



**Grand River Conservation Authority
Agenda - General Meeting**

PUBLIC

Friday, March 23, 2018

9:30 a.m.

Auditorium

Grand River Conservation Authority
400 Clyde Road, Box 729
Cambridge, ON N1R 5W6

Pages

1. Call to Order

2. Roll Call and Certification of Quorum – 13 Members constitute a quorum (1/2 of Members appointed by participating Municipalities)

3. Chair's Remarks

4. Review of Agenda

THAT the agenda for the General Membership Meeting be approved as circulated.

5. Declarations of Pecuniary Interest

6. Minutes of the Previous Meetings

THAT the minutes of the General Membership Meeting of February 23, 2018, be approved as circulated.

7. Business Arising from Previous Minutes

8. Hearing of Delegations

9. Presentations

10. Correspondence

THAT Correspondence from Conservation Halton regarding support and assistance, and from the City of Hamilton regarding a Notice of Appeal, and from the Township of Amaranth regarding the GRCA 2018 budget, and from a group of seasonal campers at Pinehurst Conservation Area regarding seasonal camping, be received as information.

a.	Conservation Halton - Letter of Support	16
b.	City of Hamilton - Notice of Appeal of 2018 Municipal Levy	17
1.	Office of the Mining and Lands Commissioner - Response to Hamilton Appeal	18
c.	Township of Amaranth - 2018 Budget	20
d.	Pinehurst Seasonal Campers - Seasonal Camping	21
11.	1st and 2nd Reading of By-Laws	
12.	Reports:	
a.	GM-03-18-35 - Communications and Marketing Review/Audit Final Report	24
	THAT Report Number GM-03-18-35 – Communications and Marketing Review/Audit Report be received as information.	
b.	GM-03-18-40 - Ontario Municipal Board Appeal of OPA 48, City of Guelph: Re-designation of GRCA's Lands on Niska Road/Pioneer Trail - Settlement	65
	That Report Number GM-03-18-40 Ontario Municipal Board Appeal of OPA 48, City of Guelph: Re-designation of Grand River Conservation Authority's Lands on Niska Road/Pioneer Trail- Settlement be received as information.	
c.	GM-03-18-26 - Cash and Investment Status	67
	THAT Report Number GM-03-18-26 Cash and Investment Status – February 2018 be received as information.	
d.	GM-03-18-36 - Financial Summary	69
	THAT the Financial Summary for the period ending February 28, 2018 be approved.	
e.	GM-03-18-28 - 2018 Board Member Per Diems and Honorariums	88
	THAT Board Member Per-diems and Honorariums be increased by 1.75%, retroactive to January 1, 2018.	
	AND THAT Board Member Per-diems and honorariums be adjusted each year on January 1 by the same rate as non-union positions.	
f.	GM-03-18-29 - Environmental Assessments	91
	THAT Report Number GM-03-18-29 - Environmental Assessments, be received for information.	

g.	GM-03-18-27 - Provincial Watershed Planning Guidance	95
	<p>THAT the Grand River Conservation Authority recommend to the Ministry of the Environment and Climate Change (MOECC) and the Ministry of Natural Resources and Forestry (MNRF) that they defer finalizing the Watershed Planning in Ontario guidance document, allowing for additional consultation with municipalities, conservation authorities, and other stakeholders;</p> <p>AND THAT this report be forwarded to MOECC and MNRF through the Environmental Registry.</p>	
h.	GM-03-18-30 - Update on Tier 3 Water Budget Studies in the Grand River Watershed	112
	<p>THAT GM-03-18-30 – Update on Tier 3 Water Budget Studies in the Grand River Watershed be received as information.</p>	
i.	GM-03-18-39 - Lake Erie Region Source Protection Program Update	121
	<p>THAT Report number GM-03-18-39 – Lake Erie Region Source Protection Program Update be received for information.</p>	
j.	GM-03-18-34 - Seasonal Camping Program	125
	<p>THAT Report Number GM-03-18-34 – Seasonal Camping Program and the Seasonal Campground Operating Procedure outlined in the report be received as information.</p>	
k.	GM-03-18-31 - Road Resurfacing Tender Results	139
	<p>THAT Grand River Conservation Authority award the tender for the 2018 road surface treatments to Cornell Construction Limited of Brantford, Ontario up to the amount of \$210,050.05 including HST.</p>	
l.	GM-03-18-32 - Office Cleaning Contract Tender Results	141
	<p>THAT the Grand River Conservation Authority award the Office Cleaning Services Contract to Corvin Building Maintenance Limited of Toronto, Ontario in the amount of \$121,691.95 including HST for the term of May 1, 2018 to April 30, 2021.</p>	
m.	GM-03-18-32 - 2018 Loader Tractor Tender Results	143
	<p>THAT Grand River Conservation Authority award the tender for the purchase of two (2) 30.7 kW (41.2 HP) PTO four wheel drive tractors with cab and front loader attachments to Premier Equipment for a total amount of \$106,147.02 (excluding HST).</p>	

- n. GM-03-18-37 - February 2018 Flood Event 145

THAT Report number GM-02-18-37 February 2018 Flood Event be received as information.

- o. GM-03-18-38 - Current Watershed Conditions 158

THAT Report GM-XX-XX-XXX, Current Watershed Conditions, be received for information.

That Report Number GM-03-18-38 – Current Watershed Conditions as of March 14, 2018 be received as information.

13. Committee of the Whole

14. General Business

15. 3rd Reading of By-Laws

16. Other Business

17. Closed Meeting

THAT the General Membership enter a closed meeting to discuss the following matters:

- a. Declaration of Surplus Property - Town of Erin
- b. Land Exchange - Haldimand County
- c. Easement - City of Waterloo
- d. Easement - Township of Centre Wellington
- e. Ongoing Litigation

18. Next Meetings

- Labour Relations Steering Committee - April 9, 2018 at 2 p.m.
- General Membership - April 23, 2018 at 9:30 a.m.
- Strategic Planning Workshop - April 23, 2018 following the General Membership

19. Adjourn

THAT the General Membership Meeting be adjourned.

20. **Grand River Source Protection Authority Meeting (if required)**

Regrets only to:

Office of the Chief Administrative Officer, Phone: 519-621-2763 ext. 2200



905.336.1158
Fax: 905.336.7014
2596 Britannia Road West
Burlington, Ontario L7P 0G3
conservationhalton.ca

Protecting the Natural
Environment from
Lake to Escarpment

March 05, 2018



Dear Grand River Conservation Authority staff and members of the Board,

On behalf of the Board of Directors and staff at Conservation Halton, I would like to express our concern and sympathy for the flooding experienced in the Grand River watershed last month.

We would be pleased to offer of support and assistance to the Grand River Conservation Authority should it be required anytime in the future.

Yours truly,

Hassaan Basit

Chief Administrative Office
Conservation Halton
2596 Britannia Road West, Burlington, ON L7P 0G3
905.336.1158 | conservationhalton.ca

C.C Board of Directors Conservation Halton & Board of Directors Grand River Conservation Authority



City of Hamilton
City Hall, 71 Main Street West
Hamilton, ON Canada L8P 4Y5
www.hamilton.ca

Byrdena M. MacNeil, Solicitor
Legal Services Division, City Manager's Office
Office Address: 21 King Street West, 12th Floor
Hamilton, Ontario L8P 4W7
Phone: 905-546-2424, ext. 4637 Fax: 905-546-4370
Email: byrdena.macneil@hamilton.ca

Hamilton

March 8, 2018

BY EMAIL & BY REGULAR MAIL
E-Mail: Daniel.pascoe@ontario.ca

Office of the Mining and Lands Commissioner
700 Bay Street, 24th Floor
Box 330
Toronto, Ontario M5G 1Z6

Dear Mining and Lands Commissioner:

Re: Notice of Appeal – Grand River Conservation Authority
2018 Municipal Levy Apportionments

Pursuant to subsection 27(8) of the *Conservation Authorities Act*, R.S.O. 1990, Ch. C.27, the City of Hamilton hereby appeals the 2018 levy made against it by the Grand River Conservation Authority, as set out in the Grand River Conservation Authority's Municipal Levy Apportionments, 2018 notice dated February 23, 2018 (copy attached).

Should you require anything further, please let me know.

Yours very truly,

Byrdena M. MacNeil
Solicitor

Encl.

cc: Helen Jowett, Chair, Grand River Conservation Authority – By Facsimile to 1-519-621-4844
Karen Armstrong, Secretary-Treasurer/Deputy CAO, GRCA – By Email to karmstrong@grandriver.ca

From: Pascoe, Daniel (MLC)
To: [MacNeil, Byrdena](#)
Cc: [Karen Armstrong](#)
Subject: RE: Appeal of Grand River Conservation Authority 2018 Levy Apportionments
Date: Friday, March 9, 2018 9:29:12 AM
Sensitivity: Confidential

Dear Ms. MacNeil,

Thank you for your email.

I hereby confirm receipt of the above-noted appeal and I have assigned the appeal MLC File CA 002-18.

I also hereby confirm that we will hold this, the City of Hamilton's appeal of the 2018 levy apportionment charged by the Grand River Conservation Authority in abeyance, pending the outcome of the judicial review of the Deputy Commissioner's Decision issued in December, 2017 in MLC File CA 002-15.

Yours truly,

Daniel E. Pascoe

Registrar/Mediator

Office of the Mining and Lands Commissioner

700 Bay Street, 24th Floor, Box 2400

Toronto, Ontario M5G 1Z6

Tel: 416 314-2324

Fax: 416 314-2327

E-Mail: Daniel.pascoe@ontario.ca

Website: www.ontario.ca/omlc

From: MacNeil, Byrdena [<mailto:Byrdena.MacNeil@hamilton.ca>]
Sent: March 8, 2018 6:32 PM
To: Pascoe, Daniel (MLC)
Cc: 'karmstrong@grandriver.ca'
Subject: Appeal of Grand River Conservation Authority 2018 Levy Apportionments
Sensitivity: Confidential

Dear Mr. Pascoe:

Attached, please find the City of Hamilton's appeal of the 2018 levy apportionments charged by the Grand River Conservation Authority.

Once the appeal is opened by your office, the City respectfully requests that it be held in abeyance pending the conclusion of the City's judicial review application being brought respecting the Deputy Mining and Lands Commissioner's decision issued in MLC File No. CA 002-15 (NPCA).

I trust this is satisfactory. Should you require anything further, please let me know.

Thank you.

Byrdena M. MacNeil

Senior Solicitor

City of Hamilton

t: 905.546.2424 ext.4637

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e: byrdena.macneil@hamilton.ca

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BEN RYZEBOL, Director of Public Works
PUBLIC WORKS - TELEPHONE: (519) 941-1065
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SUSAN M. STONE, C.A.O./Clerk-Treasurer
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email: suestone@amaranth-eastgary.ca

374028 6TH LINE, AMARANTH, ONTARIO
L9W 0M6

March 12, 2018

Grand River Conservation Authority
Joe Farwell, Chief Administrative Officer
400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6

Dear Mr. Farwell,

Re: Grand River Conservation Authority 2018 Budget

At the regular meeting of Council held March 7, 2018, the following resolution was carried:

Moved by J. Aultman – Seconded by G. Little

Be it Resolved That:

Council do hereby support the Grand River Conservation Authority's 2018 Budget / General Levy in the amount of \$11,352,000.00; Amaranth's share being \$32,644.00 for operating and \$3,327.00 for capital, for a total of Amaranth's share being \$35,971.00.

Should you require anything further please do not hesitate to contact this office.

Yours truly,

Susan M. Stone, A.M.C.T.
CAO/Clerk-Treasurer
Township of Amaranth

SMS/ch

December 29, 2017

To The GRCA Board of Directors;

We are Seasonal Campers at Pinehurst Conservation Area, and we wish to bring forward a concern about the potential to change the Agreement for seasonal campers. As well, we wish to offer some recommendations for your consideration, to address this concern.

At the recent GRCA Annual General Meeting, the materials distributed discussed the potential of requiring Seasonal Campers to remove their trailers from the sites at the end of the camping season. The rationales noted were a) bring Pinehurst (and Byng Island) winter storage practice in line with other Conservation Areas where onsite trailer storage is not allowed, and b) to discourage the campers from “pushing the boundaries of some of the rules”.

(Please note that we are speaking only for the Seasonal Campers at Pinehurst Conservation Area, as we can not presume to know the feelings or wishes of Seasonal Campers at Byng Island Park who may be affected by this decision.)

To address these concerns, we respectfully request your consideration of the following:

1. Allow the existing Seasonal Campers to continue to store their trailers on site for winter storage, on a grandfathered basis. Write this grandfathering clause into the Seasonal Camping Agreement. We have been paying a reasonable amount to keep our trailers onsite for winter storage for years, and should be exempt from any future change to this regulation. New campers can be advised that winter storage is no longer available except to those who fall under previous regulations, which would support the GRCA’s desire to transition campers to off-site storage – through attrition.
2. It should be noted that, to date, most seasonal campers choose the winter storage option. This equates to approximately \$19,000 to \$20,000 in revenue for GRCA. As noted in the Seasonal Camping Update provided at the AGM, “Conservation area revenues are highly weather dependent and poor weather on summer weekends can have a serious impact on both day use and nightly camping. Seasonal camping provides a steady, financial foundation that can be relied upon year after year.” This winter storage revenue helps to support staffing and services at the park, and is not easily replaced.
3. Require all campers to provide proof of insurance on their trailers to eliminate liability to the GRCA and sign a waiver that indicates that ‘Campers

are aware of and accept the risks related to storing a trailer on site, with no liability or responsibility to be accepted by GRCA'.

4. Address issues directly and promptly with Seasonal Campers if regulations are being broken, or they are overstepping appropriate boundaries. Hold a town hall meeting at the beginning of the season and encourage seasonal campers to attend to review the agreement (re-written in user friendly language), and clarify expectations and allow questions and development of solutions. Recognize that a few campers who are not fully compliant are not representative of all campers, the majority of whom strive for compliance and respect for the Park's regulations.

5. We urge you, as a Board, to consider and appreciate the value of the community of Seasonal Campers, and how it supports the ambiance of the park. Pride of ownership is in the best interests of both the Park and the Campers. Numerous seasonal campers have been part of the community at Pinehurst for many years. We take pride in maintaining our sites, and being good neighbours and park citizens. This helps the park in many ways: the campers are respectful and helpful, we create a sense of community in the park, the park's seasonal camping area presents as a safe, senior- and family-friendly neighbourhood and thus encourages new campers to make the commitment to become seasonal campers. There are likely few, if any, complaints about the seasonal campers...all the more reason to maintain a supportive and respectful relationship. We appreciate the warm community of campers, and indeed this is why many of us chose to take on the responsibility and expense of a seasonal site. We love the park. And it is this ambiance that brings in new seasonal campers, who are warmly welcomed by their neighbours.

6. Often, there have been 3 or more generations who have loved and enjoyed the Park, and in particular the seasonal sites. Many of the Seasonal Campers are seniors, who have had their trailers onsite for the duration of their years at Pinehurst. It is not easy for these seniors to relocate their trailers at the end of the park season. For some, it would be almost impossible. We would ask that you consider this, in particular, with compassion and understanding.

7. If maintenance is required on specific seasonal sites, or is to be completed on a particular schedule, we would work with you to make arrangements as best possible to support your need for access to that area of the site. For example, we could pull the trailer off site for the day and move it to another area of the park while the work is being completed. We trust the supervisors at

Pinehurst Conservation Area and enjoy a friendly and respectful relationship with the team there.

At the AGM, the Board discussed an agenda item that had sparked concern among Board Directors. The response from the Board was to make a determined response, to push back and to speak up for what was best. We are looking to this example as we respond to this winter storage concern. We know, from that discussion, that the Board Directors appreciate the value and necessity of speaking up to ensure that the right path is chosen.

We respectfully request that you review this upcoming decision with these considerations in mind. We would be pleased to present at the Board, if that opportunity is available.

And, in closing, we encourage you to support the seasonal campers at Pinehurst as we have supported Pinehurst Lake Conservation Area, and the GRCA for many years.

Sincerely,

Seasonal Campers at Pinehurst.

Cc: Dawn Toering

Steven and Corey Towering: sctoering@gmail.com

Val and George Prince: valprince58@outlook.com

Marie Comeau: mecomeau1@hotmail.com

Deb and Lee MacPhee: dltmacphee@sympatico.ca

Clint Langer: 1974me@live.ca

Dian Shannon, Keith Worley: dianshannon@rogers.com; worley01@rogers.com

Grand River Conservation Authority

Report number: GM-03-18-35

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Communications and Marketing Review/Audit Final Report

Recommendation:

THAT Report Number GM-03-18-35 – Communications and Marketing Review/Audit Report be received as information.

Summary:

This report provides an overview of the findings and recommendations stemming from the Communications and Marketing Review/Audit. In May 2017, the Grand River Conservation Authority (GRCA) retained Enterprise Canada to undertake a comprehensive Communications and Marketing Review. The overall goal of the review was to perform an organization-wide audit of current communications and marketing practices for the GRCA as well as the Grand River Conservation Foundation (GRCF). The review was conducted over a six month period, and the consultant provided a report to the GRCA in late November 2017.

Overall, Enterprise Canada's assessment concluded that among its closest stakeholders, the GRCA enjoys a positive image and solid reputation. At the same time, there was strong recognition that communications structures, processes, strategies and tactics need to be updated. Enterprise Canada's report identified opportunities for improvement, and provided 48 recommendations for the GRCA's review and consideration.

Report:

Enterprise Canada's audit included a review of both internal and external communications in order to identify strengths and weaknesses, and to develop specific recommendations and action steps to refine and improve the GRCA's communications processes and ensure alignment of the Authority's communications with the objectives of its Strategic Plan.

The assessment involved extensive research, which included:

- a review of the GRCA's communications products and publications
- executive interviews with senior staff, communications staff, GRCA and GRCF board members, and other stakeholders
- a board member survey
- a survey of staff and the general public
- parks staff interviews
- a digital audit
- external research of other conservation authorities

- a review of data collected through park visitor surveys between 1994 and 2015

The information collected during the research and consultation process was analysed to identify commonalities and trends. Enterprise Canada's report grouped these common themes into three basic categories: Communications Products and Channels, Branding and Marketing, and the Role and Practice of Communications.

Within these three broad categories, 48 specific recommendations were made in the following areas:

1. Branding & Marketing
2. Audiences
3. Internal Communications
4. Communication Operations
5. Communications Products
6. Communications Channels
7. Customer Service
8. Department Structure
9. Market Research
10. Media Relations

Enterprise Canada's summary report is attached as Appendix A.

Review, Prioritization and Implementation

Staff have reviewed the recommendations and have identified preliminary action steps and considerations in the attached chart, labelled Appendix B.

The current Strategic Plan was approved by the GRCA Board in April 2012, and the GRCA will be working to update the plan in 2018. It is vital that the GRCA's communications are in alignment with its strategic plan. Therefore, the consultant's recommendations will be reviewed again, once the GRCA has updated its strategic plan, to ensure they remain in alignment.

Financial implications:

The Communications budget was increased by \$50,000 in 2018 in order to help support the implementation of recommendations stemming from the Communications and Marketing Review.

However, these funds were a one-time allocation from surplus, which is not sustainable in the long-term. Once the GRCA's Strategic Plan has been updated, any financial implications stemming from the implementation of the consultant's recommendations would be incorporated into the budget forecast and planning process for 2019.

Other department considerations:

A number of recommendations suggest a change in current practice and/or a shift of responsibilities from one area/department to another. All divisions continue to provide input into the process.

Prepared by:

Lisa Stocco
Manager of Communications

Approved by:

Karen Armstrong
Secretary Treasurer/Deputy CAO

ENTERPRISE



GRAND RIVER CONSERVATION AUTHORITY

Communications Audit Summary Report

November 2017

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Executive Summary

Enterprise began conducting a communications audit for the Grand River Conservation Authority in the spring of 2017.

The audit included an intensive review of existing documents, online portals and communications tools as well as extensive research via focus groups, one-on-one interviews and online surveys. Subsequent to this research, we are making several recommendations in the following key areas:

1. BRANDING & MARKETING

The GRCA should undertake a full brand review to ensure consistency across all properties and in all departments.

2. AUDIENCES

The target audiences for the GRCA are diverse, but it is important that efforts to engage New Canadians, youth, the business community and urban dwellers be a priority.

3. INTERNAL COMMUNICATIONS

Each business area of the GRCA should have a marketing/communications plan that aligns with the communications and business plans for the entire organization.

