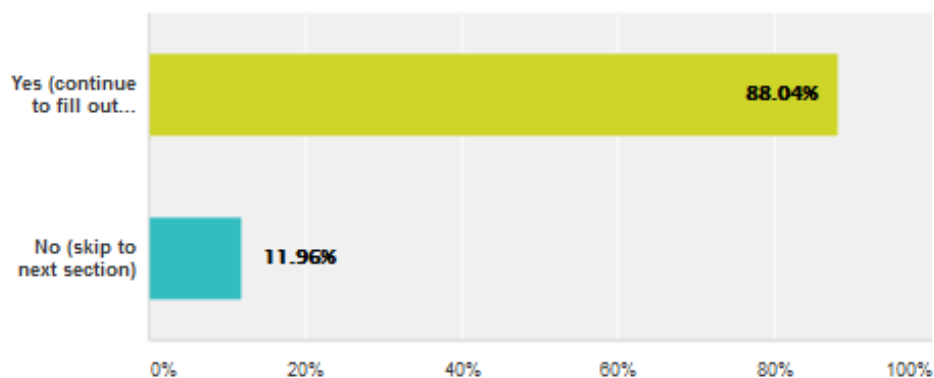
See most of the ideas given in Appendix B. There was a wide range of suggestions:

- Mechanisms to Extend the Reach
- Municipal Councils / Neighbourhoods
- Annual Summer Village Meetings
- Work with local Greenhouses
- Give Hope
- Look at other current resources
- Link environmental to lake health and human health.
- Put a Marketing team together and save the lake.
- Use shame and fame / Encourage people to become role models – Leaders +
- Use signage at key access points. Clear/imaginative messages
- Gardening programs with best practices
- Face-to-face consultations / Hand delivery of brochures, especially to those with green, lush lawns by Councilors, PLWA people, summer students, experts, by-law officers and neighbours
- Use Soil tests
- Improve communications - Make current resources quick and easy to read / distribute. Stronger messages. Better summaries.
- Focus on the key challenges / Make convenient and internet accessible.

## Guidelines & Regulations

**Q18: I do believe that guidelines and/or regulations are required.** N = 301 (Skipped 43)

**Note:** The Yeses continued to fill out this section of the survey, the No's (41) skipped to the last question of the survey.





**Q19: Select all content that should be included in any guideline or regulation.** N = 272  
(41 skipped due to Q18 No answer and 31 others skipped)

Answer Choices	Responses	
What is and is not allowed for lawns	95.59%	260
What is and is not allowed for gardens	84.93%	231
What is and is not allowed for containers	75.37%	205
Any alternate options allowed	68.01%	185
Seasonal considerations (i.e. no fertilizing on frozen ground)	51.10%	139
Exemptions (i.e. newly seeded lawns, tested soils that confirm need)	43.01%	117
Information or Warnings for non-compliance	67.65%	184
Enforcement measures	72.43%	197
Total Respondents: 272		

#### Comments included:

- **Keep Simple**
  - *“Too complicated. Just say NO”*
  - *“Too much grey area in most of the above options. Once you start allowing exemption and seasonal considerations you will lose your audience. “*
- **Specifics Important**
  - *“All of the Above!”*
  - *“Content needs to be specific when listing what is allowed including product name and where the product would be available. .. at one point I received an e-mail from village office stating ALL septic/holding tanks were required to be PASS INSPECTION but guess what>>> no-one knew who could actually do the work ...and so no action is what happens around the lake”*
- **Exemptions**
  - *There should not be any exemptions in my opinion*
  - *No exemptions for chemical use.*
- **Consequences Key**
  - *“Serious issues need consequence. My neighbour wouldn't do it if she could have a hefty fine.”*
  - *“Although I strongly believe in enforcement, it seems to not work around here... no consequences...”*
  - *“Warning for first offence, \$250 fine for second, \$500 for third.”*
- **Enforcement Considerations**
  - *I would like to see enforcement, but am doubtful, as I still see out houses and outdoor showers. And nothing done about it.*

- *“Ensure you can and will enforce any by law introduced to control nutrient loading into the lake. We have by-laws in place since 2008 to stop grey or sewage from entering the lake... this however has not been enforced and violators still exist.”*
- *“It would be interesting if there was a "safe" whistle blower methodology so that offenders could be identified. I'm thinking of what do you do if you see someone spreading fertilizer on their lakefront lawn.”*
- *“Enforcement is difficult. How would one know about a breach?”*
- **Other**
  - *“Should be guidelines by experts .... not draconian measures”*