4. COMMUNICATIONS OPERATIONS

The GRCA communications department should work to be more proactive in telling positive stories about the organization, while making the necessary moves to ensure key audiences are being engaged after hours and on weekends.

5. PRODUCTS

Some of the current communications products offered by the GRCA are somewhat antiquated, and that there are too many in circulation. A move to more online products is recommended.

6. COMMUNICATIONS CHANNELS

More attention is required in social media and on digital channels, including a need for better customer engagement online after hours and on weekends, particularly during peak operating seasons for the parks.

7. CUSTOMER SERVICE

GRCA Communications should provide a customer service training package that includes documentation on proper language to use to consistently represent the GRCA brand.

8. DEPARTMENT STRUCTURE

Communications functions are growing more complex in the digital age, requiring a specialized team with diverse responsibilities in communications, media relations, social media, design and marketing.

9. MARKET RESEARCH

The GRCA needs more information on its audiences and the information they consume, want and need.

10. MEDIA RELATIONS

The GRCA has a strong media relations program, but it needs to be reviewed to ensure it is keeping up with the rapid changes of the new media world. A more proactive media relations program is recommended with a focus on outreach and promotion.



Introduction

The Grand River Conservation Authority engaged Enterprise in the spring of 2017 to conduct an organization-wide review of its communications and marketing functions.

Overall, we found that — among its closest stakeholders, at least — the GRCA has a stellar reputation with a general acknowledgement that it has a long history of working with its partners and collaborating on important projects, and is working to strengthen and enhance that. A key factor to this reputation is the level of respect and enthusiasm across the GRCA for its communications department and the role it plays.

It should also be noted that there was also general enthusiasm for conducting this communications audit to identify deficiencies that need to be addressed and streamline and improve the service offering, particularly as it pertains to modern communications tools and tactics for reaching target — and evolving — audiences.

At the same time, there was strong recognition that communications strategies and tactics need to be updated, to ensure the best use of resources.

OBJECTIVES

The objectives of this audit include:

- Review and evaluate the effectiveness of the existing communications structures, processes and strategies in the GRCA communications department.
- Assess the image and public perception of the GRCA.
- Audience identification, including new and emerging audiences.
- Develop specific recommendations to improve and refine communications processes.

While there has been extensive research done to meet these objectives, it must be noted that there was no requirement or budget for proper, in-depth market research or to test our recommendations. Every organization faces different circumstances that require unique and custom solutions, and what works in one area may not work in another.

But in general, these are the principles we settled upon based on what has been effective and efficient elsewhere, combined with the needs and wants of the GRCA:

- Consistency in communication planning and advice.
- Clarity and definition in the roles and responsibilities of the GRCA communications department.

- Refinement and evolution of the communications products produced by the GRCA.
- Definition and protection of the GRCA brand.

Methodology

The recommendations contained in this report were reached following an extensive and comprehensive research effort that included:

- **Planning Session**
- **Document Review**
- **Executive Interviews**
- **GRCA and GRCF Board Member Surveys**
- **General Public and Staff Surveys**
- **Parks Staff Interviews**
- **Digital Audit**
- **External Research**
- **Parks Visitor Surveys**

Summary of Findings

This project resulted in the collection of a lot of information, but throughout the process common themes emerged that we have grouped into three basic categories.

COMMUNICATIONS PRODUCTS & CHANNELS

Overall, it is felt that some of the current communications products offered by the GRCA are somewhat antiquated, and that there are too many in circulation.

There is a need to apply a strategic focus to the publications branded as GRCA documents, with the right mix of digital and print.

BRANDING & MARKETING

The communications function of any organization is the keyholder to protecting, preserving and promoting the brand of the organization.

On this front, there is much for the GRCA to consider. We heard quite definitively that the Communications department should be the brand filter of the organization to ensure consistency and compliance.

But at the same time, it must be sensitive to the different audiences that should be hearing the messages of the GRCA, including the divide between rural and urban residents, the business community and, perhaps most significantly, new Canadians who have been anecdotally identified as the fastest growing segment of users of GRCA parks.

To this end, communications from the GRCA should be more than just functional. GRCA communications should be more proactive and promotional with positive stories that reflect the activities and happenings of each business area, with a focus on customer service. This marketing component is vital in presenting and preserving the brand of the organization. It should be noted that customer service means more than how the frontline staff in the parks interact with visitors, but perhaps more so how various audiences are engaged online and through social media.

ROLE AND PRACTICE OF COMMUNICATIONS

There is a need to clarify the role of the GRCA's communications department, with defined roles and responsibilities to ensure the right people are doing the right jobs, and that the proper protocols are in place to ensure that the right tasks are going to the right staff.

All communications activities should align with the strategic priorities of the GRCA — no

collateral should be issued, event staged or other activity engaged unless it is supportive of the GRCA brand. These activities should be defined in business plans.

Also identified was a need for clear — and clearly communicated — communication processes in crisis and emergency situations.

Observations & Recommendations

Enterprise reviewed and analyzed the information collected during our consultation and research to assess what we heard and identify commonalities and trends.

Overall, we found that the communications department of the GRCA is well respected and has a high rate of approval among stakeholders and the board. However, we have also found gaps in service and areas where there could be improvements.

The department consists of three and a half full-time staff who, among other responsibilities, research and write the communications products published by the GRCA, manage social media for the organization, provide graphic design services, engage in some marketing functions, manage crisis, issue and emergency communications, provide after hours and weekend communications support and engage the media.

The evolution of the media and communications landscape and a shift in demographics (re: target audiences) has created some deficiencies in communications, and inconsistencies both with the way the GRCA brand is presented and the way audiences are engaged.

Following are observations, primarily focusing on gaps in service, and recommendations for improvement.

BRANDING & MARKETING

OBSERVATIONS

- There is a need for an overarching theme for the GRCA.
- There has been a considered move in other jurisdictions about dropping the word “Authority” from their name as it sounds too bureaucratic and negative.
- There is stated desire for more proactive promotion of the positive aspects of the GRCA, and that this should be a function of the communications department.
- Most parks staff identify as employees of their particular park, not the GRCA, and it is anecdotally felt that park visitors are less likely to associate the park with the GRCA.
- The public image of the GRCA will differ based on how and why people interact with the organization and the Grand River -- i.e., users of the parks versus those who live on the floodplain.

“A lot of people know the GRCA exists, but they have little idea of what it does.”

- There is inconsistency in the messaging; for example, the parks want to be seen as friendly and approachable, but when you open the park pamphlets the first thing you see is a list of what you cannot do.

RECOMMENDATIONS

BRANDING & MARKETING

1. All communications should be passed through a strategic “filter” to emphasize the health and vitality of the organization and its importance to the community from both an environmental and recreation perspective. This should be pervasive through all outreach.
2. The GRCA should undertake a full brand review and update to ensure consistency across all properties and representatives and provide a solid foundation for communications. For example, GRCA should revisit and review its signage strategy and plan, all communications materials and publications, etc. Consideration should also be given to reviewing and expanding the style guide.
3. When considering branding and public image, the GRCA strategic planning process should review the use of the word “Authority” in its name.

COMMUNICATIONS PRODUCTS & CHANNELS

4. Grand River Parks pamphlets should be redrafted to adopt a more positive tone up front.

“This was a small organization that over time grew into a larger, more sophisticated organization. The brand, even visually, didn’t keep up and no one really thought about it.”

AUDIENCES

OBSERVATIONS

- There is a growing contingent of new Canadians using GRCA parks, both for day use and camping.
- Particularly in the south, target audiences for the GRCA are likely to come from outside the watershed.
- There is a desire to expand and grow the audience of the GRCA beyond “devout followers,” while also noting that — on the parks side at least — they are at or near capacity.

- There is a general feeling that the further one lives from the Grand River, the less connected they are to the GRCA.
- Most of these observations are based on anecdotal evidence as there is no clear market research on the users and consumers of GRCA products and services.

“We don’t know who our users are.”

- There are two distinct divisions within the watershed — between urban and rural residents, and between the north and the south. In both cases, the way people interact with the river differs, meaning their needs from the GRCA differ.
- With both Six Nations of the Grand River and the Mississaugas of the New Credit First Nations within the watershed, Indigenous groups remain an important stakeholder and partner.
- It was felt more engagement of, and participation from, the business community should be a priority.
- Broadening the base among the business community — companies, boards of trade, chambers of commerce, service clubs — is important to help grow fundraising through the GRCF.
- All communications, from pamphlets and brochures to park signs and warning signs, are in English.
- MPPs are a vital audience, and it is important to establish relationships with the candidates in the provincial election to ensure a strong relationship persists after the June 2018 election.

“The province is a critical piece. They have the funding and legislative capacity that can make or break you. The stuff that comes out of Queen’s Park has a massive impact on what happens here.”

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. The communications department should oversee stakeholder engagement in the watershed. Have strategic discussions about engagement with identified stakeholder groups, such as:
 - a. Indigenous peoples.



- b. New Canadians.
- c. Seniors.
- d. Youth.
- e. Business community.
- f. Urban residents.

COMMUNICATIONS PRODUCT & CHANNELS

2. As part of the review of the signage strategy, consideration should be given to translate safety instructions into other languages – which has dual benefit of practical safety and sending a welcoming message; work with OPG for universal signage around dam safety; produce and promote materials explaining the signs.
3. Dedicated and consistent outreach to new Canadians and ethnic groups that like certain activities (e.g. fishing, picnics, camping, etc.).

BRANDING & MARKETING

4. Develop and execute an information program that targets and engages provincial election candidates in all the major parties on the campaign trail. With some 11 ridings in the watershed, this will be a significant undertaking, but an important one.
5. Launch a concentrated campaign to get urban residences to the river and parks.

INTERNAL COMMUNICATIONS

OBSERVATIONS

- There are four business areas within the GRCA, each with varying functions.
- Challenges were identified with internal communications, including some concerns about a lack of openness and sharing of critical information.
- There is a need to ensure the staff who need specific information have access to that information.
- Many feel there are silos in the GRCA that should be broken down and the departments should be more integrated.

“There is a bit of confusion around who does what.”

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. Each business area of the GRCA requires a marketing/communications plan that is customized, but tied into the greater communications strategy and business plan for the entire organization.
2. All communications projects should be defined in a business plan that aligns with the GRCA's strategic objectives.
3. The connections between each department and the Board of Directors need to be clearly defined, including protocols for the sharing of relevant information.

COMMUNICATIONS OPERATIONS

OBSERVATIONS

- The protocols for emergency response among the involved parties (municipalities, emergency services, GRCA) are not clearly spelled out, understood or followed.
- In the case of a flood, responsibility for communication, in particular the warning of municipal residents during flood events, is shared with the local municipality, but many members of the public are unsure (and it is likely they do not care) who is responsible for what.
- There is always room to improve relations with external partner agencies and organizations.
- Staging and execution of public meetings is inconsistent and not always reflective of the GRCA brand.
- Media relations tends to be more reactive than proactive.
- GRCA's Watershed Awards program is dated and could use a refresh.
- With only two staff sharing the responsibility for media response after hours and during emergencies, the model for emergency communications response is unbalanced and unsustainable.
- Peak periods when GRCA parks consumers are most likely to need information or responses are typically unstaffed, and thus largely unresponsive.

“We’ve got branding issues right now. We are moving to a 24/7 world and we don’t have 24/7 staff.”



- There is some disparity internally about what the GRCA is or wants to be; for example, does it operate parks or does it operate conservation areas?
- Too often, communications is an afterthought on a project instead of being an integral part of the planning process.
- There is no official marketing function or department at the GRCA.

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. Emergency protocols should be reviewed with GRCA's partner agencies; in particular the roles and responsibilities of each and how those are communicated internally and externally.
2. A clear protocol is required for the planning and execution of public meetings, including a checklist to guide the logistics, promotion, advertising and RSVPs for the event.
 - a. The Communications Department should play a leadership and oversight role in ensuring public meetings and events are reflective of the GRCA brand and communications strategy.
3. A seasonal staffer, a public relations student, should be hired to serve as a community manager of the GRCA's social media channels from May to September, with assurances they will be monitored and active after hours and during weekends.
 - a. This position should be based at GRCA headquarters in Cambridge.
 - b. It is imperative that it is staffed from Wednesday to Sunday, with coverage in the evening hours.
 - c. Primary responsibilities of the role are to monitor social media and email channels, responding where appropriate and required.
4. Communications plans should be required of every GRCA project that will require public or media interaction.

COMMUNICATIONS PRODUCTS & CHANNELS

5. GRCA should develop an annual editorial calendar of positive, proactive story ideas that can be developed for a variety of platforms and shared across multiple channels, including pitched to traditional media, posted as owned media and shared across social media.

BRANDING & MARKETING

6. Based on our review of what other Conservation Authorities are doing, GRCA should consider reformatting the Watershed Awards with specific designations and



criteria that align with its program areas. For example:

- a. Outdoor education aimed at families and youth.
 - b. Volunteer program.
7. Communications staff should provide annual training for front-line staff, including providing proper messaging, key talking points and the overall narrative.

PRODUCTS

OBSERVATIONS

- There is a heavy reliance on print products, which were noted by several interviewees as “antiquated.”
- There is general acceptance that the GRCA does not need as many printed publications as it currently has.
- While there is little use in the public sphere for GRCA Current, it has been noted as an important document for keeping municipalities in the watershed engaged about highlights from GRCA board meetings.
- There is insufficient market data to accurately determine the readership of The Grand, but it was most commonly identified as the GRCA document that could be changed, merged with another or scrapped entirely.
- The Grand consumes a lot of resources, in terms of both dollars and staff time, but there is little knowledge about the size of the audience for the publication.
- There are quite a few printed information booklets and/or pamphlets published by the GRCA, from parks guides to fishing and hunting information. However, outside of the Parks Guide, few of these materials are available for patrons at the parks.
- While the trend in communications is moving towards more digital channels and products, there is a significant population in the watershed — Mennonites, elderly, remote rural areas — that are not connected to the digital world.

“We need to better define our audience. I don’t know that a few thousand print publications to the older generations is necessarily where we should focus our time and effort.”

- Opinions among parks senior staff on the best format for providing park information was divided, but it was universally accepted that the most important piece of information to provide is a map of the park.



RECOMMENDATIONS

COMMUNICATIONS PRODUCTS & CHANNELS

1. Evolve GRCA Current to an online document, foregoing the need for design and layout. The online document should be equipped with a print function that would enable people to download a PDF and print it off if desired.
 - a. Distribute to mailing list of municipal partners the morning after the board meeting.
 - b. Sign up option for members of the public.
 - c. Make printed copies available upon request, which can be mailed out.
2. Replace Grand Actions with a multi-media blog that is updated regularly with news articles, videos and items of important and interesting information.
 - a. Designate one staff member with writing, editing and creative digital skills as Editor-in-Chief of the blog, responsible for creating and curating content.
3. Our inclination is to recommend the elimination of The Grand, but more research needs to be done to determine how many people are reading it and which parts they consider useful.
 - a. With this market research, a new publication or online document can be produced to support the annual report, based on what parts of The Grand people read and found useful.
 - b. This new publication should be accompanied by a communications plan and promotional strategy to explain what it is, how it will maintain existing readers of The Grand and expand the audience to new readers.
4. With the increased desire to see more proactive, promotional activities from GRCA communications, we recommend more use of video products on the organization's various channels, from the website to social media channels.
5. We found no compelling reason to change the format of the Parks Guide or the pamphlets for each park.
6. GRCA should invest resources to bolster its photo and video capabilities.
 - a. Determination has to be made whether investments are made to ensure the proper equipment and expertise resides in house to manage this function, or if it should be contracted out.
 - b. Video assets have a wide range of uses, from standalone videos used on social channels to support for the blog and to support media relations outreach.

COMMUNICATIONS CHANNELS

OBSERVATIONS

- The GRCA website is relatively new, functional and provides a lot of information for those seeking recreation, those requiring information on flooding and the environment or people seeking general information about the river and watershed.
- Social media channels utilized by the GRCA are largely “on send” and do not facilitate two-way conversations.
 - There are three Twitter channels used by GRCA, one for general information one for flood information and the third for the parks.
 - Five parks maintained their own Twitter accounts until May 1, 2017, when all parks Twitter activity was consolidated into @grandriverparks. Parks senior staff are generally okay with the change and are happy with having a centralized Twitter account.

“What we don’t do well is use social media as a two-way communication piece, and that is a resourcing issue.”

- There are missed opportunities to engage audiences — particularly parks users — by not having responsive engagement on social accounts regularly after hours and on weekends.
- Each of the parks have email accounts, but they are infrequently monitored, especially at times when current and potential visitors may be seeking information.
- The current process for monitoring and engaging both traditional and social media after hours and on weekends is not sustainable.

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. A summer student should be hired as the community manager of the GRCA’s social media accounts and other social feeds where park patrons may be seeking information. This would include monitoring parks email accounts.

COMMUNICATIONS PRODUCTS & CHANNELS

2. The GRCA should strongly consider investing in an app for its parks that could provide real-time information on capacity at the parks, GRCA beaches and water quality, health advisories, basic recreation info like boating and fishing, lists of



events and visitor services programs.

3. We recommend the following social media activities:
 - a. The Twitter accounts used by the GRCA are functioning well and should be maintained, but should evolve to be two-way communication channels, particularly @grandriverparks.
 - b. Facebook should continue in its current iteration, and serve as a portal to advertise events, share media coverage, direct traffic to grandriver.ca and post promotional videos.
 - c. GRCA should launch an Instagram page to promote the parks and other functions of the GRCA. It is a visual medium, and there are countless pictures and videos to be shared from GRCA parks and events. Instagram is also a channel used by a younger audience, a key target demographic for the GRCA.
4. Social media monitoring and measuring should become more standardized within GRCA, and should incorporate several elements:
 - a. Internal analytics for Twitter, Facebook and Instagram should be monitored and analyzed weekly to assess the reach of GRCA posts, engagements, page views and audience demographics.
 - b. GRCA should investigate implementing either Hootsuite or Sprout Social to help it easily and efficiently manage and monitor its social channels. Free trials and tutorials are available for each.
 - i. Hootsuite enables multiple social accounts that you can monitor, post, engage and, depending on the plan selected, analyze your activity. Plans range from \$19 to \$99 per month.
 - ii. Sprout Social is similar to Hootsuite, with a more robust analytics platform — and is more costly at \$99 per month.
 - c. Alternatively, Tweet deck is a free tool that enables multiple accounts, scheduled posts, monitoring of keywords, hashtags and other accounts and engagement with other users, but it is specific to Twitter. Other possible options include Meltwater Engage or TweetReach.
5. Utilizing existing email databases, GRCA should send periodic email updates promoting upcoming events and directing people to the GRCA website and social channels.

CUSTOMER SERVICE

OBSERVATIONS

- The role of customer service falls on the front line workers in the parks, with support from their supervisors who provide guidance and training.
- Despite the above, the approach to customer service is not always consistent across the GRCA.

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. GRCA Communications should provide a customer service training package that includes documentation on proper language to use to consistently represent the GRCA brand.
 - a. This should include annual visits to the parks before the season begins to provide basic customer service training to the front-line staff.
 - b. Clear and consistent talking points, updated regularly, should be used by staff to ensure they are providing the same message.

COMMUNICATIONS PRODUCTS & CHANNELS

2. Within a week of visiting a GRCA park, all visitors should receive an email survey assessing their visit.

DEPARTMENT STRUCTURE

OBSERVATIONS

- There is no defined marketing department within the GRCA, with its responsibilities being spread across various departments, leading to inconsistency in messaging and the brand.
- With 3.5 staff in the GRCA communications department, the roles are loosely defined, which has created situations where people are being asked to do tasks beyond their skill set.
- Communications is rapidly evolving and it is important that GRCA communications evolve along with it.



RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. Marketing should be consolidated as a function of communications, with a last-line of defense that ensures all marketing materials that go out the door are aligned with the GRCA brand.
2. The roles and responsibilities of the positions in the GRCA Communications Department should be clearly defined.
3. Communications for the GRCA should be managed by and through the GRCA Communications Department.
4. The staff complement in the Communications Department should be increased to six FTEs.

MARKET RESEARCH

OBSERVATIONS

- There is little qualitative or quantitative knowledge about the GRCA's audiences, whether it is park users, flood plain residents or interested parties.

RECOMMENDATIONS

BRANDING & MARKETING

1. A mechanism needs to be established so that strategic decisions are based on what your audience wants.

COMMUNICATIONS PRODUCTS & CHANNELS

2. The GRCA should undertake serious qualitative and quantitative research and data collection into who is reading products, and in what format they prefer them.
3. Outreach should include a call to action — survey, poll or contest — that has people do something when you are communicating with them and collecting information.
4. Quantitative market research should be staged regularly to ensure the GRCA remains in contact with its important target audiences and is able to track changes in trends and desires, with a qualitative effort every five years.
5. To find efficiencies, GRCA should explore partnering with post-secondary students in advanced public relations programs to design and execute both qualitative and quantitative research projects.

MEDIA RELATIONS

OBSERVATIONS

- The GRCA has a strong media relations program, but it needs to be reviewed to ensure it is keeping up with the rapid changes of the new media world.
- There are some feelings that opportunities are being missed to be more proactive with media relations.

RECOMMENDATIONS

ROLE & PRACTICE OF COMMUNICATIONS

1. The Manager of Communications and Marketing should be a designated spokesperson for media situations.
2. The CAO and Board Chair should also be prepared to speak in media situations.
3. The GRCA should expand media speaking roles within the organization to include subject matter experts who can provide insight, analysis and advice on proactive media relations outreach efforts.
4. The expanded media speaking roles should be further developed into a Speaker's Bureau that can engage other target audiences like service clubs and community groups.
5. Media training should be provided to all designated GRCA media spokespeople.

COMMUNICATIONS PRODUCTS & CHANNELS

6. The GRCA media relations strategy should emphasize the creation of robust owned media content such as pictures, infographics and video assets.
7. A rolling 12-month editorial calendar should be produced to plan media relations initiatives and the assets required (releases, fact sheets, backgrounders, images, video, etc.) to support outreach, the target media and channels to be utilized.
 - a. This media program can be developed around the experts mentioned above.



Communications Audit Recommendations

GRCA Preliminary Work Plan

Vision

A healthy and sustainable natural environment in the Grand River watershed.

Mission

We will develop and implement programs, directly or with our partners, to improve water quality, reduce flood damages, maintain a reliable water supply, facilitate watershed planning, protect natural areas and biodiversity, and provide environmental education.

We will be an environmentally responsible provider of outdoor recreation opportunities.

We will maintain a responsive, innovative, accountable and financially sustainable organization.

Values

We will strive for clear and respectful communication within our organization, with our partners and with members of the public.

We will make decisions that reflect integrity, fairness and sensitivity to the parties affected by our actions.

We will conduct our work in an efficient and effective manner, exercising creativity and innovation.

We value the trust of our stakeholders, which will be gained through our commitment to openness and accountability.

Strategic Plan

The GRCA's strategic plan provides direction on ways to handle many critical watershed resource issues. It identifies five Strategic Objectives and the action steps to be taken to meet these objectives.

Objectives:

1. Protect lives and minimize property damage from flooding and erosion.
2. Improve watershed health.
3. Connect people with the environment through outdoor experiences.
4. Maintain an organization with a focus on teamwork, development, engagement and positive change.
5. Deliver value and innovation to our watershed stakeholders.

Enterprise Canada Recommendations	GRCA Preliminary Action Steps/Considerations
<p>Branding and Marketing</p> <ol style="list-style-type: none"> 1. All communications should be passed through a strategic “filter” to emphasize the health and vitality of the organization and its importance to the community from both an environmental and recreation perspective. This should be pervasive through all outreach. 	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices. • In order to fully implement this strategic approach, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA’s strategic planning process during the spring of 2018.
<ol style="list-style-type: none"> 2. The GRCA should undertake a full brand review and update to ensure consistency across all properties and representatives and provide a solid foundation for communications. For example, the GRCA should revisit and review its signage strategy and plan, all communications materials and publications, etc. Consideration should also be given to reviewing and expanding the style guide. 	<ul style="list-style-type: none"> • In 2017, GRCA staff initiated a review of the visual style component of the GRCA’s brand. • GRCA staff developed the GRCA Visual Style Guide, and hosted a series of presentations for all staff when the guide was implemented. • A number of templates were created to support consistency in the use of the visual components of the GRCA’s brand. The development of templates is ongoing. • Over time, the guide will be expanded to a complete Brand Guide, which will include other elements of the GRCA’s brand, not solely the visual component. • Brand training will be developed and included as part of the training for new employees. Opportunities for brand training for all staff will be considered. • A full brand review and update is a significant undertaking, and will continue over time as channels, products, materials and publications are reviewed, updated and/or reordered. The full brand review will be aligned with the update of the GRCA Strategic Plan.

<p>3. When considering branding and public image, the GRCA strategic planning process should review the use of the word “Authority” in its name.</p>	<ul style="list-style-type: none"> • The new Conservation Authorities Act states in Section 3 (3) that: “The name of each authority shall be determined by the Lieutenant Governor in Council and shall conclude with the words “conservation authority” in English and shall include the words “office de protection de la nature” in French. • It is not yet clear if this section of the Act will allow for Conservation Authorities to change their name for branding purposes, while keeping their legal/business name in accordance with the Act. There are a few Conservation Authorities in the province that have dropped the word “Authority” from their names as part of their brand. • Should the Board wish to consider this recommendation, it would occur as part of the Strategic Planning process.
<p>4. Grand River Parks pamphlets should be redrafted to adopt a more positive tone up front.</p>	<ul style="list-style-type: none"> • GRCA staff are in the process of reviewing park pamphlets, not only to address this recommendation, but also to address some of the specific needs identified through the parks staff interviews. • New formats and the addition of information are being considered, with a goal of completing this work in time for the 2019 park operating season.
<p>Audiences</p> <p>1. The Communications Department should oversee stakeholder engagement in the watershed. Have strategic discussions about engagement with identified stakeholder groups, such as:</p> <ol style="list-style-type: none"> a. Indigenous peoples b. New Canadians c. Seniors d. Youth e. Business community f. Urban residents 	<ul style="list-style-type: none"> • GRCA staff are in agreement with this recommendation in principle and will consider the development of public engagement guidelines for the organization. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.

<p>2. As part of the review of the signage strategy, consideration should be given to translate safety instructions into other languages – which has dual benefit of practical safety and sending a welcoming message; work with OPG for universal signage around dam safety; produce and promote materials explaining the signs.</p>	<ul style="list-style-type: none"> • In partnership with the Operations Division, consideration will be given to signage, and a fulsome signage strategy, within the context of the overall brand review. • GRCA staff will explore options for translating certain signage and/or materials into other languages, while also exploring other methods of communicating this important information through visuals, or a combination of both.
<p>3. Dedicated and consistent outreach to new Canadians and ethnic groups that like certain activities (e.g. fishing, picnics, camping, etc.)</p>	<ul style="list-style-type: none"> • As outlined in the Market Research section of this work plan, further research is required in order for the GRCA to have a better understanding of its target audiences. This market research is necessary to inform the communications and marketing strategies for the organization.
<p>4. Develop and execute an information program that targets and engages provincial election candidates in all major parties on the campaign trail. With some 11 ridings in the watershed, this will be a significant undertaking, but an important one.</p>	<ul style="list-style-type: none"> • The GRCA regularly provides information and communicates with watershed MPPs and MPs through its news releases, formal and informal meetings and invitations to participate in GRCA events. • The GRCA also meets with Ministers at the Association of Municipalities of Ontario's Annual Conference, and is a partner with Conservation Ontario in developing Queen's Park Day – a day when Conservation Authorities have the opportunity to showcase the wide array of program benefits and advocate for government support and continued provincial funding. • The GRCA will realize this recommendation by supporting and implementing Conservation Ontario's 2018 Provincial Election Strategy.
<p>5. Launch a concentrated campaign to get urban residents to the river and parks.</p>	<ul style="list-style-type: none"> • Further research is required to better understand and implement this recommendation.

<p>Internal Communications</p> <p>1. Each business area of the GRCA requires a marketing/communications plan that is customized, but tied into the greater communications strategy and business plan for the entire organization.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices. • Implementation will require coordination and collaboration with each business area of the GRCA, as well as the Grand River Conservation Foundation, further to Recommendation # 3 under the category of Department Structure. • In order to implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.
<p>2. All communications projects should be defined in a business plan that aligns with the GRCA's strategic objectives.</p>	<ul style="list-style-type: none"> • See GRCA preliminary action steps and considerations outlined alongside Recommendation #1 in this category.
<p>3. The connections between each department and the Board of Directors need to be clearly defined, including protocols for the sharing of relevant information.</p>	<ul style="list-style-type: none"> • The new draft Best Management Practices and Administrative By-law Model is currently going through the approval process at Conservation Ontario. • In its 'Code of Conduct' this document provides general guidance on the connections between staff and the Board of Directors. • Should the Board deem appropriate, this language may be further considered as Members work through the process of adopting new by-laws in 2018.

<p>Communications Operations</p> <p>1. Emergency protocols should be reviewed with GRCA’s partner agencies; in particular the roles and responsibilities of each and how those are communicated internally and externally.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement with this recommendation, and its implementation has been a key area of focus for the Communications department, in partnership with the Engineering Department, since the June 2017 flood event. • GRCA staff are participating in ongoing meetings and discussions with municipal agencies and partners in the watershed in order to help clarify roles and responsibilities, and how these are communicated. • GRCA staff are supporting Community Emergency Management Coordinators and Municipal Flood Coordinators in the development of flood communications templates. • Multiple presentations, including a February 2018 presentation to the Board, are being delivered to reinforce GRCA and municipal roles in flood emergencies. • GRCA staff are updating, identifying and developing new communications strategies, plans and tactics for key flood damage centres.
<p>2. A clear protocol is required for the planning and execution of public meetings, including a checklist to guide the logistics, promotion, advertising and RSVPs for the event.</p> <p>a. The Communications Department should play a leadership role and oversight role in ensuring public meetings and events are reflective of the GRCA brand and communications strategy.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices, and will consider the development of public engagement guidelines for the organization. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA’s strategic planning process during the spring of 2018. Any changes would be incorporated into the budget forecast and planning process for 2019.

<p>3. A seasonal staffer, a public relations student, should be hired to serve as a community manager of the GRCA’s social media channels from May to September, with assurances they will be monitored and active after hours and during weekends.</p> <ol style="list-style-type: none"> a. This position should be based at GRCA headquarters in Cambridge. b. It is imperative that it is staffed from Wednesday to Sunday, with coverage in the evening hours. c. Primary responsibilities of the role are to monitor social media and email channels, responding where appropriate and required. 	<ul style="list-style-type: none"> • GRCA staffing requirements will be considered, once the GRCA’s Strategic Plan has been updated in 2018. • Staffing requirements in the Communications Department are being assessed to determine the level of resources and the specific skill sets required to implement these audit recommendations over time. Staffing requirements in the Communications Department will be considered within the full context of the GRCA’s updated strategic priorities. • Any financial implications, including staff increases, would be incorporated into the budget forecast and planning process for 2019.
<p>4. Communications plans should be required of every GRCA project that will require public or media interaction.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA’s strategic planning process during the spring of 2018.
<p>5. GRCA should develop an annual editorial calendar of positive, proactive story ideas that can be developed for a variety of platforms and shared across multiple channels, including pitched to traditional media, posted as owned media and shared across social media.</p>	<ul style="list-style-type: none"> • An informal editorial calendar currently exists to support communications outreach, media relations outreach and social media activities. • The calendar needs to be reviewed and formalized as a central tool. • Once the GRCA Strategic Plan is updated, consultation with each department will be undertaken to ensure that the content calendar aligns with and supports GRCA strategic objectives.
<p>6. Based on our review of what other Conservation Authorities are doing, GRCA should consider reformatting the Watershed Awards with specific designations and criteria that align with its program areas. For example:</p> <ol style="list-style-type: none"> a. Outdoor education aimed at families and youth b. Volunteer program 	<ul style="list-style-type: none"> • A comprehensive review of the GRCA’s Watersheds Awards program will occur in 2018. • The program will also be reviewed with a lens of ensuring that it aligns with the GRCA’s updated Strategic Plan. • It’s anticipated that a reformatted version of the awards program would launch in 2019 or 2020, depending on the outcome of the review and the scope of changes.

<p>7. Communications staff should provide annual training for front-line staff, including providing proper messaging, key talking points and the overall narrative.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement with this recommendation in principle, and will develop appropriate and realistic approaches to undertake brand training, as outlined alongside Recommendation #2 in the Branding and Marketing category. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.
<p>Communications Products</p> <p>1. Evolve GRCA Current to an online document, foregoing the need for design and layout. The online document should be equipped with a print function that would enable people to download a PDF and print it off if desired.</p> <ol style="list-style-type: none"> a. Distribute to mailing list of municipal partners the morning after the board meeting. b. Sign up option for members of the public. c. Make printed copies available upon request, which can be mailed out. 	<ul style="list-style-type: none"> • GRCA staff are in agreement with this recommendation. • GRCA Current is not currently achieving its intended purpose in a timely way. GRCA Current will evolve into an online document, foregoing the need for design and layout. • The online document will be print-friendly, and will be distributed to an email list of municipal partners shortly after the board meeting. • The document will be posted on the GRCA website alongside the General Membership Agendas and Minutes.
<p>2. Replace Grand Actions with a multi-media blog that is updated regularly with news articles, videos and items of important and interesting information.</p> <ol style="list-style-type: none"> a. Designate one staff member with writing, editing and creative digital skills as Editor-in-Chief of the blog, responsible for creating and curating content. 	<ul style="list-style-type: none"> • GRCA staff are in agreement with this recommendation and intend to replace Grand Actions, with a more frequent multi-media blog/e-newsletter that is hosted on the GRCA website and updated regularly with news articles, videos and items of important and interesting information. • As part of the transition, GRCA staff will investigate options for members of the public who currently receive a printed copy of the Grand Actions newsletter through the mail. These may include print-friendly solutions and distribution options, or other suitable alternatives. • One staff member will be designated as the Editor-in-Chief of the blog, responsible for its oversight.

<p>3. Our inclination is to recommend the elimination of The Grand, but more research needs to be done to determine how many people are reading it and which parts they consider useful.</p> <ol style="list-style-type: none"> a. With this market research, a new publication or online document can be produced to support the annual report, based on what parts of The Grand people read and found useful. b. This new publication should be accompanied by a communications plan and promotional strategy to explain what it is how it will maintain existing readers of The Grand and expand the audience to new readers. 	<ul style="list-style-type: none"> • Further research is required to better understand and implement this recommendation.
<p>4. With the increased desire to see more proactive, promotional activities from GRCA communications, we recommend more use of video products on the organization’s various channels, from the website to social media channels.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with current communications trends. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA’s strategic planning process during the spring of 2018.
<p>5. We found no compelling reason to change the format of the Parks Guide or the pamphlets for each park.</p>	<ul style="list-style-type: none"> • While GRCA staff agree that there is no compelling reason to change the Parks Guide, staff will investigate alternate options with respect to the development and production process for this publication. • With respect to park pamphlets, GRCA preliminary action steps and considerations are addressed alongside Enterprise Canada’s Recommendation #4, in the Branding and Marketing section of this table.
<p>6. GRCA should invest resources to bolster its photo and video capabilities.</p> <ol style="list-style-type: none"> a. Determination has to be made whether investments are made to ensure the proper equipment and expertise resides in house to manage this function, or if it should be contracted out. b. Video assets have a wide range of uses, from standalone videos used on social channels to support for the blog and to support media relations outreach. 	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with current communications trends. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA’s strategic planning process during the spring of 2018.

<p>Communications Channels</p> <ol style="list-style-type: none"> 1. A summer student should be hired as a community manager of the GRCA's social media accounts and other social feeds where park patrons may be seeking information. This would include monitoring park email accounts. 	<ul style="list-style-type: none"> • GRCA staffing requirements will be considered, once the GRCA's Strategic Plan has been updated in 2018. • Staffing requirements in the Communications Department are being assessed to determine the level of resources and the specific skill sets required to implement these audit recommendations over time. Staffing requirements in the Communications Department will be considered within the full context of the GRCA's updated strategic priorities. • Any financial implications, including staff increases, would be incorporated into the budget forecast and planning process for 2019.
<ol style="list-style-type: none"> 2. The GRCA should strongly consider investing in an app for its parks that could provide real-time information on capacity at the parks, GRCA beaches and water quality, health advisories, basic recreation info like boating and fishing, lists of events and visitor services programs. 	<ul style="list-style-type: none"> • Prior to investing in an app, which is costly, GRCA staff will continue to work on fully leveraging existing communications channels and technology.
<ol style="list-style-type: none"> 3. We recommend the following social media activities: <ol style="list-style-type: none"> a. The Twitter accounts used by the GRCA are functioning well and should be maintained, but should evolve to be two-way communication channels, particularly @grandriverparks. b. Facebook should continue in its current iteration, and serve as a portal to advertise events, share media coverage, direct traffic to grandriver.ca and post promotional videos. c. GRCA should launch an Instagram page to promote the parks and other functions of the GRCA. It is a visual medium, and there are countless pictures and videos to be shared from GRCA parks and events. Instagram is also a channel used by a younger audience, a key target demographic for the GRCA. 	<ul style="list-style-type: none"> • Following the update to the GRCA's Strategic Plan, GRCA staff will develop a social media strategy in alignment with the overarching communications strategy, and the strategic priorities of the organization. The strategy will encompass all of the GRCA's existing social media channels, including Twitter, Facebook and YouTube. The development of guidelines and training will be part of the strategy. • In order to: evolve the GRCA's social media activities to a more symmetrical two-way communications model; consider adding new social media channels; and/or expanding responsibilities in other new media channels such as Instagram, LinkedIn, Google Reviews, TripAdvisor, etc., departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.

<p>4. Social media monitoring and measuring should become more standardized within GRCA, and should incorporate several elements:</p> <ol style="list-style-type: none"> a. Internal analytics for Twitter, Facebook and Instagram should be monitored and analyzed weekly to assess the reach of GRCA posts, engagements, page views and audience demographics. b. GRCA should investigate implementing either Hootsuite or Sprout Social to help it easily and efficiently manage and monitor its social channels. Free trials and tutorials are available for each. c. Alternatively, TweetDeck is a free tool that enables multiple accounts, scheduled posts, monitoring of keywords, hashtags and other accounts and engagement with users, but it is specific to Twitter. Other possible options include Meltwater Engage or TweetReach. 	<ul style="list-style-type: none"> • Social media has evolved into a mainstream communication channel, and is intended to be used as a two-way vehicle of communication. • The use of social media for organizational communications and marketing purposes has many benefits, but it also comes with risk, which is why it must be managed carefully and strategically. • The GRCA's social media channels are monitored on an ongoing basis. However, due to limited resources, the department has made a strategic decision to limit engagement outside of business hours. • Of the GRCA's social media channels, Facebook has the highest rates of engagement, followed by the GRCA's corporate Twitter accounts. The GRCA's dedicated flood message Twitter account is used to push out information during flood events, as well as collect data. This channel is not generally used for two-way communication with followers. • Staff use a number of free tools to manage GRCA's corporate social media channels – this can be a cumbersome process. • In addition to the tools recommended by the consultant, staff are investigating a variety of available platforms in order to manage GRCA's corporate social media accounts more easily and efficiently.
<p>5. Utilizing existing email databases, GRCA should send periodic email updates promoting upcoming events and directing people to the GRCA website and social channels.</p>	<ul style="list-style-type: none"> • This function was built into the new GRCA website, and email updates are sent regularly to subscribers.

Customer Service	
<ol style="list-style-type: none"> 1. GRCA Communications should provide a customer service training package that includes documentation on proper language to use to consistently represent the GRCA brand. <ol style="list-style-type: none"> a. This should include annual visits to the parks before the season begins to provide basic customer service training to the front-line staff. b. Clear and consistent talking points, updated regularly, should be used by staff to ensure they are providing the same message. 	<ul style="list-style-type: none"> • The Operations Division developed a customer service training package in 2017. • The Communications department will partner with the Parks department to further enhance this training package to ensure it aligns with the GRCA's brand. • GRCA staff are in agreement with this recommendation in principle, and will develop appropriate and realistic approaches to undertake brand training across the organization. • In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018. Any changes would be incorporated into the budget forecast and planning process for 2019.
<ol style="list-style-type: none"> 2. Within a week of visiting a GRCA park, all visitors should receive an email survey assessing their visit. 	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices. • Further investigation is required to determine how this recommendation would be implemented.