**Q20. If you believe in regulations, what do you think would be the best approach?**

N = 268 (41 skipped due to Q18 No answer and 35 others skipped)

Answer Choices	Responses
A staged approach; begin with education and encouragement of best practices, then bring in regulations and over a period of time stricter enforcement as necessary.	46.59% 123
Move straight to bringing in regulations.	54.92% 145
Total Respondents: 264	

**Comments:**

**Staged Approach – some comments:**

- *Over one season only*
- *A staged approach with a relatively short timeline. In other words, not staged over years!*
- *Because of the serious condition now at the lake I think the period of time before we have regulations needs to be quite short.*
- *Educate [about] why you are Bringing in the Regulations*

**Move Straight to Bringing in Regulations – some comments:**

**Time is of the Essence**

- *Why wait for the situation to get worse? How much more time do we need? Action will create a reaction.*
- *I feel that this is a crisis situation - act immediately.*
- *We have gone too long without action.*
- *Don't waste time*
- *there has been lots of info and time already and it is not totally effective so move to regulations now*
- *How much longer do we need to wait? The sooner we start acting to save our lake the better.*
- *We've known of this problem for several years. We should be well beyond 'staged approaches'. It's time to act and enforce!!*

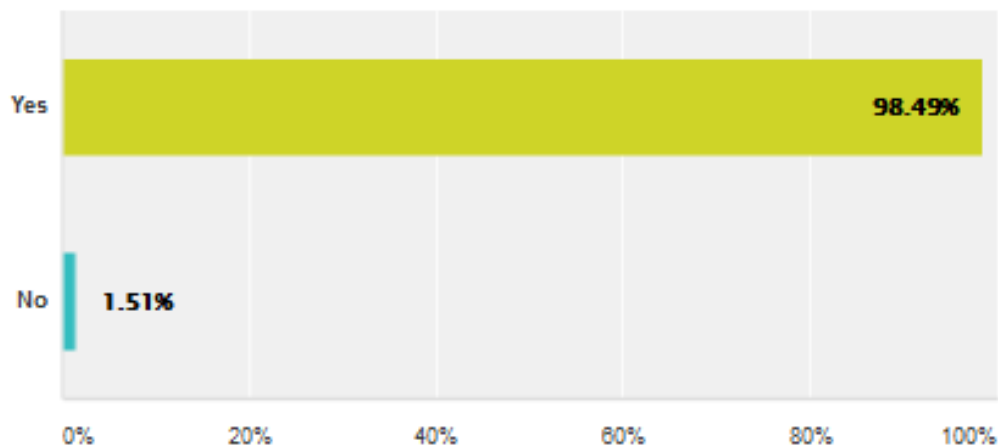
**Education**

- *We are educated adults let's stop fooling around time is of the essence*
- *We just don't get it, after all these years*
- *The lake is visibly not well. Everyone knows this... I believe change is too slow without strict regulations. How long can we continue to try and be nice and educate. If this was traffic safety... things would be different*
- *We have completed a good series of education over the recent years. I think it is reasonable to set up regulations now*
- *We have been educated for 20 years, get to it and slap them in the wallet.*
- *We need more education but we really need to move ahead and protect the water.*
- *Supplemented by a strong education programs*
- *Community conversation along with bylaw readings*
- *...and ENFORCE THEM otherwise you are wasting my time*
- *Education goes a long way but are you guaranteed any students in your classroom? Encouragement is great but again, most will turn their backs and quietly do as they wish.*
- *Enforcement will always be an issue. The local gov't does not have the resources to enforce a lot of their regulations now.*

**Other**

- *Replace Summer Villages with Pristine Places Management*

**Q21. If you support the regulation of cosmetic fertilizers, should they be consistent throughout the watershed? N = 265 (Skipped 79)**

**Comments included:**

- but not if it holds things up!!
- but not if the bar is set low... only if it is a total ban of nutrients with a very few exemptions
- guidelines, not regulations, but consistency
- Has to be fair for all

- “Do not think that you will get everyone to approve it.”
- “Why should one village have to comply and not another? It needs to be a community effort not just for cosmetic fertilizers but also outhouses”
- “They must be consistent in order to be effective”
- “This is unlikely to happen due to the large numbers of municipalities involved. ... a resolution in June 2004 declaring Pigeon Lake a Phosphorus Free Zone was passed. Ten years later, as far as I know, [municipality X] is the only village to take this to heart and pass appropriate bylaws. How many more decades will it take? I'm getting frustrated and discouraged.”
- “Good Luck in getting 10 SV's/2 Counties/1 Native Reserve of 4 bands to agree.”