<h3>Department Structure</h3>	
<p>1. Marketing should be consolidated as a function of communications, with a last-line of defence that ensures all marketing materials that go out the door are aligned with the GRCA brand.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices and current communications trends. • It is becoming increasingly understood that an organization's intangible assets (reputation, relationships, communication) represent a large part of an organization's value. • The management functions of marketing and communications (public relations) have always overlapped; however these disciplines are converging now, more than ever before. Modern audiences are empowered with more information than has ever been available. This has led to an 'earned-first' approach, with audiences that don't want to be 'sold to'. • In order to implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.
<p>2. The roles and responsibilities of the positions in the GRCA Communications Department should be clearly defined.</p>	<ul style="list-style-type: none"> • Staffing requirements in the Communications Department are being assessed to determine the level of resources and the specific skill sets required to implement these audit recommendations over time. Staffing requirements in the Communications Department will be considered within the full context of the GRCA's updated strategic priorities.
<p>3. Communications for the GRCF should be managed by and through the GRCA Communications Department.</p>	<ul style="list-style-type: none"> • GRCA staff are in agreement that this recommendation is in alignment with best management practices. • In order to implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.

<p>4. The staff complement in the Communications Department should be increased to six FTEs.</p>	<ul style="list-style-type: none"> GRCA staffing requirements will be considered, once the GRCA's Strategic Plan has been updated in 2018. Staffing requirements in the Communications Department are being assessed to determine the level of resources and the specific skill sets required to implement these audit recommendations over time. Staffing requirements in the Communications Department will be considered within the full context of the GRCA's updated strategic priorities. Any financial implications, including staff increases, would be incorporated into the budget forecast and planning process for 2019.
<p>Market Research</p> <p>1. A mechanism needs to be established so that strategic decisions are based on what your audience wants.</p>	<ul style="list-style-type: none"> GRCA staff are in agreement that this recommendation is in alignment with best management practices. In order to implement this recommendation, departmental structures and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.
<p>2. The GRCA should undertake serious qualitative and quantitative research and data collection into who is reading products, and in what format they prefer them.</p>	<ul style="list-style-type: none"> See GRCA preliminary action steps and considerations outlined alongside Recommendation #1 in this category.
<p>3. Outreach should include a call to action – survey, poll or contest – that has people do something when you are communicating with them and collecting information.</p>	<ul style="list-style-type: none"> See GRCA preliminary action steps and considerations outlined alongside Recommendation #1 in this category.
<p>4. Quantitative market research should be staged regularly to ensure the GRCA remains in contact with its important target audiences and is able to track changes in trends and desires, with a qualitative effort every five years.</p>	<ul style="list-style-type: none"> See GRCA preliminary action steps and considerations outlined alongside Recommendation #1 in this category.

<p>5. To find efficiencies, GRCA should explore partnering with post-secondary students in advanced public relations programs to design and execute both qualitative and quantitative research projects.</p>	<ul style="list-style-type: none"> GRCA staff have established relationships with post-secondary institutions, and are exploring partnership opportunities to assist with market research projects.
<p>Media Relations</p> <p>1. The Manager of Communications and Marketing should be a designated spokesperson for media situations.</p>	<ul style="list-style-type: none"> The GRCA has developed a strong media relations program over many years. Traditionally, the Manager of Communications has been the GRCA's main designated media spokesperson.
<p>2. The CAO and Board Chair should also be prepared to speak in media situations.</p>	<ul style="list-style-type: none"> The Board Chair is the official spokesperson for the General Membership. The CAO is a designated GRCA spokesperson.
<p>3. The GRCA should expand media speaking roles within the organization to include subject matter experts who can provide insight, analysis and advice on proactive media relations outreach efforts.</p>	<ul style="list-style-type: none"> While it is important to have a designated media spokesperson, especially during crisis situations, it is a best practice to have subject matter experts available to speak to the media. These experts provide insight and credibility, and can serve to foster a positive reputation for the GRCA and help build positive relationships with the media. The Communications Department supports media engagement with various staff. The approach will be reviewed to determine a formal process to address policies and training needs.
<p>4. The expanded media speaking roles should be further developed into a Speaker's Bureau that can engage other target audiences like service clubs and community groups.</p>	<ul style="list-style-type: none"> GRCA staff are in agreement and will implement this recommendation as part of the media relations strategy.
<p>5. Media training should be provided to all designated GRCA media spokespeople.</p>	<ul style="list-style-type: none"> GRCA staff are in agreement and will implement this recommendation as part of the media relations strategy.
<p>6. The GRCA media relations strategy should emphasize the creation of robust owned media content such as pictures, infographics and video assets.</p>	<ul style="list-style-type: none"> GRCA staff are in agreement that this recommendation is in alignment with current communications trends. In order to fully implement this recommendation, departmental structure and resources must be considered. Evaluation will continue throughout the GRCA's strategic planning process during the spring of 2018.

7. A rolling 12-month editorial calendar should be produced to plan media relations initiatives and the assets required (releases, fact sheets, backgrounders, images, video, etc.) to support outreach, the target media and channels to be utilized.
 - a. This media program can be developed around the experts mentioned above.

- An informal editorial calendar currently exists to support communications outreach, media relations outreach and social media activities.
- The calendar needs to be reviewed and formalized as a central tool.
- Once the GRCA Strategic Plan is updated, consultation with each department will be undertaken to ensure that the content calendar aligns with and supports GRCA strategic objectives.

Grand River Conservation Authority

Report number: GM-03-18-40

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Ontario Municipal Board Appeal of OPA 48, City of Guelph: Re-designation of Grand River Conservation Authority's Lands on Niska Road/Pioneer Trail- Settlement

Recommendation:

That Report Number GM-03-18-40 Ontario Municipal Board Appeal of OPA 48, City of Guelph: Re-designation of Grand River Conservation Authority's Lands on Niska Road/Pioneer Trail- Settlement be received as information.

Summary:

Not Applicable

Report:

Official Plan Amendment (OPA) No. 48 is the third and final phase of the Five Year Review of the City's Official Plan. Prior to the finalization of OPA No 48; the City completed OPA No. 39 - Growth Plan Conformity and OPA No.42- Natural Heritage Systems. Through OPA No. 39 - Growth Plan Conformity, the City identified lands within the settlement area for future greenfield development. The Grand River Conservation Area (GRCA) lands at Niska Road/Pioneer Trail fall within the settlement area and contain no development constraints.

On December 30, 2013, the City of Guelph (the City) received a Notice of Appeal for the City of Guelph OPA No. 48 adopted by By-Law No. (2012) 19407 which was approved by the Ministry of Municipal Affairs and Housing (MMAH) on December 11, 2013. Included in this Notice of Appeal was the re-designation of GRCA lands (see attached map) from Open Space to Low Density Residential and Medium Density Residential.

GRCA sought participant status in 2014 on the site specific appeal for the GRCA lands and in 2017, the GRCA upgraded to party status. The Ontario Municipal Board (OMB) scheduled a five day hearing to commence on March 12, 2018. On March 14, 2018, the appeal was withdrawn as a result of Minutes of Settlement between Dr. Hugh Whiteley, the Corporation of the City of Guelph and the Grand River Conservation Authority.

The Minutes of Settlement provide for enhanced public notification regarding the management plan for the entire 65 hectares (160 acres) of GRCA lands and any subsequent land management decisions related to the 8 hectares (20 acres) covered under the appeal.

The Minutes of Settlement also state that once the management plan has been finalized and approved; the City of Guelph and GRCA will establish a joint working group to help determine future public access to GRCA lands within the City limits. This working group will also include members of the public.

Financial implications:

As part of the Minutes of Settlement, each party agreed to bear their own costs for this matter.

Other department considerations:

The Resource Planning section provided support to the property department for this appeal.

Prepared by:

Samantha Lawson
Manager of Property

Approved by:

Joe Farwell
Chief Administrative Officer

Map 1: Aerial Photo of GRCA's Niska Land Holdings and the parcel for re-designated for low/medium residential on Niska Road/Pioneer Trail, City of Guelph



Grand River Conservation Authority

Report number: GM-03-18-26

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Cash and Investment Status – February 2018

Recommendation:

THAT Report Number GM-03-18-26 Cash and Investment Status – February 2018 be received as information.

Summary:

The cash position including Notes Receivable of the Grand River Conservation Authority as at February 28, 2018 was \$26,360,385 with outstanding cheques written in the amount of \$312,856.

Report:

Attached.

Financial implications:

Interest rates, etc. are shown on the report.

Other department considerations:

Not applicable.

Prepared by:

Carol Anne Johnston
Senior Accountant

Sonja Radoja
Manager of Corporate Services

Approved by:

Karen Armstrong
Secretary-Treasurer/Deputy CAO

**Grand River Conservation Authority
Cash and Investments Status Report
February 28, 2018**

Date Invested	Location	Type	Amount	Rate	Maturity	2018
	C.I.B.C.	Current Account	825,682	1.9%	Below Average Prime or 1.55%	
	Wood Gundy	Current Account	2	0.20%		
	C.I.B.C.	Property Account	66,291	1.9%	Below Average Prime or 1.55%	
	C.I.B.C.	SPP Account	542,687	1.9%	Below Average Prime or 1.55%	
	C.I.B.C.	U.S.	68			
	C.I.B.C.	PayPal Account	14,234	1.9%	Below Average Prime or 1.55%	
	C.I.B.C.	Call Centre	23,649	1.9%	Below Average Prime or 1.55%	
	Royal Bank	Conestogo	3,880			
	Royal Bank	Brant	5,248			
	Royal Bank	Rockwood	12,806			
	Royal Bank	Luther	3,573			
			<u>1,498,120</u>			
September 9, 2009	CIBC Renaissance	Account	3,252,073	1.10%		32,735
October 1, 2014	CIBC Trust Savings	Account	2,213,105	1.10%		22,277
July 15, 2016	One Investment Savings	Account	4,076,041	1.78%		66,205
June 6, 2013	Royal Bank	Bond	1,000,000	2.26%	March 12, 2018	4,182
May 5, 2014	Royal Bank	Bond	987,000	2.26%	March 12, 2018	3,840
December 8, 2014	Laurentian Bank	Bond	1,578,000	2.81%	June 13, 2019	37,241
January 28, 2015	CIBC	Bond	726,046	1.80%	May 15, 2019	13,069
September 3, 2015	CIBC	Bond	2,000,000	2.25%	September 3, 2025	45,000
October 14, 2015	Laurentian Bank	Bond	1,996,000	2.50%	January 23, 2020	49,000
March 1, 2016	CIBC	Bond	1,300,000	1.70%	March 1, 2023	22,750
September 16, 2016	CIBC	Bond	1,184,000	1.30%	March 13, 2020	15,392
August 24, 2017	Royal Bank	Bond	1,000,000	2.82%	July 12, 2018	6,893
August 24, 2017	Bank of Montreal	Bond	1,550,000	1.61%	October 28, 2021	31,155
October 2, 2017	CIBC	Bond	2,000,000	1.70%	October 9, 2018	25,187
	Total G.R.C.A. Investments		<u>24,862,265</u>			<u>374,924</u>
	G.R.C.A. Funds		26,360,385			
	Outstanding Cheques		<u>312,856</u>			

Investment By Category and Institution

	<u>% of Total Portfolio</u>		<u>% of Total Portfolio</u>
Government	0%	Gov't of Canada	0%
		Province of Ontario	0%
Banks	84%	C.I.B.C.	51%
		Bank of Nova Scotia	0%
		Bank of Montreal	6%
		Royal Bank	12%
		Toronto Dominion	0%
		National	0%
		Laurentian	14%
Other	16%	One Investment Program	16%

Grand River Conservation Authority

Report number: GM-03-18-36
Date: March 23, 2018
To: Members of the Grand River Conservation Authority
Subject: Financial Summary for the Period Ending February 28, 2018

Recommendation:

THAT the Financial Summary for the period ending February 28, 2018 be approved.

Summary:

The Financial Summary includes the 2018 *actual* income and expenditures. The budget approved at the February 23, 2018 General Meeting is included in the *Budget* column. The *Current Forecast* column will indicate an estimate of income and expenditures for the whole year. Any changes between the *Current Forecast* and the *Previous Forecast* will be discussed during the meeting. At this time a surplus of \$NIL at year-end is anticipated.

Report:

The Financial Summary is attached.

Financial implications:

The activity summarized will result in a NIL net result at December 31, 2018.

Other department considerations:

The management committee and appropriate supervisory staff receive monthly financial reports and advise the finance department of applicable forecast adjustments.

Prepared by:

Sonja Radoja
Manager Corporate Services

Approved by:

Karen Armstrong
Secretary-Treasurer/Deputy CAO

**GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING February 28, 2018**

SCHEDULE		Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
REVENUE							
Municipal							
General Municipal Levy (Operating)	various	10,025,000	10,302,000	0	10,302,000	10,302,000	0
General Municipal Levy (Capital)	various	1,050,000	1,050,000	0	1,050,000	1,050,000	0
Special Municipal Levy	various	0	150,000	99,411	150,000	150,000	0
Other	various	1,132,936	830,000	702,122	830,000	830,000	0
		12,207,936	12,332,000	801,533	12,332,000	12,332,000	0
Government Grants							
MNRF Transfer Payments	various	871,073	871,073	0	871,073	871,073	0
Source Protection Program-Provincial	various	1,570,408	1,575,000	126,245	1,575,000	1,575,000	0
Other Provincial	various	933,723	1,432,500	397,878	1,432,500	1,432,500	0
Federal	various	433,700	70,000	461,157	70,000	70,000	0
		3,808,904	3,948,573	985,280	3,948,573	3,948,573	0
Self Generated							
User Fees and Sales							
<i>Enquiries and Permits</i>	4	515,729	491,400	101,557	491,400	491,400	0
<i>Plan Input and Review</i>	4	457,368	410,000	92,896	410,000	410,000	0
<i>Nursery and Woodlot Management</i>	5	460,894	465,000	81,618	465,000	465,000	0
<i>Consulting</i>	4	0	0	3,726	0	0	0
<i>Conservation Lands Income</i>	10	53,610	71,000	741	71,000	71,000	0
<i>Conservation Areas User Fees</i>	13	8,480,836	8,000,000	331,996	8,000,000	8,000,000	0
<i>Nature Centres and Camps</i>	8	928,125	942,000	75,965	942,000	942,000	0
<i>Merchandising and Sales</i>	8	473	0	554	0	0	0
Property Rentals	11	2,937,919	2,900,700	881,399	2,900,700	2,900,700	0
Hydro Generation	12	572,154	470,000	14,313	470,000	470,000	0
Land Sales	10	0	0	0	0	0	0
Grand River Conservation Foundation	various	698,380	399,000	0	399,000	399,000	0
Donations	various	72,602	314,000	310,557	314,000	314,000	0
Landowner Contributions	5	200,118	200,000	52,229	200,000	200,000	0
Investment Income	14	442,984	450,000	18,124	450,000	450,000	0
Miscellaneous Income	various	98,391	48,000	14,417	48,000	48,000	0
Total Self-Generated Revenue		15,919,583	15,161,100	1,980,092	15,161,100	15,161,100	0
TOTAL REVENUE		31,936,423	31,441,673	3,766,905	31,441,673	31,441,673	0

**GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING February 28, 2018**

SCHEDULE	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change	
EXPENSES							
OPERATING							
Water Resources Planning & Environment	1	1,994,193	2,221,800	239,171	2,221,800	2,221,800	0
Flood Forecasting and Warning	2	700,905	800,400	77,290	800,400	800,400	0
Water Control Structures	3	1,550,381	1,725,700	153,003	1,725,700	1,725,700	0
Resource Planning	4	1,872,317	1,977,900	224,031	1,977,900	1,977,900	0
Forestry & Conservation Land Property Taxes	5	1,339,953	1,376,500	50,064	1,376,500	1,376,500	0
Conservation Services	6	764,450	861,000	99,950	861,000	861,000	0
Communications & Foundation	7	595,594	714,900	94,721	714,900	714,900	0
Environmental Education	8	1,326,109	1,316,400	123,510	1,316,400	1,316,400	0
Corporate Services	9	2,917,332	3,399,987	413,061	3,399,987	3,399,987	0
Conservation Lands	10	1,758,357	1,947,000	189,763	1,947,000	1,947,000	0
Property Rentals	11	2,178,441	1,595,400	206,785	1,595,400	1,595,400	0
Hydro Production	12	177,078	130,000	13,147	130,000	130,000	0
Conservation Areas	13	6,903,045	7,110,000	266,463	7,110,000	7,110,000	0
Miscellaneous	14	109,038	70,000	1,044	70,000	70,000	0
Information Systems	16	1,100,195	1,136,000	260,817	1,136,000	1,136,000	0
Motor Pool	16	789,383	898,000	78,386	898,000	898,000	0
Less: Internal Charges (IS & MP)	16	(1,889,578)	(2,034,000)	(339,203)	(2,034,000)	(2,034,000)	0
Total OPERATING Expenses		24,187,193	25,246,987	2,152,003	25,246,987	25,246,987	0
CAPITAL							
Water Resources Planning & Environment	1	73,117	110,000	27,219	110,000	110,000	0
Flood Forecasting and Warning	2	204,172	190,000	26,800	190,000	190,000	0
Water Control Structures	3	1,112,074	1,500,000	131,208	1,500,000	1,500,000	0
Nature Centres	8	0	0	0	0	0	0
Conservation Areas	13	859,691	1,820,000	87,533	1,820,000	1,820,000	0
Corporate Services	9	0	0	0	0	0	0
Information Systems	16	227,780	200,000	37,452	200,000	200,000	0
Motor Pool	16	170,756	500,000	9,718	500,000	500,000	0
Less: Internal Charges (IS & MP)	16	(461,383)	(410,000)	335,123	(410,000)	(410,000)	0
Total Capital Expenses		2,186,207	3,910,000	655,053	3,910,000	3,910,000	0
SPECIAL							
Water Resources Planning & Environment	1	279,571	285,000	30,427	285,000	285,000	0
Flood Forecasting and Warning	2	132,927	850,000	14,435	850,000	850,000	0
Forestry	5	185,284	270,000	7,605	270,000	270,000	0
Conservation Services	6	1,281,536	936,000	109,785	936,000	936,000	0
Communications	7	0	0	0	0	0	0
Environmental Education	8	260,266	0	0	0	0	0
Conservation Land Purchases	10	139,401	0	47,838	0	0	0
Conservation Lands	10	553,129	420,000	10,379	420,000	420,000	0
Property Development	11	0	50,000	0	50,000	50,000	0
Hydro Generation	12	112,472	300,000	0	300,000	300,000	0
Miscellaneous	14	28,890	35,000	0	35,000	35,000	0
Source Protection Program	15	1,570,408	1,575,000	126,245	1,575,000	1,575,000	0
Total SPECIAL PROJECTS Expenses		4,543,884	4,721,000	346,714	4,721,000	4,721,000	0
Total Expenses		30,917,284	33,877,987	3,153,770	33,877,987	33,877,987	0
Gross Surplus		1,019,139	(2,436,314)	613,135	(2,436,314)	(2,436,314)	0
Prior Year Surplus Carryforward		315,832	412,314	315,832	412,314	412,314	0
Net Funding FROM/(TO) Reserves		(922,657)	2,024,000	377,377	2,024,000	2,024,000	0
NET SURPLUS		412,314	0	1,306,344	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 1 - Water Resources - Planning and Environment
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,469,253	1,587,900	224,114	1,587,900	1,587,900	
Administration Expenses	256,974	313,000	3,488	313,000	313,000	
Insurance Expenses	115,267	110,000	-	110,000	110,000	
Other Operating Expenses	152,699	210,900	11,569	210,900	210,900	
Total OPERATING Expenditures	1,994,193	2,221,800	239,171	2,221,800	2,221,800	
Instrumentation	30,973	60,000	12,816	60,000	60,000	
Water Quality Monitoring Equipment	42,144	50,000	14,403	50,000	50,000	
Total CAPITAL Expenditures	73,117	110,000	27,219	110,000	110,000	
Grand River Water Management Plan	33,840	20,000	0	20,000	20,000	
Dundas Valley Groundwater	0	0	0	0	0	
Upper Blair Drainage	107,653	100,000	10,511	100,000	100,000	
Large Cover Placement Project	0	0	0	0	0	
Natural Heritage Study-Wellington	28,313	30,000	5,740	30,000	30,000	
Species at Risk -SARA	0	0	0	0	0	
Waste Water Optimization Program	109,765	135,000	14,176	135,000	135,000	
Drought Contingency Pilot Project	0	0	0	0	0	
Total SPECIAL PROJECT Expenditures	279,571	285,000	30,427	285,000	285,000	
Grand River Watershed Management Plan	0	0	0	0	0	
Planning Enforcement	0	0	0	0	0	
Total FUNDING to RESERVES	0	0	0	0	0	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	2,346,881	2,616,800	296,817	2,616,800	2,616,800	0
Funding						
Municipal						
General Municipal Levy (Operating)	2,030,600	2,071,100	0	2,071,100	2,071,100	
General Municipal Levy (Captial)	60,000.00	60,000	-	60,000	60,000	
Special Levies	0	150,000	99,411	150,000	150,000	
Municipal Other	127,748	30,000	-94,080	30,000	30,000	
Government Grants						
MNRF Transfer Payments	33,200	33,200	0	33,200	33,200	
Other Provincial	190,870	192,500	24,133	192,500	192,500	
Federal	19,618	0	310,182	0	0	
Self Generated						
Donations Other	0	3,000	0	3,000	3,000	
Funding From Reserves						
Grand River Watershed Management Plan	0	27,000	0	27,000	27,000	
Gauges	0	50,000	0	50,000	50,000	
TOTAL FUNDING	2,462,036	2,616,800	339,646	2,616,800	2,616,800	0
Net Surplus/(Deficit)	115,155	0	42,829	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 2 - Flood Forecasting and Warning
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	373,875	463,200	58,095	463,200	463,200	
Administration Expenses	255,233	260,800	14,651	260,800	260,800	
Other Operating Expenses	71,797	76,400	4,544	76,400	76,400	
Total OPERATING Expenditures	700,905	800,400	77,290	800,400	800,400	
Hardware	75,164	88,000	25,367	88,000	88,000	
Stream Gauges	129,008	102,000	1,433	102,000	102,000	
Total CAPITAL Expenditures	204,172	190,000	26,800	190,000	190,000	
Floodplain Mapping Projects	132,927	850,000	14,435	850,000	850,000	
Total SPECIAL PROJECT Expenditures	132,927	850,000	14,435	850,000	850,000	
Total FUNDING to RESERVES	65,000	0	-	0	0	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	1,103,004	1,840,400	118,525	1,840,400	1,840,400	0
Funding						
Municipal						
General Municipal Levy (Operating)	527,345	547,445	0	547,445	547,445	
General Municipal Levy (Capital)	190,000	190,000	0	190,000	190,000	
Municipal Other						
Government Grants						
MNRF Transfer Payments	252,955	252,955	0	252,955	252,955	
Other Provincial	134,187	510,000	296,099	510,000	510,000	
Federal	0	0	0	0	0	
Funding From Reserves						
Floodplain Mapping Projects	0	340,000	0	340,000	340,000	
TOTAL REVENUE	1,104,487	1,840,400	296,099	1,840,400	1,840,400	0
Net Surplus/(Deficit)	1,483	0	177,574	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
 Schedule 3 - Water Control Structures
 FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual YTD	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Compensation and Benefits	1,103,590	1,170,100	140,416	1,170,100	1,170,100	
Administration Expenses	14,271	28,600	2,254	28,600	28,600	
Property Taxes	163,892	189,000	0	189,000	189,000	
Other Operating Expenses	268,628	338,000	10,333	338,000	338,000	
Total OPERATING Expenditures	1,550,381	1,725,700	153,003	1,725,700	1,725,700	
Total CAPITAL Expenditures	1,112,074	1,500,000	131,208	1,500,000	1,500,000	
Total FUNDING to RESERVES	302,000	0	-	0	0	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	2,964,455	3,225,700	284,211	3,225,700	3,225,700	0

Funding

Municipal

General Municipal Levy (Operating)	1,278,550	1,325,350	0	1,325,350	1,325,350	
General Municipal Levy (Capital)	800,000	800,000	0	800,000	800,000	

Government Grants

MNRF Transfer Payments	400,350	400,350	0	400,350	400,350	
Provincial	486,489	700,000	0	700,000	700,000	

Self Generated

Miscellaneous	0	0	0	0	0	
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TOTAL REVENUE AND FUNDING FROM RESERVES	2,965,389	3,225,700	0	3,225,700	3,225,700	0
Net Surplus/(Deficit)	934	0	-284,211	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
 Schedule 4 - Resource Planning
 FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
<u>Expenditures and Funding to Reserves</u>						
Compensation and Benefits	1,594,807	1,706,200	213,306	1,706,200	1,706,200	
Administration Expenses	193,435	218,100	6,786	218,100	218,100	
Other Operating Expenses	84,075	53,600	3,939	53,600	53,600	
Total OPERATING Expenditures	1,872,317	1,977,900	224,031	1,977,900	1,977,900	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	1,872,317	1,977,900	224,031	1,977,900	1,977,900	0
<u>Funding</u>						
Municipal						
General Municipal Levy (Operating)	981,832	961,932	0	961,932	961,932	
Government Grants						
MNRF Transfer Payments	114,568	114,568	0	114,568	114,568	
Other Provincial	6,831	0	3,134	0	0	
Self Generated						
Solicitor Enquiry Fees	60,010	52,000	9,445	52,000	52,000	
Permit Fees	455,719	439,400	92,112	439,400	439,400	
Plan Review Fees	457,368	410,000	92,896	410,000	410,000	
Consulting	0	0	3,726	0	0	
TOTAL REVENUE	2,076,328	1,977,900	201,313	1,977,900	1,977,900	0
Net Surplus/(Deficit)	204,011	0	(22,718)	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 5 - Forestry & Conservation Lands Property Taxes
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	587,194	539,900	58,488	539,900	539,900	
Administration Expenses	56,118	43,400	1,282	43,400	43,400	
Property Taxes	168,606	177,800	(46,654)	177,800	177,800	
Other Operating Expenses	528,035	615,400	36,948	615,400	615,400	
Total OPERATING Expenditures	1,339,953	1,376,500	50,064	1,376,500	1,376,500	
Ecological Restoration	185,284	270,000	7,605	270,000	270,000	
Total SPECIAL PROJECT Expenditures	185,284	270,000	7,605	270,000	270,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	1,525,237	1,646,500	57,669	1,646,500	1,646,500	0
Funding						
Municipal						
General Municipal Levy (Operating)	632,700	669,500	0	669,500	669,500	
Municipal Other						
Government Grants						
Provincial	11,279	0	12,682	0	0	
Federal	72,427	0	1,135	0	0	
Self Generated						
Nursery	423,470	450,000	81,618	450,000	450,000	
Landowner Contributions (Tree Planting)	200,118	200,000	52,229	200,000	200,000	
Donations - Foundation	48,216	57,000	0	57,000	57,000	
Donations - Other	58,451	270,000	254,274	270,000	270,000	
Funding From Reserves						
Conservation Area Reserve (EAB)	16,205	0	0	0	0	
TOTAL REVENUE	1,462,866	1,646,500	401,938	1,646,500	1,646,500	0
Net Surplus/(Deficit)	-62,371	0	344,269	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 6 - Conservation Services
FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Compensation and Benefits	651,189	693,100	94,787	693,100	693,100	
Administration Expenses	94,505	110,000	3,927	110,000	110,000	
Other Operating Expenses	18,756	57,900	1,236	57,900	57,900	
Total OPERATING Expenditures	764,450	861,000	99,950	861,000	861,000	
RWQP Grants	1,011,358	800,000	92,731	800,000	800,000	
Brant/Brantford Childrens Water Festival	25,544	26,000	2,465	26,000	26,000	
Haldimand Childrens Water Festival	42,303	40,000	0	40,000	40,000	
Species at Risk	78,678	70,000	11,805	70,000	70,000	
AGGP-UofG Research-Buffers	20,812	0	336	0	0	
Great Lakes SHSM Event	6,076	0	0	0	0	
Great Lakes Agricultural Stewardship Initiative	96,765	0	2,448	0	0	
Total SPECIAL PROJECT Expenditures	1,281,536	936,000	109,785	936,000	936,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	2,045,986	1,797,000	209,735	1,797,000	1,797,000	0

Funding

Municipal

General Municipal Levy (Operating)	689,500	713,000	0	713,000	713,000	
Municipal Other	1,005,188	800,000	796,202	800,000	800,000	

Government Grants

Other Provincial	100,992	30,000	48,724	30,000	30,000	
Federal	100,148	70,000	145,537	70,000	70,000	

Self Generated

Donations - Foundation	147,970	127,000	0	127,000	127,000	
Donations - Other	14,151	26,000	22,283	26,000	26,000	
Miscellaneous	12,357	0	873	0	0	

Funding From Reserves

Cambridge Desiltation Pond	742	1,000	0	1,000	1,000	
Upper Grand Restoration	0	30,000	0	30,000	30,000	

TOTAL REVENUE	2,071,048	1,797,000	1,013,619	1,797,000	1,797,000	0
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Net Surplus/(Deficit)	25,062	0	803,884	0	0	0
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GRAND RIVER CONSERVATION AUTHORITY
 Schedule 7 - Communications
 FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Compensation and Benefits	487,770	566,400	85,635	566,400	566,400	
Administration Expenses	73,722	75,500	9,086	75,500	75,500	
Other Operating Expenses	34,102	73,000	-	73,000	73,000	
Total OPERATING Expenditures	595,594	714,900	94,721	714,900	714,900	
Total FUNDING to RESERVES		-		-	-	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	595,594	714,900	94,721	714,900	714,900	0
Funding						
Municipal						
General Municipal Levy (Operating)	676,900	714,900	0	714,900	714,900	
TOTAL REVENUE	676,900	714,900	0	714,900	714,900	0
Net Surplus/(Deficit)	81,306	0	(94,721)	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 8 - Environmental Education
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
<u>Expenditures and Funding to Reserves</u>						
Compensation and Benefits	930,588	942,400	96,109	942,400	942,400	
Administration Expenses	92,419	74,300	2,311	74,300	74,300	
Insurance Expense	10,447	10,000	0	10,000	10,000	
Property Taxes	11,440	19,400	0	19,400	19,400	
Other Operating Expenses	281,215	270,300	25,090	270,300	270,300	
Total OPERATING Expenditures	1,326,109	1,316,400	123,510	1,316,400	1,316,400	
Major Repairs & Maintenance Projects	0	0	0	0	0	
Total CAPITAL Expenditures	0	0	0	0	0	
Apps' Mill Nature Centre Renovations	260,266	0	0	0	0	
Total SPECIAL PROJECT Expenditures	260,266	0	0	0	0	
Guelph Nature Centre	70,000	30,000	0	30,000	30,000	
Total FUNDING to RESERVES	70,000	30,000	0	30,000	30,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	1,656,375	1,346,400	123,510	1,346,400	1,346,400	0
<u>Funding</u>						
Municipal						
General Municipal Levy (Operating)	319,300	354,400	0	354,400	354,400	
Government Grants						
Provincial	3,075	0	0	0	0	
Federal	48,957	0	0	0	0	
Self Generated						
Donations - Foundation	243,580	50,000	0	50,000	50,000	
Donations - Other	0	0	0	0	0	
Nature Centre Revenue - Schools	565,127	578,000	58,947	578,000	578,000	
Nature Centre Revenue - Community	45,051	33,000	4,848	33,000	33,000	
Nature Centre Revenue - Camps	317,947	331,000	12,170	331,000	331,000	
Merchandise Revenue	473	0	554	0	0	
Funding from Reserves						
Laurel Creek & Taquanyah Nature Centre	9,300	0	0	0	0	
TOTAL REVENUE	1,552,810	1,346,400	76,519	1,346,400	1,346,400	0
Net Surplus/(Deficit)	(103,565)	0	(46,991)	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 9 - Corporate Services
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	1,848,424	1,990,000	271,909	1,990,000	1,990,000	
Administration Expenses	297,506	337,300	23,080	337,300	337,300	
Insurance	56,897	55,000		55,000	55,000	
Other Operating Expenses	779,367	1,087,687	125,773	1,087,687	1,087,687	
LESS: Recovery of Corporate Services Expenses	(64,862)	(70,000)	(7,701)	(70,000)	(70,000)	
Total OPERATING Expenditures	2,917,332	3,399,987	413,061	3,399,987	3,399,987	
Building	155,000	0	0	0	0	
Personnel	15,000	0	0	0	0	
Total FUNDING to RESERVES	170,000	0	0	0	0	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	3,087,332	3,399,987	413,061	3,399,987	3,399,987	0
Funding						
Municipal						
General Municipal Levy (Operating)	2,888,273	2,944,373	0	2,944,373	2,944,373	
Government Grants						
MNRF Transfer Payments	70,000	70,000	0	70,000	70,000	
Provincial						
Self Generated						
Donations - Foundation	0		0			
Donations - Other						
Miscellaneous	25,000		8,628			
Funding From Reserves						
Personnel	0	15,000	0	15,000	15,000	
TOTAL REVENUE	2,983,273	3,029,373	8,628	3,029,373	3,029,373	0
Net Surplus/(Deficit)	(104,059)	(370,614)	(404,433)	(370,614)	(370,614)	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 10 - Conservation Lands
FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Compensation and Benefits	1,014,057	1,042,500	137,073	1,042,500	1,042,500	
Administration Expenses	92,798	156,500	4,380	156,500	156,500	
Insurance	148,276	143,000	-	143,000	143,000	
Other Operating Expenses	503,226	605,000	48,310	605,000	605,000	
Total OPERATING Expenditures	1,758,357	1,947,000	189,763	1,947,000	1,947,000	
Land Purchases/Land Sale Expenses	139,401	0	47,838	0	0	
Emerald Ash Borer	314,172	400,000	10,379	400,000	400,000	
Trees for Guelph	0	0	0	0	0	
Trails - Capital Maintenance	238,957	20,000	0	20,000	20,000	
Total SPECIAL PROJECT Expenditures	692,530	420,000	58,217	420,000	420,000	
Forestry	117,424	0	0	0	0	
Land Sale Proceeds	0	0	0	0	0	
Total FUNDING to RESERVES	117,424	0	0	0	0	

TOTAL EXPENDITURES AND FUNDING TO RESERVES	2,568,311	2,367,000	247,980	2,367,000	2,367,000	0
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Funding

Municipal

Municipal Other	0	0	0	0	0	
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Government Grants

Federal	89,300	0	4,303	0	0	
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Self Generated

Luther Misc Income	31,564	46,000	0	46,000	46,000	
Other Areas Income	22,046	25,000	741	25,000	25,000	
Timber Sales	37,424	15,000	0	15,000	15,000	
Land Sale Proceeds	0	0	0	0	0	
Donations - Foundation	183,325	50,000	0	50,000	50,000	
Donations - Other	0	15,000	34,000	15,000	15,000	
Miscellaneous Other	2,854	0	0	0	0	

Funding From Reserves

Land	139,401	400,000	0	400,000	400,000	
Conservation Area Reserve (Dickson Trail funding)	56,157	20,000	0	20,000	20,000	
Forestry (EAB)/Ice Storm/Legal	314,172	0	0	0	0	
Gravel	0	1,000	0	1,000	1,000	

TOTAL REVENUE	876,243	572,000	39,044	572,000	572,000	0
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Net Surplus/(Deficit)	(1,692,068)	(1,795,000)	(208,936)	(1,795,000)	(1,795,000)	0
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GRAND RIVER CONSERVATION AUTHORITY
Schedule 11 - Property Rentals
FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Compensation and Benefits	571,683	574,000	74,146	574,000	574,000	
Administration Expenses	63,033	73,000	1,948	73,000	73,000	
Insurance Expense	14,787	15,500	-	15,500	15,500	
Property Taxes	106,621	98,000	-	98,000	98,000	
Other Operating Expenses	1,422,317	834,900	130,691	834,900	834,900	
Total OPERATING Expenditures	2,178,441	1,595,400	206,785	1,595,400	1,595,400	
Property Development	-	50,000	-	50,000	50,000	
Total SPECIAL PROJECT Expenditures	0	50,000	0	50,000	50,000	
Cottage Lot Program-Belwood	41,000	0	-	0	0	
Cottage Lot Program-Conestogo	70,000	0	-	0	0	
Demolitions/R&M Savings	122,000	0	-	0	0	
Total FUNDING to RESERVES	233,000	0	0	0	0	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	2,411,441	1,645,400	206,785	1,645,400	1,645,400	0
Funding						
Self Generated						
Belwood	951,224	957,000	420,083	957,000	957,000	
Conestogo	1,138,839	1,151,000	463,474	1,151,000	1,151,000	
Agricultural	233,309	230,000	140	230,000	230,000	
Residential	313,140	250,000	41,496	250,000	250,000	
Miscellaneous	301,407	312,700	-43,794	312,700	312,700	
Funding FROM Reserves						
Property Development	0	50,000	0	50,000	50,000	
Cottage Lot Program (Ice Storm)/Contaminated Site	488,115	0	0	0	0	
Wells/Septic/Demolitions	280,300	100,000	0	100,000	100,000	
TOTAL REVENUE	3,706,334	3,050,700	881,399	3,050,700	3,050,700	0
Net Surplus/(Deficit)	1,294,893	1,405,300	674,614	1,405,300	1,405,300	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 12 - Hydro Production
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	56,537	42,000	7,001	42,000	42,000	
Administration Expenses	538	0	538	0	0	
Other Operating Expenses	120,003	88,000	5,608	88,000	88,000	
Total OPERATING Expenditures	177,078	130,000	13,147	130,000	130,000	
Parkhill Hydro Turbine Project	112,472	300,000	0	300,000	300,000	
Total SPECIAL PROJECT Expenditures	112,472	300,000	0	300,000	300,000	
Land Sale Proceeds	125,000	70,000	0	70,000	70,000	
Total FUNDING to RESERVES	125,000	70,000	0	70,000	70,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	414,550	500,000	13,147	500,000	500,000	0
Revenue						
Self Generated						
Hydro Production-Belwood	337,542	240,000	14,313	240,000	240,000	
Hydro Production-Conestogo	234,612	230,000	0	230,000	230,000	
Funding from Reserves						
Land Sale Proceeds	112,472	300,000	0	300,000	300,000	
TOTAL REVENUE	684,626	770,000	14,313	770,000	770,000	0
Net Surplus/(Deficit)	270,076	270,000	1,166	270,000	270,000	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 13 - Conservation Areas
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures and Funding to Reserves						
Compensation and Benefits	3,833,510	4,177,000	199,894	4,177,000	4,177,000	
Administration Expenses	173,930	173,000	9,941	173,000	173,000	
Property Tax	57,784	60,000	0	60,000	60,000	
Other Operating Expenses	2,837,821	2,700,000	56,628	2,700,000	2,700,000	
Total OPERATING Expenditures	6,903,045	7,110,000	266,463	7,110,000	7,110,000	
Total CAPITAL Expenditures	859,691	1,820,000	87,533	1,820,000	1,820,000	
Pools & Water Treatment Equipment, Stabilization	842,000	300,000	0	300,000	300,000	
Total FUNDING to RESERVES	842,000	300,000	0	300,000	300,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	8,604,736	9,230,000	353,996	9,230,000	9,230,000	0
Funding						
Government Grants						
Federal	83,250	0	0	0	0	
Self Generated						
Brant	1,101,738	1,000,000	12,907	1,000,000	1,000,000	
Byng Island	1,041,858	1,000,000	8,773	1,000,000	1,000,000	
Belwood Lake	342,862	330,000	42,978	330,000	330,000	
Conestogo Lake	490,070	480,000	20,869	480,000	480,000	
Elora Gorge	1,633,807	1,700,000	19,944	1,700,000	1,700,000	
Elora Quarry	251,010	220,000	58	220,000	220,000	
Guelph Lake	976,925	940,000	51,317	940,000	940,000	
Laurel Creek	471,676	410,000	41,201	410,000	410,000	
Pinehurst Lake	843,688	770,000	35,375	770,000	770,000	
Rockwood	1,103,129	950,000	49,157	950,000	950,000	
Shade's Mills	224,073	200,000	49,417	200,000	200,000	
Total Fee Revenue	8,480,836	8,000,000	331,996	8,000,000	8,000,000	
Donations-Foundation	41,335	80,000	0	80,000	80,000	
Donations - Other						
Funding From Reserves						
Conservation Areas	0	1,150,000	0	1,150,000	1,150,000	
TOTAL REVENUE	8,605,421	9,230,000	331,996	9,230,000	9,230,000	0
Net Surplus/(Deficit)	685	0	-22,000	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
 Schedule 14 - Miscellaneous
 FOR THE PERIOD ENDING February 28, 2018

How much does it cost, and who pays for it?