#### **Distance from the Lake**

- *“Perhaps properties further away from the lake should have different regulations than properties that are waterfront”*
- *“perhaps stronger nearer the lake”*
- *“Not sure; should lake front property regulations be stricter than second row property??”*
- *“Regulations should be for land adjacent to water bodies and streams, with specified setbacks.”*

#### **... and Beyond**

- *“they should be consistent province wide”*
- *“Whatever it is, it needs to be clear, concise and the same no matter what watershed is being discussed! All watersheds need to be treated the same if you are truly calling them a watershed.”*

## **Final Comments**

**Q22. Any final comments?** N = 77 (Skipped 267)

See all comments in Appendix C.

## Conclusions

The PLWMP Cosmetic Fertilizer and Engagement Committees can, with confidence draw a number of conclusions:

1. Given that:
  - This survey almost doubled the number of responses from the significantly valid first survey,
  - This survey was done over the holidays, and it voiced the opinions of at least 747 people;
  - The people who participated were predominately from the beaches all around the lake, and while most were seasonal residents, just under 60 participated.
  - 80% of the responders are involved in decisions and/or actions to do with gardening and / or lawn maintenance;

**This survey is statistically valid;**

**The use of cosmetic fertilizers is a topic of high interest and /or concern 75%; and,**

**The survey carries strong messages to all who have a role to play in the health of the lake.**

2. **There are a number of people who use cosmetic fertilizers, some containing phosphorus and a higher percentage of people using fertilizers with nitrogen and a seemingly growing number of people who are now using organic fertilizers.**
3. There is a high desire to know have more well-founded information on soil and lawn management practices that will not harm the lake.
4. More education and communication is required for people to change their practices. The survey indicates that a number of people hold beliefs about fertilizers that are not motivating them to change their practices. For example: 23% percent of the responders did not indicate that they believe that, Cosmetic fertilizers are a contributing factor to the lake's water quality, and 11% believe that nitrogen does not impact water quality
5. A concerted effort by all players around the lake is required to much more fully address the use of cosmetic fertilizers in the watershed.
6. Most survey responders want to see all the governments moving to address the issue in such a manner that a consistent regulations result, although people were split on whether their municipalities should start with guidelines for a short period of time, or go directly to regulations given the past education.
- 7.

8.

**Next Steps**

**The PLWMP**

The PLWMP



## **Appendix A – List of Acronyms**

AARD:	Alberta Agriculture and Rural Development (AARD)
AESRD:	Alberta Environment, Sustainable Resource Development
AHS:	Alberta Health Services
ALMS:	Alberta Lake Management Society
APLM:	Association of Pigeon Lake Management
ATPR	Alberta Tourism, Parks and Recreation
COW:	County of Wetaskiwin
PLWA:	Pigeon Lake Watershed Association
PLWMP:	Pigeon Lake Watershed Management Plan
TOR:	Terms of Reference

## Appendix B – List of Suggestions to Hone Communications &/or Education - Question 17

### Mechanisms to Extend the Reach

- *“Info sent out with tax notices” / “Send brochures out with tax notices”*
- *“Media (local, provincial and “*
- *“Create a phone app for PLWMP”*
- *“How about simple signs you could put on your property each season to show your support of best practices (cosmetic fertilizer & herbicide use) & demonstrate you can still have a nice yard without it.”*

### Hand Delivery

- *“Since not everyone is on the PLWA email list, a brochure delivered to cottages, etc, would contact more people.”*
- *“Other communication methods: officer (counsellor, bylaw enforcement, fish cop) to [talk to] individuals”*
- *“Door to door campaigning”*
- *“To get best contact ... brochures be hand delivered... the person delivering them should be knowledgeable enough to explain what is in the brochure. Face to face contact would be best. Would be even better if the person delivering the information knew the people they were contacting. That way they can ask about their usage and encourage discontinuation of their use.”*
- *“It’s not hard to see who uses and who does not, just by walking around and seeing who has the most green lawn with no weeds - lush, weed free and deep green is a giveaway to a user. Those are the folk that need to have some written information delivered specifically to their recreational property so they know that everyone else has noticed that the lawn they have in front of their cottage is obviously artificially pristine!!”*
- 

### Other

- *“Make bylaws and inform the landscape contractors who in turn will advise their clients.”*
- *Not all people read e-mails, websites etc. I feel a brochure or pamphlet explaining the Do's & Don'ts should be delivered to each lake resident. Bylaws prohibiting the use of cosmetic fertilizers need to be in place, with every lake/village resident receiving a written copy, to post in their homes/cabins for all family members to understand and respect.”*
- *“Regarding the Cosmetic Fertilizer, one possible solution is to have a team from the Watershed Assn visit those sites that have obvious uses of cosmetic fertilizer to discuss the impact directly with the landowner.”*
- *“I like the idea of an expert speaker, perhaps could these speakers be included in the programming of the summer village's AGM's or other meetings which may draw*



*more of an audience and reach those who would not otherwise come to an independent event dedicated to the topic.”*

- *“Hold annual demonstrations at each beach and have an individual volunteer their place host the demo.”*

#### Municipal Councils / Neighbourhoods

- “Get Summer Villages, Counties and Government onside”

#### Annual Summer Village Meetings

- Make presentations at the AGM of each summer village
- “Send information with tax notices.”

#### Summer Villages Could ...

- “Put up a story board in each summer Village/ Recognize and reward people who ... reduced or eliminated nutrient feeding into the lake, owners whom clean up and remove lakeshore debris that will degrade into phosphorus and nitrogen... Reward those whom are doing the right things. Have an annual rewards function for those individuals.”
- “It has been hard to take this too seriously when we see shorelines being changed and the counties doing nothing about it. I take a step and the neighbours go back 25. Perhaps we do need enforcement of basic things with caveats put on properties before they are allowed to sell”
- “X” applied a heavy duty agricultural herbicide to his lawn that he purchased at the hardware store. It was very easy to see what he had done. It was burnt for almost the entire summer. If there was someone to call to report him I would have. I have talked to them until I am blue in the face.”
- “each community has a display on the entrance...two clear cubes. One holds one lb. of Phosphorus and one holds 500 lb. of synthetic algae..a statement on the percentage of cosmetic fertilizer that is not absorbed goes with the display”
- “Signage on roadways”
- “Not everyone has internet, there should be workshops at the community meetings as well as handouts. Also some way to testing to catch those that are still using the fertilizers.”
- “The summer village AGM's are usually well attended and should be used to educate the ratepayers on the effects of fertilizers.”
- “Education session at the Summer Villages Annual General Meetings (people will be there).”
- “visitations by council members to all properties”
- Visits by bylaw enforcers to obvious users of poor practices- earnings then huge fines
- 

#### Work with local Greenhouses

- “Have a local greenhouse have a stand selling organic fertilizers at the general meeting. also selling recommended native perennials...”

### **Content / Resources**

- “Nobody wants to go to "seminars" these days!? Give them what they want.... HOPE”
- “Look at success in Nova Scotia. Look at materials used in other jurisdictions and by other organizations i.e. Sierra Club of Canada.”
- “Make the links to environmental/lake health and human health.”
- “Cancer is rampant. Why take more chances with these chemicals.”
- “...knowledge of access points to info is essential.”

### **Other methods / Ideas**

- “Put a Marketing team together and save the lake.”
- “target the lawn care companies that work on the ditches and lawns within the summer villages”
- “Promote use of native plants”
- “Cultivate a "Master Gardener" program that promotes best practices.”
- 
- 

### **Role Models**

- “Local leaders need to DEMONSTRATE the change on their own property.”
- “A wall of shame at the entrance of the summer village with photos of offenders/properties that are not showing best practices. Also a wall of fame for those that are using recommended practices.”

### **Use the Media**

- “Newspaper/media stories so it is coming from an "official" source.”
- “News/Info. features on TV & local papers like Wet. Times & Pipestone Flyer”
- “Neighbours influencing neighbours, that is, peer pressure may help.”
- “Public pressure is the best way to achieve cooperation along with a how to do presentation”
- Peer pressure. Recognize people, celebrate people who change to zero cosmetic fertilizer use and pester those who do not with emails, circulars and escalating fines

### **Signage**

- “put up signs along main entrances to the lake area - a list of do's and don'ts”
- “Imaginative signage. Keep the concept visually in places that people frequent. Ex: 'You do not need a perfect lawn.' 'The children want to be able to swim in our lake', ' take care, what you use will end up in the lake.'”
- “Face to face consultations with people with immaculate lawns...”
- “Use summer students to hand deliver brochures to each cabin in every summer village.”
- “Experts talking to land owners about benefits of proper lawn care.”