Expenditures and Funding to Reserves

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
Other Miscellaneous	109,038	70,000	1,044	70,000	70,000	
Total OPERATING Expenditures	109,038	70,000	1,044	70,000	70,000	
Total CAPITAL Expenditures						
Mill Creek Rangers	28,890	35,000	0	35,000	35,000	
Total SPECIAL PROJECT Expenditures	28,890	35,000	0	35,000	35,000	
Interest Income	330,340	350,000	0	350,000	350,000	
PST Refund/Insurance Proceeds	0	0	0	0	0	
Total FUNDING to RESERVES	330,340	350,000	0	350,000	350,000	
TOTAL EXPENDITURES AND FUNDING TO RESERVES	468,268	455,000	1,044	455,000	455,000	0

Funding

Government Grants

Provincial	0	0	13,106	0	0	
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Self Generated

Interest Income-Operating	0	100,000	0	100,000	100,000	
Interest Income-Reserves	442,984	350,000	18,124	350,000	350,000	
Commodity Tax Refunds	0	0	0	0	0	
Miscellaneous	56,270	48,000	0	48,000	48,000	
Grand River Conservation Foundation	33,954	35,000	0	35,000	35,000	

TOTAL REVENUE	533,208	533,000	31,230	533,000	533,000	0
Net Surplus/(Deficit)	64,940	78,000	30,186	78,000	78,000	0

GRAND RIVER CONSERVATION AUTHORITY
 Schedule 15 - Source Protection Program
 FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures						
Compensation and Benefits	484,096	570,000	66,082	570,000	570,000	
Administration Expenses	50,210	65,000	1,374	65,000	65,000	
Other Operating Expenses	160,163	120,000	10,700	120,000	120,000	
Water Budget - Technical Studies	719,805	680,000	23,018	680,000	680,000	
Water Quality - Technical Studies	156,134	140,000	25,071	140,000	140,000	
TOTAL EXPENDITURES	1,570,408	1,575,000	126,245	1,575,000	1,575,000	0
Funding						
Government Grants						
Provincial	1,570,408	1,575,000	126,245	1,575,000	1,575,000	
TOTAL FUNDING	1,570,408	1,575,000	126,245	1,575,000	1,575,000	0
Net Surplus/(Deficit)	0	0	0	0	0	0

GRAND RIVER CONSERVATION AUTHORITY
Schedule 16 - Information Systems and Motor Pool
FOR THE PERIOD ENDING February 28, 2018

	Actual 2017	Budget 2018	Actual YTD	Previous Forecast	Current Forecast	Forecast Change
How much does it cost, and who pays for it?						
Expenditures						
Information Systems						
Compensation and Benefits	876,256	910,000	140,484	910,000	910,000	
Administrative Expenses	30,035	25,000	5,599	25,000	25,000	
Software and Hardware Maintenance	142,362	150,000	105,535	150,000	150,000	
Supplies and Services	51,542	51,000	9,199	51,000	51,000	
Total OPERATING Expenditures	1,100,195	1,136,000	260,817	1,136,000	1,136,000	
Capital Expenses	227,780	200,000	37,452	200,000	200,000	
LESS Internal Charges	(1,238,965)	(1,270,000)	0	(1,270,000)	(1,270,000)	
NET Unallocated Expenses	89,010	66,000	298,269	66,000	66,000	
Motor Pool						
Compensation and Benefits	266,463	292,000	30,316	292,000	292,000	
Administrative Expenses	17,919	25,500	598	25,500	25,500	
Insurance	37,114	38,800	0	38,800	38,800	
Motor Pool Building and Grounds Maintenance	23,161	10,000	1,188	10,000	10,000	
Equipment, Repairs and Supplies	243,956	277,700	34,639	277,700	277,700	
Fuel	200,770	254,000	11,645	254,000	254,000	
Total OPERATING Expenditures	789,383	898,000	78,386	898,000	898,000	
Capital Expenses	170,756	500,000	9,718	500,000	500,000	
LESS Internal Charges	(1,111,996)	(1,174,000)	(4,080)	(1,174,000)	(1,174,000)	
NET Unallocated Expenses	(151,857)	224,000	84,024	224,000	224,000	
TOTAL EXPENDITURES	(62,847)	290,000	382,293	290,000	290,000	0
Funding						
Government Grants						
Federal	20,000	0	0	0	0	
Self Generated						
Miscellaneous	1,910	0	4,916	0	0	
TOTAL REVENUE	21,910	0	4,916	0	0	
Gross Surplus (Deficit)	84,757	(290,000)	(377,377)	(290,000)	(290,000)	
Funding From Reserves	2,266,204	2,734,000	381,457	2,734,000	2,734,000	
Funding to Reserves	(2,350,961)	(2,444,000)	(4,080)	(2,444,000)	(2,444,000)	
Net Surplus/(Deficit)	0	0	0	0	0	0

Grand River Conservation Authority

Report number: GM-03-18-28

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Per Diems and Honorariums for 2018

Recommendation:

THAT Board Member Per-diems and Honorariums be increased by 1.75%, retroactive to January 1, 2018.

AND THAT Board Member Per-diems and honorariums be adjusted each year on January 1 by the same rate as non-union positions.

Summary:

Under the updated Conservation Authorities Act (2017) the Ontario Municipal Board (OMB) is no longer required to approve payments made to Conservation Authority Board Members. Prior to this change, Grand River Conservation Authority (GRCA) had received approval from the OMB to adjust the amounts annually by the rate of inflation, based on the National Consumer Price Index. For increased consistency, staff are recommending that as of January 1, 2018, the per diems and honorariums are increased annually at the same rate as non-union positions, as applicable.

Report:

Prior to the 2017 update to the Conservation Authorities Act, Section 37 said “no salary, expenses or allowances of any kind shall be paid to any of the members of the authority without the approval of the Ontario Municipal Board”. On August 31, 2007 The General Membership passed Resolution number 107-07, which included the following wording:

“...THAT staff seek approval of the Ontario Municipal Board...to increase per diems and honorariums annually at a rate equal to the Consumer Price Index.”

On September 12, 2013, in response to recommendations made by a board-appointed Members’ Remuneration Committee, the Board passed Resolution 119-13, which included the following wording:

...AND THAT the honorariums and per-diems for the Chair and Vice-chair be adjusted each year on January 1, by the rate of the Consumer Price Index (all items index for Canada as of December 31);

The above requests were approved by the OMB and, since that time, the per diems and honorariums have been increased each year on January 1 by the amount of the previous year’s “All-items Consumer Price Index” (CPI) for Canada.

The current Conservation Authorities Act no longer requires OMB approval for payments to Members. Given this legislative change, the current approach to per diems and honorariums has been reviewed. On January 26, 2018, Statistics Canada published the CPI for the year ending December 31, 2017 at a rate of 1.9 %. At the General

Membership Meeting of November 24, 2017, a 1.75% increase was approved for non-union positions effective January 1, 2018.

For increased consistency, staff are recommending that Board Member Per-diems and honorariums be adjusted each year on January 1 by the same rate as non-union positions, as applicable. Thus, staff are recommending that Board Member Per-diems and Honorariums be increased by 1.75%, retroactive to January 1, 2018.

A draft summary of Per Diems, Honorariums and Reimbursement for Members, January 1, 2018 has been prepared, reflecting the 1.75% increase. At the present time no change is recommended for mileage in the 2018 Budget (\$0.50 per km).

Financial implications:

The 2018 Draft Budget includes \$119,000 for Board Members' honorariums, per diems, mileage and expenses. The budgeted amount reflects the adjusted rates.

Other department considerations:

Not Applicable

Prepared by:

Karen Armstrong
Deputy CAO and Secretary-Treasurer

Approved by:

Joe Farwell
CAO

**Grand River Conservation Authority
Per Diems, Honorariums and Reimbursement for Members
January 1, 2018**

		Chair	Vice-Chair	Other Members
(1)	General Membership/Committee of the Whole	\$ 146.93 **	\$ 146.93 **	\$ 146.93 **
(2)	Other Committees (Audit, Special Recognition or Ad Hoc Committees struck by the Board) <i>Note: A Per Diem is only paid when a Committee meets on a separate day from (1)</i>	\$ 88.42 **	\$ 88.42 **	\$ 88.42 **
(3)	Other time spent on business of the Authority (pursuant to Section 59(1)(b) of the By-Law)*	\$ 26,626.00 (Per Year)	\$ 2,663.00 (Per Year)	\$ 88.42 ** (per meeting)
(4)	Mileage for travel to or from any of the above***	\$ 0.50 (per kilometre)	\$ 0.50 (per kilometre)	\$ 0.50 (per kilometre)

***Section 59(1)(b) of By-law 1-2016:** "a per diem allowance for time spent on business of the Authority when such time is spent on the said business at the direction of the General Membership or the Chair, such allowance to be as approved by the General Membership from time to time. The following activities shall be eligible for per diem allowance under this clause:

- Attendance at meetings of municipal councils to present the Authority's Annual Budget and General Levy requirement, if the member does not sit on that council and when such council presentations are scheduled through the Chair's office or at the request of the General Membership;
- Attendance at meetings of working groups or committees when appointed by the General Membership to such group or committee as an "official representative" of the Authority;
- Attendance at workshops, conferences or tours hosted by the Authority or Conservation Ontario, if participation is open to all members and registration is made through the Chair's office;
- Any other business approved as eligible for a per diem allowance by the General Membership".

** **Per-diems** have been adjusted by 1.75% effective January 1, 2018

*** **Mileage rate** has remained unchanged from 2017

Grand River Conservation Authority – Report

Report number: GM-03-18-29
Date: March 13, 2018
To: Members of the Grand River Conservation Authority
Subject: Environmental Assessments

Recommendation:

THAT Report Number GM-03-18-29 – Environmental Assessments be received as information.

Summary:

To provide the General Membership of the Grand River Conservation Authority with information on Environmental Assessments being reviewed, a summary report is presented below. The report has been prepared as directed through Motion No. P44-99 (May 18/99) adopted through General Membership Res. No. 55-99 (May 28, 1999).

Report:

Report on Environmental Assessments for March 13, 2018

A. **New Environmental Assessments Received**

New: Environmental Assessments received by the Grand River Conservation Authority and currently under review.

1. First Notice – Glasgow Street Bridge Class Environmental Assessment, Township of Woolwich

The Township of Woolwich has initiated a 'Schedule C' Class Environmental Assessment (EA) for the double-span steel truss bridge on Glasgow Street, located 200 metres south of Sawmill Road in Conestogo, Township of Woolwich. The purpose of the Class EA is to address potential load limit exceedances and identify a short and long term plan for the bridge.

The study area contains resource features regulated by the GRCA including the Conestogo River, floodplain, wetland and associated allowances.

The Glasgow Bridge, also known as the Conestogo Bridge, was constructed in 1886 and is identified in Arch, Truss & Beam - the Grand River Watershed Heritage Bridge Inventory.

GRCA staff have responded to the Notice of Commencement indicating an interest in the Class EA study.

2. First Notice – Middlebrook Place Bridges Class Environmental Assessment, Township of Woolwich

The Township of Woolwich has initiated a 'Schedule C' Class Environmental

Assessment (EA) for two bridges located on Middlebrook Place (Bridge #170160) and Weisenberg Road (Bridge #180160), approximately 300 metres and 450 metres southeast of Middlebrook Road respectively in the Township of Woolwich.

Bridge #170160 is a three metre span concrete bridge and Bridge #180160 (Chamber's Bridge) is a 50 metre span steel truss bridge over the Grand River and is currently closed due to structural deterioration.

The purpose of the Class EA is to assess options for rehabilitation, replacement, permanent closure, or removal of the bridges, while considering both vehicular and pedestrian uses.

The study area contains resource features regulated by the GRCA including the Grand River and an associated tributary, floodplain, steep slopes, valleylands and associated allowances.

The Chamber's Bridge was constructed in 1930 and is identified in Arch, Truss & Beam - the Grand River Watershed Heritage Bridge Inventory.

GRCA staff have responded to the Notice of Commencement indicating an interest in the Class EA study.

3. First Notice – Peel Street Bridge Class Environmental Assessment, Township of Woolwich

The Township of Woolwich has initiated a 'Schedule C' Class Environmental Assessment (EA) for the double-span steel truss bridge located on Peel Street, approximately 600 metres west of Katherine Street in the settlement of Winterbourne, Township of Woolwich.

The Peel Street Bridge, or Winterbourne Bridge, has recently been closed due to significant structural deterioration. The purpose of the Class EA is to assess options for rehabilitation, replacement, permanent closure or removal of the bridge, while considering both vehicular and pedestrian uses.

The study area contains resource features regulated by the GRCA including the Grand River, floodplain, wetland and associated allowances.

The Winterbourne Bridge was constructed in 1913 and is identified in Arch, Truss & Beam - the Grand River Watershed Heritage Bridge Inventory.

GRCA staff have responded to the Notice of Commencement indicating an interest in the Class EA study.

4. First Notice – Dover Street Sanitary Pumping Station Class Environmental Assessment, City of Cambridge

The City of Cambridge has initiated a Schedule "B" Class Environmental Assessment (EA) study to assess the preferred sanitary servicing strategy for future sanitary pumping station requirements within the Dover Street Sanitary Pumping Station (SPS) catchment area.

The study area contains resource features regulated by the GRCA including the Speed River, floodplain and associated allowances.

GRCA staff have responded to the Notice of Commencement indicating an interest in the Class EA study.

B. Classification of Reviewed Environmental Assessments

Minor: Minimal potential resource impacts that can be mitigated using conventional construction methods.

Major: Significant impacts on identified resource features. Alternatives and proposed mitigation will be outlined in detail.

Minor Impacts –

5. Final Notice – Weber Street Improvements Class Environmental Assessment, Northfield Drive to Blythwood Road, City of Waterloo

The Region of Waterloo has completed a 'Schedule B' Class Environmental Assessment (EA) for improvements to Weber Street between Northfield Drive and Blythwood Road in the City of Waterloo.

The preferred solution involves: reconstruction of the roadway; replacement of the storm and sanitary sewers and watermain; rehabilitation of the bridge over the Waterloo Spur/ION tracks; construction of new cycling facilities; and various other improvements.

The study area contains Cedar Creek and its associated floodplain at Albert Street and Weber Street. Minor work is anticipated within the floodplain and the culvert on Cedar Creek may be replaced. Staff will review the final design as a GRCA permit will be required for work within the regulated area.

6. Final Notice – Proposed New Interchange at Bishopsgate Road/Highway 403 Environmental Assessment, County of Brant

The County of Brant has completed a Harmonized Group B Provincial Transportation Facility and Municipal Class Environmental Assessment (Class EA) for the planning of a new interchange at Bishopsgate Road and Highway 403 and the realignment of Bishopsgate Road to Puttawn Road through Falkland in the County of Brant.

The study area contains resource features of interest to the GRCA including a portion of the Provincially Significant Whitemans Creek Kenny Creek Wetland, a coldwater creek, steep slopes, floodplain and associated allowances.

The preferred solution involves minor realignment and improvements to King Edward Street and Bishopsgate Road and interchanges from Bishopsgate Road to Highway 403. Minor impacts are anticipated within the allowances to the wetland and steep slopes. Staff will review the final design as a GRCA permit will be required for work within the regulated area.

7. Final Notice – Addendum for Rest Acres Road Corridor from Highway 403 to King Edward Street, County of Brant

The County of Brant has completed an addendum to a Harmonized Group B Provincial Transportation Facility and Municipal Class Environmental Assessment (Class EA) to define the corridor vision and preliminary design plan of Rest Acres Road between Highway 403 and King Edward Street.

The study area contains no resource features of interest to the GRCA.

8. Final Notice – Grand River Street North Corridor from Watt’s Pond Road to St. Patrick Street, County of Brant

The County of Brant has initiated a Schedule “C” Class Environmental Assessment (EA) study for planning and preliminary design of transportation network improvements to Grand River Street North, between Watt’s Pond Road and St. Patrick Street. The proposed improvements will address the transportation needs identified in the Transportation Master Plan 2008 (updated 2016) and accommodate all road users, while supporting the existing institutions, businesses and planned development growth.

No features of interest to the GRCA exist within the study area and no further involvement is needed.

Major Impacts – None for this report

Financial implications: Not Applicable

Other department considerations: Not Applicable

Prepared by:

Approved by:

Beth Brown
Supervisor of Resource Planning

Nancy Davy
Director of Resource Management

Grand River Conservation Authority

Report number: GM-03-18-27
Date: March 15, 2018
To: Members of the Grand River Conservation Authority
Subject: Draft Watershed Planning in Ontario Guidance – Response to Environmental Registry Posting

Recommendation:

THAT the Grand River Conservation Authority recommend to the Ministry of the Environment and Climate Change (MOECC) and the Ministry of Natural Resources and Forestry (MNRF) that they defer finalizing the Watershed Planning in Ontario guidance document, allowing for additional consultation with municipalities, conservation authorities, and other stakeholders;

AND THAT this report be forwarded to MOECC and MNRF through the Environmental Registry.

Summary:

The Government of Ontario is seeking input on a draft document *Watershed Planning in Ontario: Guidance for Land-use Planning Authorities*. The Guidance is intended to support municipalities in watershed planning to meet new and existing requirements in provincial land use plans, including the 2017 Growth Plan for the Greater Golden Horseshoe and Greenbelt Plan, and the Provincial Policy Statement (2014).

Watershed planning has been underway in the Grand River basin since the 1930s. The 2014 Grand River Watershed Water Management Plan is a recent milestone in updated science and collaborative planning. GRCA will continue discussions with municipalities through the Water Managers Working Group to determine the extent to which existing watershed and subwatershed plans meet provincial guidelines, and identify future planning needs and priorities. GRCA participated in the Province's Watershed Engagement Group, providing early input on watershed planning best practices. This report summarizes the draft Guidance document and key review comments. GRCA's Board report and detailed comments (Appendix 1) will be submitted to the Province through the Environmental Registry.

Report:

Background

The Coordinated Land Use Planning Review (2017) resulted in amendments to four provincial land use plans, including the Growth Plan for the Greater Golden Horseshoe and the Greenbelt Plan. These amendments introduced new requirements for watershed planning. GRCA supports the requirements for co-ordinated watershed planning to inform growth and development.

The Growth Plan applies to most of the municipalities in the Grand River watershed (except the Counties of Perth, Oxford, Norfolk and Grey). The Greenbelt Plan applies only to areas along the eastern edge of the watershed in the Townships of Erin and Puslinch, Town of Milton, Township of North Dumfries and City of Hamilton, but the Province has recently

proposed study areas to expand the Greenbelt into parts of Waterloo Region and the Counties of Brant, Wellington, and Dufferin.

The Ontario Ministry of the Environment and Climate Change (MOECC) and Ministry of Natural Resources and Forestry (MNR) released a draft *Watershed Planning in Ontario: Guidance for Land-use Planning Authorities* on the Environmental Registry for a 60-day public review period closing on April 7th, 2018 (Posting #013-1817, [Environmental Registry Direct Link](#)). The Guidance is intended for use by municipalities in fulfilling provincial land use planning requirements related to watershed and subwatershed planning.

GRCA staff have participated in a provincially-established Watershed Engagement Group (WEG), consisting of municipal, conservation authority (CA), and non-governmental organization representatives. Through the WEG and direct contact with the Province's consultants via surveys, interviews, and a workshop, GRCA provided early input on best practices, gaps in watershed planning guidance, and a draft table of contents for the document. The Province hosted a second workshop in February 2018, two weeks after posting the Guidance to the EBR, to solicit feedback on the draft Guidance. The Province has requested detailed comments to aid in revision of the document (see Appendix 1).

Watershed Planning in the Grand River

There is a long history of collaborative watershed planning in the Grand River basin. Early watershed-scale reports addressed flooding, water supply, water quality, and watershed planning, culminating in the 1982 Grand River Basin Water Management Study. The 2014 Grand River Watershed Water Management Plan (WMP) updated the science and represents a voluntary, collaborative approach to water management by watershed municipalities, GRCA, Six Nations of the Grand River, and provincial and federal partners. In fact, the WMP is identified in the draft Guidance document as an example of integration of water planning with municipal land use and infrastructure planning. Watershed planning in the basin is also supported by a watershed-wide Fisheries Management Plan (1998) and Forest Plan (2004).

GRCA has partnered with municipalities and other stakeholders to undertake subwatershed-scale planning since the late 1980s. More than 60 subwatershed and master drainage studies have been completed within GRCA's jurisdiction by a variety of agencies (GRCA, municipalities, and developers), covering about a quarter of the watershed. GRCA will continue discussions with municipalities to determine the extent to which existing watershed and subwatershed plans meet provincial guidelines, and identify future watershed planning needs and priorities.

Watershed Planning Policies

The Provincial Policy Statement (PPS) (2014) under the *Planning Act* provides the broad context for watershed planning in Ontario, directing planning authorities to use "the watershed as the ecologically meaningful scale for integrated and long-term planning". Many municipalities within the Grand River watershed have Official Plan policies that align with this policy, either allowing for, or in some cases requiring, watershed or subwatershed plans to inform land use planning and water management decisions.

The Growth Plan and Greenbelt Plan define watershed planning as providing "a framework for establishing goals, objectives, and direction for the protection of water resources, the management of human activities, land, water, aquatic life, and resources within a watershed and for the assessment of cumulative, cross-jurisdictional, and cross watershed impacts". Subwatershed plans are to reflect and refine watershed planning for smaller drainage areas, focusing on development-related impacts. New policies in these Plans identify municipal growth, land use, development, and infrastructure planning matters that are to be informed by watershed and subwatershed planning.

- Watershed planning must inform:
 - the feasibility and location of settlement area boundary expansions;
 - planning for new or expanded water, wastewater and stormwater infrastructure;
 - comprehensive master plans for municipal and private communal water and wastewater systems;
 - stormwater master plans for serviced settlement areas;
 - co-ordinated planning for potable water, stormwater and wastewater systems by municipalities sharing a receiving water body; and
 - identification and protection of water resource systems.
- Subwatershed planning must inform:
 - Stormwater management plans for large scale development;
 - Planning for large-scale development outside of settlement areas within key hydrologic areas; and
 - Planning for redevelopment or resort development in developed shoreline areas of inland lakes.

Draft Guidance

The draft Guidance is intended to support municipalities in their fulfillment of watershed/subwatershed planning directions under the Provincial land use plans and PPS. The document addresses the following topics:

- Introduction: watershed planning process, principles, history, definitions, roles and coordination, and equivalency and transition provisions
- Engagement and Indigenous perspectives
- Watershed delineation and characterisation
- Setting the vision, goals, objectives and targets
- Water quantity, water budget and water conservation plans
- Water quality and nutrient load assessment
- Natural hazards
- Climate change
- Cumulative effects assessment
- Assessment of land use and management scenarios
- Implementation
- Monitoring and adaptive management

GRCA staff have reviewed the Guidance and solicited feedback from municipal partners. Key issues are as follows. Additional detailed comments are included as Appendix 1.

The Role of Conservation Authorities in Watershed Planning

The draft Guidance document includes sections on municipal and provincial roles in watershed planning, but does not include a section on CA roles. As such, the Guidance underplays the history, expertise, roles, and resources of many CAs for watershed planning.

The PPS directs planning authorities to use the watershed as the ecologically meaningful scale for water planning, but does not identify a lead agency for watershed planning. The Growth Plan directs municipalities “partnering with conservation authorities as appropriate” to “ensure that watershed planning is undertaken”. The Guidance should reflect the municipal requirement to ensure watershed planning informs decision making, but should not dictate the lead agency.

The *Conservation Authorities Act* (CAA) establishes CAs for the purpose of “organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario”. Further,

CAs have the power “to study and investigate the watershed”. Within the Greater Golden Horseshoe area, many CAs have significant experience undertaking watershed and subwatershed planning, managing water resources, and supporting municipal land use planning and infrastructure decisions. GRCA has decades of experience, often serving as a facilitator of cross-municipal planning.

CAs have other roles and responsibilities which inform watershed planning and support implementation. These include administration of Section 28 of the CAA, responsibility for fulfilling the provincial interest with respect to natural hazards (Section 3.1 of the PPS), as a public commenting body in accordance with the *Planning Act*, and as a source protection authority under the *Clean Water Act*. These roles are not clearly reflected in the document, and in the key area of floodplain mapping, the Guidance says municipalities “may choose to rely on the services of conservation authorities...but are not required to do so”. Lack of engagement with CAs could result in duplication of effort, inefficiencies, and conflict between decision making at planning and permitting stages. The contribution of CA expertise in defining hazards and in the development of watershed plans will ensure that watershed plan recommendations and implementation of the above roles and responsibilities are harmonized.

Implementation of watershed plans requires actions often beyond the scope of many municipalities. CAs have developed partnerships with a range of watershed stakeholders including local government and other government agencies, community groups, academic institutions, landowners, residents and businesses. The ability of conservation authorities to develop and continue to foster these partnerships can support implementation of watershed plan recommendations.

The Guidance document should be revised to include a section on Conservation Authority roles, and the statement that municipalities are not required to rely on the services of CAs in natural hazard planning should be revised.

Minimum Expectations, Equivalency and Transition Provisions

Clarification is needed with respect to minimum components and scope of work for watershed and subwatershed planning to inform the various land use and infrastructure planning processes identified in the policies. For example, the document does not articulate whether or how the scope of a watershed plan to support wastewater master planning should differ from a plan to inform settlement area boundary expansions; would nutrient load assessments or water conservation plans be required for both purposes?

Watershed planning components are described as “typical...to provide municipalities with flexibility”. While flexibility is desired, lack of clarity may hamper the ability of municipalities to anticipate watershed planning needs, engage appropriate partners in scoping planning studies, and demonstrate fulfillment of provincial requirements. Lack of minimum expectations may result in inconsistent approaches and quality of watershed planning across the Province.

The Guidance should include a table or matrix identifying minimum components for each planning process to be informed by watershed planning, and the corresponding level of municipal government responsible (e.g., lower and single-tier municipalities are responsible for stormwater master plans). The document should address how watershed planning could be scaled and scoped to address the needs of many municipalities and multiple planning needs. The Guidance should draw on the 1990s era Provincial guidance documents to illustrate the hierarchical relationship among watershed, subwatershed and land use planning. Example terms of reference for watershed and subwatershed plans could be provided in an appendix.

Additional guidance is required regarding equivalency. Provincial plan policies identify processes and decisions that are to be informed by watershed planning “or equivalent”.

The Guidance suggests municipalities assess whether existing studies meet the policy requirements, noting that an equivalent study must use the watershed scale, identify and provide for the protection of water resource systems, and consider existing and proposed development and potential impacts on water quality and quantity. The discussion on equivalency should address the objectives, scope, level of detail, and date of completion of existing watershed and subwatershed studies, and provide more specific criteria for evaluating their sufficiency to meet provincial requirements. Further, the role of existing single-component studies (e.g., assimilative capacity study, natural heritage study, source water assessment report) in partial fulfillment of watershed planning requirements should be addressed.

The Guidance acknowledges that multi-year baseline monitoring provides the foundation for watershed planning, and that long-term monitoring is required to support adaptive management and updates to watershed plans. Many municipalities are currently engaged in conformity and comprehensive Official Plan review exercises. Where watershed plans meeting the policy requirements don't exist, and baseline data is unavailable, municipalities will lack the time to initiate and complete new watershed plans as required. Transition provisions should describe how municipalities can draw on existing, older, and component studies, and engage appropriate partners to fill watershed planning gaps to support current planning decisions, and strategically update watershed planning moving forward.

Technical Guidance

“How to do it?” sections in the Guidance document provide general descriptions of the scope of key watershed planning elements (e.g., water budgets) and point to existing technical guidance where available. Minimum technical methods are not identified and there remain gaps where technical guidance is lacking. Notably, no additional definitions or technical methods are provided for delineation of the Water Resource System – identification of which is required by the Growth Plan. The draft points to existing protocols and guidance (e.g., Ontario Stream Assessment Protocol, source water protection guidance, and CA-published resources). As a result, some elements of the System, for example significant surface water contribution areas, have yet to be defined. GRCA is working to identify existing mapping and technical data to inform delineation of Water Resource Systems.

The generalized scope of work described for some components, notably climate change and cumulative effects assessment, are substantive and likely beyond the necessary scope of some watershed or subwatershed plans (e.g., the need for greenhouse gas inventories). For each watershed planning element, the methodology section should describe technical methods representing minimum, moderate, and advanced levels of sophistication, and direct municipalities to implement the approach that is suitable to address the plan's scope and purpose, and available resources.

Integration of Watershed Systems

The Guidance does not strongly reflect the complexity and interrelationships among watershed systems, and the importance of integration in watershed characterisation, scenario analysis, and development of management strategies. Notable gaps include the role of physiography and geology in influencing water systems, surface water-groundwater interactions, stream morphology, and interconnections between water resources and natural heritage. At minimum, the Guidance should identify all the disciplines required for watershed planning, including geology and hydrogeology, hydrology and hydraulics, water quality, terrestrial and aquatic biology, fluvial geomorphology, and land use planning.

In particular, the document is not reflective of the level of inclusion and integration of aquatic and terrestrial natural heritage systems in typical watershed planning practice. The document identifies mapping the extent of Natural Heritage Systems (NHS) as a task, but

should also refer to the Growth Plan policy 4.2.2 allowing municipalities to refine provincial NHS mapping. Refinement of the NHS is a typical component of subwatershed planning to inform development. Further, the document should explain that buffers and constraints on development need to take into account the quality and sensitivity, or vulnerability, of natural heritage features. References to targets and recommendations for protection, restoration and enhancement are often limited to riparian areas. These references should be broadened to encompass aquatic and terrestrial natural areas.

In conclusion, the draft Guidance in its current form underrepresents and may undermine the roles CAs play in watershed planning (e.g., natural hazards). The draft falls short of the level of specificity required for municipalities to evaluate the equivalency of existing studies, engage appropriate watershed planning partners, anticipate and scope new watershed planning needs, and demonstrate compliance with provincial policies. For these reasons, and due to the compressed timeline of the development of the Guidance (initiated in June 2017), it is recommended that the Province defer finalizing the *Watershed Planning in Ontario* guidance, allowing for additional consultation with municipalities, conservation authorities, and other stakeholders.

GRCA is pleased to continue discussions with watershed municipalities and other local stakeholders to clarify and confirm GRCA's role in watershed and subwatershed planning, discuss anticipated watershed planning needs and priorities, and support delineation of the Water Resource System.

Financial implications:

None at this time. However, GRCA's framework for establishing subwatershed planning priorities and the funding model was approved in 2000 and should be revisited as future subwatershed planning needs are identified in consultation with watershed municipalities.

Other department considerations:

Several GRCA program areas provided input on this report including: Resource Planning and the Engineering Division.

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Appendix 1: GRCA Comments – Watershed Planning in Ontario: Guidance for Land-Use Planning Authorities (Draft, January 2018)

Watershed Planning in Ontario: Guidance for Land-Use Planning Authorities Draft

Name: Grand River Conservation Authority

Section	Comments
2 Introduction	
2.1 Watershed Planning Process	<ul style="list-style-type: none"> • Pg. 7 – under “Phase 1 will” – the text should include establishing baseline or “current” conditions of natural systems. • Pg. 8 – under “Phase 1 will” – should clarify Phase 1 may identify “preliminary” opportunities for protection, enhancement, rehabilitation and development, which would be confirmed or updated through Phase 2/3 work. Also clarify that “identify monitoring needs” refers to gap filling and/or interim monitoring needs to support Phase 2/3 work. Long-term monitoring to support plan implementation and future updates to the plan should be confirmed in Phase 3. • Pg. 8 – under “Phase 1 will” – the text notes that the complexity of Phase 1 work depends on other completed studies. This sentence should note that the objectives, scope, and currency of existing studies should be considered. Further, the text notes Phase 1 should “incorporate or complement not duplicate” previous work. The text should note that Phase 1 work may be required to UPDATE previous work where it is deemed out of date. • Pg. 8 – “If no previous studies are available, some aspects of the watershed plan could be done as part of Phase 1 activities” – it’s not clear what is meant by this statement. In the absence of previous studies, what aspects would be added to Phase 1 activities? • Pg. 8 – The text under “Phase 3 will” should differentiate between watershed and subwatershed planning to support the various processes identified in the provincial plans and PPS. For example, clarify if/how Phase 3 work and outputs to support settlement area boundary expansions vary from those to support infrastructure master planning. Work/outputs that are common to all planning triggers should be highlighted.
2.2 Principles	<ul style="list-style-type: none"> • This section should identify use of the watershed as the required scale for watershed/subwatershed studies.
2.3 Brief History of Watershed Planning in Ontario	
2.4 Current Framework	
2.5 Definitions of Watershed	

Section	Comments
Planning	
2.6 Summary of Policy Requirements	<ul style="list-style-type: none"> • Clarification is needed with respect to minimum components and scope of work for watershed and subwatershed studies. Under “Checklists” on pg. 17, the text states “Watershed planning components...are typical, or recommended components to provide municipalities with flexibility”. This implies there are no mandatory minimum components or scopes of work for watershed/subwatershed plans triggered by provincial policies. This lack of clarity could result in confusion and delays in planning processes (e.g., comprehensive OP reviews), and inconsistency and lack of quality in the resulting (sub)watershed plans.
2.7 Role & Coordination	<ul style="list-style-type: none"> • A section on the Conservation Authority Role should be added. The second paragraph under the Municipal Role heading (1st paragraph on pg 22) should be moved/incorporated under the new CA Role heading. This section should note the following: <ul style="list-style-type: none"> ○ The purpose statement of the Conservation Authorities Act “ to provide for the organization and delivery of programs and services that further the conservation, restoration, development and management of natural resources in watersheds in Ontario” ○ Section 28 regulation responsibilities ○ Delegated “Provincial interest” in Plan Review for natural hazards ○ Public commenting bodies on municipal policy documents and planning and development applications ○ Source water protection role • As a result of those roles, and to reduce the potential for duplication, inconsistency or conflict, municipalities should work or partner with CAs in watershed and subwatershed planning, where they exist, as noted in Policy 4.2.1.1 of the Growth Plan.
2.8 Equivalency & Transition Provisions	<ul style="list-style-type: none"> • This section does not provide the level of detail needed to be useful to municipalities. The discussion on equivalency should address the objectives, scope, level of detail, and date/currency of existing studies. The fourth paragraph appears to say only a watershed study is equivalent to a watershed study. What role could existing single-component studies (e.g., assimilative capacity study, natural heritage study, source water assessment report, Environmental Impact Studies, etc) play in partial fulfillment of (sub)watershed planning requirements?
3 Engagement and Indigenous Perspectives	
3.1 Effective Engagement & Committees	<ul style="list-style-type: none"> • What are the minimum provincial policy requirements for engagement? They should be listed. • Under Step 3 – How might the engagement records be used in the process?
3.2 Partnering with Indigenous Communities	<ul style="list-style-type: none"> • Again, what are the provincial policy/legislative requirements for engagement? It says that engagement is encouraged. Does that mean it’s not required?

Section	Comments
	<ul style="list-style-type: none"> When should indigenous communities be engaged? Is it based on geographic proximity, land claims, or other approach?
4 Watershed Delineation & Characterization	<ul style="list-style-type: none"> Prior to section 4.1, a section should be added on Scoping the Study. After section 2.5, the guidance document does not clearly differentiate watershed and subwatershed planning, or address the varying scopes of study required to support the triggers identified in provincial plans. For instance, how does watershed planning to support water and wastewater master plans differ in scope/requirements from subwatershed planning to support planning for designated greenfield areas? Scoping involves identifying the trigger for (sub)watershed planning, establishing the watershed study area, identifying key drivers and issues, and identifying required study outputs (e.g., refined natural heritage system, master drainage plan, etc.).
4.1 Delineation of Watersheds & Subwatersheds for Land Use Planning	<ul style="list-style-type: none"> This section should note that where there are interconnections between surface water and groundwater, the study area of a sub(watershed) study should consider groundwater flow divides in addition to surface water drainage. Study boundaries may need to consider the boundaries of natural features providing hydrologic functions/services that straddle (sub)watershed divides (e.g., wetlands).
4.2 Identification of the Water Resource System	<ul style="list-style-type: none"> This section is quite vague and does not provide enough detail such that a smaller municipality that lacks the resources/experience of doing watershed planning would understand how to complete the process of mapping a Water Resource System. A specific methodology should be given (similar to what was provided for the provincial NHS mapping) so that the identification of the System is consistent across the province. There should be a minimum requirement laid out with opportunities for refinements based on the resources available. Pg. 37 – the text points to existing technical guidance for identification of Water Resource System features. However, technical guidance does not exist for some components identified in the Growth Plan (e.g., Significant surface water contribution areas). The potential for surface water-groundwater linkages should be identified in this section. The discussion of a “pressure-state-response framework” is confusing and vague. An example in the form of a chart or other visual would be helpful.
4.3 Characterization of Existing Conditions	<ul style="list-style-type: none"> This section does not reflect the level of integration and inclusion of natural heritage systems in typical (sub)watershed planning practice. For instance, on pg 39, establishment of indicators and assessment of current conditions is not limited to water quality and quantity, but also incorporates biological metrics (e.g., benthic macroinvertebrates, fish community). Pg. 40 - characterization of natural heritage should include flora, fauna, vegetation communities, and, notably, Species at Risk, which are not mentioned in the document but often inform assessment of the quality, sensitivity and vulnerability of natural areas to impacts.

Section	Comments
	<ul style="list-style-type: none"> • Pg. 40 – First sentence under “Why is it important” should be revised to note watershed characterization provides the basis for identification of constraints on development (e.g., mapping of wetlands, watercourses, floodplains). • Pg. 41 – the text should note that existing/historic monitoring data and environmental evaluations to support development applications often will form a piecemeal picture of watershed conditions – lacking in the scope and integration required for watershed planning. • Pg. 42, last bullet and pg. 47 bulleted list - Conservation authorities should be identified as a key partner in watershed monitoring – it is unlikely that municipalities have/will engage in long term monitoring across municipal boundaries. These sections overemphasize the role of federally and provincially collected data, which on their own, are unlikely to be collected at the spatial resolution to support (sub)watershed planning for many of the triggers identified in provincial policies (e.g., planning for development in designated greenfield areas). Further, the roles and contributions of citizen –led monitoring should be identified and differentiated from long-term agency-led monitoring (re: consistent application of protocols, long term data management and analysis to inform adaptive management). The CA role in delivery of provincial monitoring networks (PGMN, PWQMN) should be identified. A key challenge in (sub)watershed planning is forecasting planning needs far enough in advance to implement monitoring programs to fill gaps in baseline data to support studies. This can result in planning delays and pressure to proceed without adequate/current information. Forecasting (sub)watershed planning needs should be identified as a key step in Section 7.2. • Pg. 43 table – Climate data should identify precipitation and air temperature specifically. Typical uses should include establishment of in-stream thermal regime. The description of the Habitat data type should include reference to aquatic and terrestrial natural heritage. Species at Risk should be identified under Wildlife. The table should include a section on municipal water, wastewater, and stormwater infrastructure. Delete references to United States legislation and tools (305b report, 303d list, TMDL reports) – they are not relevant. Water quality standards and Source Water Assessments aren’t “types” of data used, but potential source of data and should be removed from the table. • Remove the reference to ‘standards’ in the table on page 44. Standards refers to a referenced limit in a regulation as part of an Environmental Compliance Certificate (ECA). When a parameter is characterized using specific benchmarks, usually, water quality objectives or guidelines are used. The purpose of the study is also considered which then points to the appropriate guideline to be used. For instance, the guidelines most used by watershed practitioners are for the protection of aquatic life. • Pg. 45 – bullet list – The currency of existing monitoring data should be identified as a consideration in establishing information