- “soil test lake side lawn areas . publish fertility levels and post a sign on each site. Scale 1 to 10 1 being low fertility 10 being high fertility”

Media

#### **Tone / Key Characteristics**

- “I think the residents need to understand the necessity of the change without feeling they are having changed forced upon them for the benefit of others.”
- “Something that is quick, not lengthy to read. Easy to distribute”
- “stronger messages”

#### **Enhance Current Reporting**

- “Better summaries on your reports. Most people want concise overviews and for those who want more information, a lot of the detail could be put into Appendixes.”
- “...I see no simple solution to this other than sending out informational brochures with an overtone of upcoming fertilizer bans. Then make it happen. Quickly!”

#### **Focus / Key Challenge**

- “Target obviously fertilized yards on the watershed”
- “This generation of society is a busy one. Those that own and maintain properties at Pigeon Lake lead busy lives in the city followed by complete down time at the lake. Asking for the attendance of these people to seminars or sessions in my opinion will not happen. Make the information (both education and regulation) convenient and internet accessible.”
- Concerned people will attend sessions - offenders typically do not so hopefully they would read a brochure.”

## Appendix C – Any final Comments? Question 22

Answers just the way they were given, except any specific references to people or places have been removed.

- *Ingrained habits must change*
- *Our primary concern is not to have a negative impact on the lawn but we like to have a nice looking property. How do we do that without an infestation of weeds and brown lawn?*
- *Target kids as they are receptive*
- *If all individuals did proper weed management, ie spend some time pulling out weeds, other residents would not feel the need to fertilize to combat the dandelion war.*
- *I understand the need for this, but if there is to be some sort of regulations applied here, there has to be alternatives provided to property owners to keep their investment decent looking. As a recreation property owner I am tired of all the regulations and bylaws, being shoved down our throats.*
- *There are many uninformed and ill-informed property owners. The more education, guidelines and regulations the better.*
- *I believe regulation would be needed if education and personal commitment to discontinue use is not effective.*
- *Let's not use fertilizers or herbicides in our communities. The lake is too vulnerable.*
- *I don't want to get into wars with my neighbours*
- *Cosmetic fertilizer not needed*
- *It is very sad that this issue has taken so long to be resolved.*
- *The health of the Lake must also include the creeks, walking trails, parks, picnic areas, ski trails etc. It is not only a water issue*
- *This will be difficult to implement but totally necessary*
- *Keep up the good work*
- *I think it is wrong to ask the Provincial taxpayer to pay hundreds of thousands to millions of dollars to study and survey this to death, and to come up grandiose schemes; when implementing a cosmetic fertilizer ban is cost effective, timely, simple and shows leadership/continuity between ALL Municipal governments.*
- *This survey was a great idea. You've given me validation for my own viewpoint and if that isn't education and encouragement, what is? We need to keep the ball rolling on green management of Pigeon Lake Watershed. After 60 years in [municipality X] I see very well the impact that careless environmental practices bring. Quite frankly, it's frightening. I strongly believe in flexibility for implementing changes but not on this issue. It's a simple fix. There is absolutely no reason why residents need to use cosmetic fertilizers. None at all. I see it as an ego thing and nothing else. In my opinion it would take way too much precious time, money and energy to attempt a fix by education. It comes down to accepting responsibility for individual actions and in order to achieve compliance for fertilizer usage the only way out is to implement protective environmental laws. Thank you very much for the opportunity to contribute to this survey.*
- *The problem here is that you are preaching to the choir.*
- *Pigeon Lake/Alberta is FAR BEHIND THE REST OF THE COUNTRY on this issue. It must be done right away! Total ban on cosmetic fertilizers/pesticides immediately.*

- *Apart from lawn and garden care, provincial government should have legislated years ago proper septic systems. [Municipality X] was a front runner in this and am surprised that the government has not mandated this earlier. Also, I do not support the expansion of boat launches, particularly the one in X as it encourages day use of the lake, making the boat volume in the Bay excessive and adding to the strain on the lake quality. To be honest - where do all those boaters pee when they are out on the lake all day? Think we know where... Thank you for the opportunity to express our views and we are pleased with the push to respect and clean-up our beautiful lake. We have been cottage owners since 1959 and love our lake.*
- *Everyone in the watershed plays a role in protecting & improving the health & quality of the lake.*
- *While I think PLWA is doing a lot of great work, I think your message is at times lost in detail. Communications should be simple and to the point .... too much detail obscures the message .... details should be put in appendixes for those who want more information.*
- *All cosmetic fertilizers are not safe.*
- *Thank you to all involved in this important work!*
- *Quite a few residents seem to believe that most of the fertilizer run-off comes from the farms in the watershed, not from cosmetic use. It will be hard to change minds without addressing this idea. Knowledge and education will be key to changing attitudes and practices.*
- *Critical that action is taken now! Property at the lake is being severely devalued with all the problems & poor publicity as a result.*
- *Thanks for the work that you do!!!*
- *I think that providing information about viable alternatives for fertilizers etc., including the names of products that would be acceptable is key to getting owners to change their habits. I thank your organization for the work it is doing to protect our lake.*
- *We should be looking at taxing people who are on the lake and use those funds to get the lake healthy again.*
- *Perhaps there should be some thought into incenting the farms and commercial land owners to change their practices as well.*
- *We need to Act Now!*
- *Many village owned properties are full of noxious weeds that seed and go on to resident owned properties-In order to enforce rules on to residents something has to be done to curb this.*
- *I'm disappointed with this survey; I was expecting better. There are a number of false statements "adding phosphorus will not help a plant" (i can't remember the exact wording that was used). and it is awash with bias. I am lead to conclude that you are simply conducting a survey to back up an already conceived plan.*
- *Excellent job you guys are doing*
- *"Make certain that information used to deal with issue is factual and sup[ported] by knowledgeable people. Our country is over regulated. Provide facts and guidelines and permit individual action."*
- *"If the goal is to reduce the amount of fertilizer and that means fewer people should use it, track data that will help understand if the goal is being met."*
- *"Let's implement mandatory sewer holding tank testing to insure security of waste contents. Further if you are not on a sewer system you have one year to have a regulated tank installed or it will be installed and the cost added to your tax notice. Failure to comply how about a tax sale of the property! Time to get on side the lake is dead and deader. I also think we should consider a gas motor moratorium for a year. Also need Gov agriculture on board to move all cattle off the lake shore ie First Nations support here and move to have a wide zone exclusion of Ag fertilizers until we rid ourselves of the blue green algae! How do you like me so far? Thanks!"*

- *“Attitudes need to change... A lawn is outside. It is not a carpet. A healthy lake is much more important than a pristine lawn. Thank you to all of the volunteers working so hard on this issue!”*
- *“Time for action Thank you”*
- *“Thank you”*
- *“Encourage the planting of trees, they are not a useless crop that needs cosmetics, and they are good for our air quality”*
- *I wish you good luck with any changes you might be able to make. Unfortunately it may be too late for this lake.*
- *Find a way to bring in personal considerations when talking about pollution - things like sickness resulting from water use and declining property values*
- *Good work/effort by the PLWMP. We DO need to include the lake adjacent golf courses. I suspect them and agriculture both dwarf any cosmetic use and contribution to loading on the lake.*
- *Please take measures to help us Save the Lake!*
- *A lot of money has been spent researching the life and quality of Pigeon Lake. Any further money, time and resources should be put into what we already know.....our actions today are not leading to a healthy lake tomorrow.*
- *Thank-you to all the work done by the members of the watershed association, the education and information sent out, the community events and the efforts to improve the health of Pigeon Lake.*
- *I wish you every success in eliminating the use of cosmetic fertilizers in the watershed.*
- *“Keep up the good work we want a healthy lake, not healthy lawns*
- *I believe that it is time to immediately institute regulations and policies because Pigeon Lake water has shown to us over the past 10 years that it is a critical distressed and that the blue and green algae annual occurrences will continue and will likely increase thereby making the lake basically unusable for recreation and fishing.*
- *Thanks for your valued efforts on behalf of the lake community.*
- *My perception is that elements stay intact through environmental cycles and are reused by the lawn year after year if the grass clippings are left on the lawn. Additions of more cosmetic fertilizer seem to guarantee the accumulated excess eventually leaches into the lake. 2. My 2nd perception is that spreading dirt from composted kitchen vegetation and ashes from bon fires is ok. Is there scientific data re the benefit/harm of using ashes and compost? If so, perhaps this knowledge needs to be distributed.*
- *I am very anxious for a resolution for the blue/green algae every year as I am tired of the disappointment in my grandkids faces when they can't go swimming in the middle of the summer :(*
- *I did actually complete this survey about 2 weeks ago but clearly the last 3 pages didn't get saved or counted. I have now done this for a second time, how do I know that this time it was registered? Any thoughts??!!*
- *Keep up the great work!*
- *It really makes me sad when August comes around. It also drives me crazy when they say it's naturally occurring. I grew up at Ma Me O, we never had anything like this before. Again thanks for trying to save our lake.*
- *Nutrient loading is much broader than this specific issue. This is a very productive place to start. Thanks.*
- *It appears that politics have excluded the farms and golf courses owners*
- *Feel; guilty about fertilizer useage as we have owned for over 15 Years and have only used it these past two years in order to get the grass to fill in.*

- *Thank you for all of the work you do. We love you.*
- *PLWMP is doing a great job at education and research and now it is time to have the support of bylaws for enforcement.*
- *Good Luck Guys!*
- *I really think that this survey was sent at a bad time, receiving during the holiday season. I put it away and was just reminded today to fill it in... plus so little time to complete it.*
- *Thank you to the committee for all your hard work on getting this survey out, very curious to hear the responses. I believe cosmetic fertilizer use in our watershed is one of many important factors which need to be addressed. Thank you again to the PLWMP for the tireless efforts.*
- *Thanks for putting all the efforts into this survey. Your extensive efforts are starting to show results.*
- *Good luck!*
- *need action!!!*
- *Exempting provincial parks and indian reserves makes everything else futile. Follow your nose to the sources. Celebrate the sewer system. .*
- *Keep up the good work, much is learned and gained by doing these surveys as it involves people who are the owners of the lakes health.*
- *I believe there are other bigger contributors to the problem with the PLWMP that being many residents who have grey water go directly into the lake.*
- *Keep forging ahead. It is frustrating seeing the water the way it gets. When we bought Pigeon was rated ahead of many other lakes in the area. I don't think that is the case now and is simply because of negligence on the part of owners. I love to work in my yard so help us to do it in a more friendly way. I have learnt more from this survey so we will be doing more to be even friendlier to the environment. Thank you.*
- *People don't understand how critical this is. The Province should get involved. People have to modify behavior. The lake is not the city nor does it have to look like the city. This has to be a priority in all communications!!*
- *Our perception is that there is a lack of information about the various causes of problems with water quality and which causes are more significant than other causes (ie. a quantitative analysis). We think that people use fertilizers and pesticides on their lawns because they don't accept the cumulative effect argument.*
- *Novel methods might work: ex schedule a "road meeting" to present a quick bout of info then have a draw for something meaningful*
- *Thanks for doing this*
- *People need alternatives to the present. Telling someone they can't use something is useless unless there is an alternative option for them. Put together videos for the web. Many people can't be bothered to go to a meeting.*
- *All regulations concerning the watershed should be consistent around the lake, all municipalities should have the same regulations and enforcement.*
- *This has been discussed since 1970, nothing as happened, let's get right to a bylaw with huge fine enforcing no cosmetic fertilizers.*
- *Time is of the essence or are we already past the tipping point?*
- *"Spend more time getting all the other "talk" done and enforced before worrying about cosmetic stuff CAUSE if the root of the problem is not addressed then it won't matter if I put phosphate free fertilizer on my law once a year and/or phosphate free fertilizer on my vegetables or flowers weekly."*

- *As always, getting out the "message" is key and a multi-pronged approach is needed. Summer villages should also set bylaws for fertilizer use/misuse.*
- *it will be a long process of promoting change but it is an endeavour that must be undertaken everywhere.*
- *It's not just about the fertilizers, there are still shoreline properties using fields and out houses. This has to be stopped and people fined.*
- *I understand the need for this, but if there is to be some sort of regulations applied here, there has to be alternatives provided to property owners to keep their investment decent looking. As a recreation property owner I am tired of all the regulations and bylaws, being shoved down our throats.*