Section	Comments
	<p>needs and developing environmental monitoring plans.</p> <ul style="list-style-type: none"> • Pg. 45 – The discussion on indicators should be integrated with the discussion in Section 5 – indicators are the tools/metrics that connect watershed objectives and targets. In other words, the target should be a quantitative/qualitative expression of the condition of an indicator (e.g., PWQO provides a target for total phosphorus). • Pg. 45 – Last paragraph should identify chloride as a key water pollutant associated with the urban environment. • Overall, the content on monitoring provides inconsistent messaging – in places the text (appropriately) suggests review of existing information and scoping of monitoring to fill gaps, while in others it implies a dedicated monitoring program (5 years) is required to support subwatershed planning. The text should be clarified to suggest the purpose and scope of the study will determine what data is required, the currency and sufficiency of existing data should be evaluated, and gaps should be filled with regard to the minimum data necessary to reflect natural variability in environmental systems (often 5 years to reflect climatic and hydrologic variability).
5 Setting the Vision, Goals, Objectives & Targets	<ul style="list-style-type: none"> • Pg. 49 – The triangle diagram should include a box for Indicators between Objectives and Targets. Using the example provided on pg 52-53, the Indicator is % wetland cover. (see comment under section 4.3) • Vision and Goal setting should be informed by the trigger for (sub)watershed planning and scoping of the study. (see comments under section 4) • Additional discussion on target setting should address typical approaches (e.g., maintenance of existing conditions vs. enhancement of existing conditions) and how they relate to satisfaction of provincial objectives (e.g., A Wetland Conservation Strategy for Ontario near term no net loss and longer term net gain targets from 2010 baseline).
6. Watershed Planning Elements & Best Practices	
6.1 Water Quantity, Water Budget & Water Conservation Plans	<ul style="list-style-type: none"> • The text on water budget should identify that seasonal water budgets and water budgets for individual features (e.g., wetlands) can be important for understanding hydrology and linkages between hydrology and ecology. • Pg. 56 – Under “Uses of a Water Budget” text should be added to identify the water budget role in informing stormwater management targets and planning. • Pg. 63 – The section on enhancing stormwater infiltration should identify that protection of the quality of groundwater-based drinking water sources can be a constraint. • This guidance should include the other important aspects of water quantity which include environmental flows, drought contingency planning, water use and flood damage reduction.
6.2 Water	<ul style="list-style-type: none"> • Physical water quality – in-stream temperature – should also be

Section	Comments
Quality & Nutrient Load Assessment	<p>considered in this section.</p> <ul style="list-style-type: none"> • The discussion under “How to do it?” is overly simplistic. Indicators are mentioned, but appropriate metrics are not (e.g., use of means, medians, ranges, percentiles). The discussion should emphasize the need to consider hydrologic (wet vs dry weather conditions) and temporal (e.g., seasonal) influences, in addition to spatial patterns. While loading may be a meaningful metric for some purposes (e.g., contribution to downstream watercourses or waterbodies), in-stream concentrations may be more relevant for other objectives (e.g., aquatic habitat). • There is an incorrect explicit assumption in this section that watershed planning should focus in on ‘nutrients’ as the only driving issue. The watershed issue(s) should be identified in the Characterization Section (Section 4.3) and carried forward into a section that describes current and future state. The section title should be broadened to “Environmental Capacity Assessment” – this extends the scope from determinations of assimilative capacity for Municipal Wastewater Master Plans, to be inclusive of other ‘inputs’ beyond wastewater (e.g. stormwater, upstream nonpoint source inputs). This also broadens the concept to evaluating the contaminant(s) that were identified in the Characterization Section and not just nutrients. For example, in the case of the Grand River, oxygen is the overarching indicator that gauges whether the system is responding in a way that best accommodates all of the cumulative inputs. This assessment can include nutrient loading but if it is just scoped to ‘nutrient loads’ then the assessment is only partially completed. • Environmental Capacity must be defined in the guidance – currently it references assimilative capacity but it is not defined. For example, it could be defined as “the ability of a water system to accommodate the cumulative inputs from a variety of sources (point and nonpoint) so that the overall quality or health of the system does not decline”. By broadening this concept, it invites opportunity and innovation to evaluate the stressors within the water system not as a point source or a nonpoint source. Environmental Capacity assessments can be approached by evaluating the current, and future capacity of a system to accommodate ‘all’ inputs within the area of focus. This would allow for innovative approaches to evaluate cumulative effects. Again, in the Grand River, there is a dynamic modelling platform that allows for various scenarios to be evaluated based on the watershed stressors of 1. Population growth that increases urban development (land base changes) or wastewater flows; water consumption and/or use; 2. Upstream inputs or strategies including rural or urban nonpoint sources; 3. Wastewater effluent quality management strategies including infrastructure upgrades or optimized process control. • The box on page 69 is too general to be useful. The ‘generality’ outlined in the box on this page does a disservice to the intent of the Provincial policies and may send a signal that this is all that is needed. Also note that the 1994 Provincial policies acknowledge the need to be practical in assessments of receiving waters;

Section	Comments
	<p>however, the box suggests that the “most stringent requirement will be applied”. The 1994 policies recognize that ‘...all practical measures shall be taken...’. For instance, some practical measures may include testing new technology or considering offsetting in an approach for overall pollutant load reduction. If the box remains, the text should include other necessary aspects including more specific requirements regarding the length of data required to characterize historic conditions (e.g., requiring the most recent 5 years of data as opposed to data collected 20 years ago) and the need to evaluate the ‘7Q20’ low flow statistics for the receiving system if it is river system. There are issues with defining this if the river system is regulated and an equivalent statistical analysis is needed.</p> <ul style="list-style-type: none"> • The source water protection content here should note the program has a very narrow focus (e.g., identifying specific contaminants in drinking water sources), and will provide limited information to support watershed-scale water quality assessment. Also, since there is no monitoring program under the CWA, it relies on municipal, conservation authority, provincial, and other monitoring programs for data.
6.3 Natural Hazards in Watershed Planning & Subwatershed Plans	<ul style="list-style-type: none"> • A brief description of CAs’ delegated Authority should be provided, consistent with CA roles and responsibilities as described in the Policies and Procedures for Conservation Authority Plan Review and Permitting Activities (CALC, 2010) (created in consultation with MNRF). Proposed wording: “In addition CA’s regulatory role under the Conservation Authorities Act, CAs have a significant advisory role to watershed municipalities under the Planning Act. In 1995, the Ministry of Natural Resources and Forestry delegated the responsibility for municipal plan input and review for natural hazards to CAs. This means that CA staff review and comment on municipal policy documents and development proposals to ensure consistency with the Provincial Policy Statement, - Section 3.0, Protecting Public Health and Safety.” • Pg. 75 – The wording of the last sentence in the second paragraph should be revised to more strongly encourage municipalities to work with conservation authorities, where they exist (i.e., remove “but are not required to do so”). Because of CAs’ roles in commenting on natural hazards for Planning Act applications and their expertise in hazard (slope, floodplain, shoreline, wetland, watercourse) mapping, lack of engagement with CAs has the potential to result in duplication, inconsistency, and challenges in later permitting to implement growth related initiatives and plan review (e.g. permits required under Ontario Regulations for natural hazards e.g. GRCA – Ontario Regulation 150/06). • A brief description of the CA Act or at a minimum, a reference to it should be included in this section. • The technical guideline documents for natural hazards provide a starting point for the development of mapping. However due to the currency of these documents (published in 2002, based on information available in the 1990s) there are opportunities for

Section	Comments
	<p>more advanced technical evaluations to be considered. The guidance should note that alternate methodologies may be appropriate for (sub)watershed studies and that consultation with the CA and MNRF should be undertaken prior to studies being undertaken.</p> <ul style="list-style-type: none"> • An updated and more detailed implementation guideline for the PPS natural hazard policies may be beneficial to reaffirm the provincial approach for natural hazard policy implementation in (sub)watershed plans.
6.4 Climate Change & Watershed Management	<ul style="list-style-type: none"> • The section on “how to do it?” identifies some potential impacts of climate change on water resources and management (e.g., changes to water quality and supply), but does not provide technical guidance on how to characterize or qualitatively/quantitatively assess potential impacts. • The first sentence under Step 2 should include the impact of existing “and future” land and water use, and infrastructure. • The guidance should better clarify what is considered the minimum scope of work required to address climate change, and which items described in guidance are over-and-above expectations. For instance, is assessment of GHG emissions required scope for all (sub)watershed studies, regardless of the planning trigger? This component seems more relevant for municipal infrastructure master planning, and integration with municipal sustainability and climate strategies, than subwatershed planning for greenfield development.
6.5 Connections to Natural Systems	<ul style="list-style-type: none"> • This section should clarify that the provincially identified NHS under the Growth Plan can be revised through (sub)watershed planning, and what criteria should be used to revise/update the NHS at the watershed scale. • This section summarizes many targets established in federal and provincial publications (e.g., ECCC targets for impervious surfaces, wetland and forest cover, width of riparian buffers). Pg. 88 states “targets should be identified in accordance with provincial and national guidelines”. If current conditions fall short of the guidelines, does that imply that targets should reflect enhancement of conditions to reach provincial federal/provincial guidelines? • Pg. 89 First sentence under Step 3 should be reworded to clarify that “watershed delineation and characterization” does not, on its own, “provide for protection of natural heritage features and areas”. • This section should be revised to reflect that in addition to mapping the extent of natural heritage systems, (sub)watershed planning draws on information regarding the quality and sensitivity or vulnerability of natural heritage features to inform establishment of constraints on development and setbacks. For instance, larger setbacks are recommended from features that are deemed sensitive (e.g., cold water streams).
6.6 Cumulative Effects Assessment	<ul style="list-style-type: none"> • Pg. 93 – A figure is referred to at the bottom of the page that appears to be missing. • This section may overwhelm municipalities with limited

Section	Comments
	<p>experience in watershed planning and should clarify minimum scope of work and associated methods required.</p> <ul style="list-style-type: none"> • This section should provide an indication of the (substantive) data needs to support CEA, in particular, to develop predictive models. • Cumulative effects as described in the guidance is limited to space and time concepts. The academic literature describes cumulative effects from within biological organization from genes to populations. Both approaches are valid; however, it should be defined in the section. • Step 7 starting on page 98 - This section references the need to characterize the variability yet only identifies a single benchmark and not a range. Best to identify the need to be within a range of conditions given the natural variability, otherwise exceeding a 'benchmark' may not be useful information.
6.7 Assessment of Land Use & Management Scenarios	<ul style="list-style-type: none"> • Pg. 101 The second last paragraph should be revised to add environmental impact as a key consideration in assessment of land use and management scenarios. • Pg. 105 Section 3 should clarify that environmental considerations should inform development of alternative scenarios, as well as evaluation of scenarios. • Pg. 107 refers to a “mixed qualitative/quantitative” approach to assessing ecological and human costs and benefits, but does not provide examples of either. Additional examples reflecting a range of approaches and level of effort would be helpful. Scenario analysis using hydrologic models, evaluating impacts on water balance and establishing stormwater criteria, in particular, is a common approach requiring more explanation.
7 Implementation	
7.1 Watershed Plan & Subwatershed Plan Development	<ul style="list-style-type: none"> • Pg. 110 suggests municipalities adopt a standardized approach for (sub)watershed planning to “support analysis of cross-watershed and cross-jurisdictional impacts”. The text should suggest municipalities work in partnership with CAs, where they exist, to facilitate integration and comparability of (sub)watershed plans, as CAs have the mandate for program and service delivery at the watershed scale, and considerable expertise in facilitating cross-municipal watershed management. • Pg. 111 – The table of contents should include a section on evaluation of land/resource use scenarios, the preferred scenario and potential impacts, to provide the rationale for the recommended management actions. • Pg. 112 – This section should describe in more detail the types of recommendations and implementation mechanisms typically included in (sub)watershed plans, including policies and criteria (OP amendments, subdivision plans, etc.), operations and maintenance, monitoring and research, enforcement, stewardship and education, restoration, and land securement.
7.2 Informing Land Use Planning &	<ul style="list-style-type: none"> • See comments above on equivalency and minimum requirements. • This section should appear near the beginning of the Guidance.

Section	Comments
Integrated Planning for Water, Wastewater, & Stormwater	<ul style="list-style-type: none"> • Throughout the document, and particularly in this section, the guidance should differentiate between the expected roles of upper- and lower-tier municipalities. For instance, the Guidance suggests high-level watershed planning inform water, wastewater and stormwater master plans. While upper tier municipalities generally play a role in water and wastewater planning, it's lower tier municipalities who engage in stormwater master planning. • The section notes the need to align municipal planning processes (e.g., conformity exercises, OP reviews, master planning, secondary planning, infrastructure planning, etc) with watershed and subwatershed planning, but offers no guidance on how to do so (forecasting needs, nesting studies, sequencing of deliverables). The section also should address approaches to sequencing and/or packaging (sub)watershed studies with other planning processes (e.g., MESP's, secondary plans, master planning). • The need to collect sufficient baseline environmental data to support (sub)watershed planning makes transition provisions (not provided in the document) especially important for municipalities engaging in conformity and comprehensive review processes. • This section notes the potential for integration of (sub)watershed planning with EAs, but does not address nesting/coupling of (sub)watershed studies with other planning studies (e.g. Master Environmental Servicing Plans, Secondary/Area Studies). • Step 2 should be repositioned to "Alignment of EA approaches within Watershed / Subwatershed Planning".
7.3 Implementing The Plans Beyond Municipal Policy & Land Use Decision-Making	<ul style="list-style-type: none"> • This section should be broadened to encompass a wider range of (sub)watershed planning recommendations and implementation tools that are (or can be) outside of municipal policy and land use planning, including operations and maintenance, enforcement, ecosystem restoration, and land securement. • Page 123 / 124 acknowledges the support the Province has made with respect to stewardship, but it should also acknowledge the long-standing support from municipalities and conservation authorities to agricultural stewardship initiatives like the Rural Water Quality Program and other clean water programs. • Reference to 'sharing data' should be backed up by recommending municipalities have policies to ensure data supporting watershed/subwatershed plans are open, accessible, and public.
8 Monitoring & Adaptive Management	<ul style="list-style-type: none"> • Pg. 126 – The description of monitoring components is unclear and not reflective of current frameworks, which more commonly refer to objectives (e.g., improve water quality), indicators (e.g., concentration of total phosphorus – one example of a parameter), and targets (the desired state of the indicator). Indicators generally are grouped into indicators of stress, response and conditions. Indicators of "implementation effort" also may be used (e.g., # of stormwater facilities installed or retrofitted). The term "performance monitoring" is generally reserved for performance of facilities (E.g., treatment plants,

Section	Comments
	<p>stormwater ponds).</p> <ul style="list-style-type: none"> • Pg. 129 The section on “updating watershed plans” does not provide guidance on determining when existing plans are out of date and should be updated. • Reference to monitoring should also include ‘monitoring and reporting’ as reporting is just as important as collecting the data. Monitoring should be linked back to the issues identified in the characterization section. • The section on “Communicating results” on page 129 should be more high level (i.e., not prescriptive on the tool – report cards – to be used) to reflect that communication needs and strategies should be decided locally. • The statement “ ...however watershed report cards may need some revisions to improve standardization of collection protocols and comparability of indicators between watersheds” misses the entire reason why you characterize and undertake watershed planning – to best describe the local conditions and issues. This means that standardization of indicators would not be appropriate across all watersheds as the local issues and resources for long term monitoring may not be the same.
9 Resources	
10 Abbreviated Terms	
11 Appendix A	

Grand River Conservation Authority

Report number: GM-03-18-30

Date: March 5, 2018

To: Members of the Grand River Conservation Authority

Subject: Update on Tier 3 Water Budget Studies in the Grand River Watershed

Recommendation:

THAT GM-03-18-30 – Update on Tier 3 Water Budget Studies in the Grand River Watershed be received as information.

Summary:

Since the implementation of the Lake Erie Region Source Protection program, after the Clean Water Act came into effect in 2007, four Tier 3 Water Budget studies have been initiated in the Grand River watershed to assess the sustainability of municipal drinking water supplies. These studies include the drinking water systems in the Whitemans Creek subwatershed, the Regional Municipality of Waterloo, the Township of Centre Wellington, and the City of Guelph and Township of Guelph/Eramosa. Collectively, these studies represent over a \$5 million dollar investment by the Province and local municipalities to assess municipal water quantity, both in its current state and into the future.

The overall objective of each Tier 3 Water Budget study is to determine whether a municipality is able to meet its current and planned water quantity requirements, considering increased municipal water demand, future land development, drought conditions, and other water uses.

Each of the Tier 3 Water Budget Studies completed within the Grand River watershed has followed this objective, however water quantity issues unique to each area have resulted in differing approaches applied to each study.

Report:

All Source Protection Areas in Ontario have completed either a Tier 1 (simple) or a Tier 2 (more complex) water budget study for the entire watershed.

In 2009, a regional Tier 2 Water Budget Study was completed across the Grand River watershed. This study subdivided the watershed into local groundwater and surface water assessment areas, loosely based on subwatershed delineations. Each assessment area was evaluated for its potential for low, moderate, or high stress under a variety of scenarios such as current and future municipal water takings and drought. Assessment areas that were classified as having a moderate or significant potential for stress triggered the requirement for a Tier 3 Water Budget and Local Area Risk Assessment (Tier 3 study). Tier 3 studies are detailed technical projects that measure how much water is available for municipalities now and into the future.

Tier 3 studies are structured in three phases: physical characterization, numerical model development, and risk assessment. The physical characterization provides a detailed

assessment of the subsurface geology and local aquifers which supply the municipal groundwater. Municipal water takings and other local water users are also assessed. Collectively, this provides an overall characterization of the local geology, groundwater system, and water use.

The second phase of the study involves the development of a numerical groundwater flow model. Groundwater flow models are simplifications of the complex subsurface environment yet they provide insight and information on how the groundwater flow system may respond to different stresses without the risk of long term testing in the real world.

The final phase of the study, the risk assessment, utilizes the numerical models developed in the second phase of the study to delineate water quantity-related wellhead protection areas (WHPA-Q). Intake protection zones (IPZ-Q) may also be delineated. A series of scenarios, such as increased municipal demand, future land use changes, and drought, are then applied to the model and a risk assessment, resulting in a low, medium, or significant risk level for the WHPA-Q is completed. In the case of a moderate or significant risk level, water quantity policies are developed within the WHPA-Q and IPZ-Q.

To date, four Tier 3 studies have been initiated in the Grand River watershed: in the Whitemans Creek subwatershed, the Region of Waterloo, the Township of Centre Wellington, and the City of Guelph and Township of Guelph/Eramosa. Study locations are shown on Figure 1.

Whitemans Creek Tier 3 Study

The Whitemans Creek Tier 3, initiated in 2015, is a subwatershed wide study jointly funded by MOECC and MNRF. The objective of this study is to evaluate the two municipal groundwater systems in the subwatershed: Bright and Bethel, and also evaluate drought scenarios at the larger subwatershed scale.

The Bright groundwater municipal system is located in the County of Oxford and serves the village of Bright. The Bethel system is within the County of Brant. Groundwater supplied by the Bethel system is pumped north to supply a portion of the community of Paris.

In addition to municipal water use, large portions of the subwatershed are heavily cropped for agricultural use, and therefore irrigated. Permitted agricultural water users (irrigators) in the subwatershed commonly draw water from the shallow aquifer system located in the Norfolk Sand Plain, while this shallow system also supports cold water fisheries along Whitemans Creek and its tributaries.

To address the complexities of shallow groundwater and surface water interactions in the Whitemans study area, an integrated subwatershed-wide groundwater – surface water numerical model was developed with the ability to model irrigation water use.

The Whitemans Tier 3 is currently completing the risk assessment phase and moving forward, the project will be evaluating various drought and irrigation practice scenarios and updating water quality wellhead protection areas for the municipal groundwater systems within the study area.

The results from this study and the model developed reflects the best available science and understanding of the subwatershed. The study results will be able to be used by local water managers for drought planning and land use planning, and by the staff at OMAFRA and MOECC.

Region of Waterloo Tier 3 Study

The Region of Waterloo's Tier 3 study was completed in 2014. The outcome from the study and the risk assessment resulted in a low risk level within the WHPA-Qs. This eliminated the requirement to develop water quantity-related policies within these areas.

The low risk level rating resulted from the productive overburden and bedrock aquifers in this area of the watershed. The Region also maintains a large, integrated system of over one hundred groundwater wells which are blended with surface water pumped from the Grand River, and an Aquifer Storage and Recovery System maintained at Manheim. As a result of the size and complexity of the Region's system, there is an increase in management options to the Region, and an increase in the overall tolerance of the municipal supply system.

The Region used the Tier 3 groundwater flow model to support the development of their Water Supply Master Plan to optimize their water supply system. The model is currently being used to support a local subwatershed study, hydrogeological studies for municipal supply, and siting monitoring for contaminated sites.

Township of Centre Wellington Scoped Tier 3 Study

The Township of Centre Wellington Scoped Tier 3 study was initiated in 2016. The Township's municipal supplies consist of nine groundwater wells which service the communities of Fergus and Elora.

Under the Province's Growth Plan, Centre Wellington's population is expected to approximately double by the year 2041, with most of the growth expected in Fergus and Elora. In addition to the expected growth, Nestle Waters purchased the Middlebrook well, a highly productive privately-owned well, located to the west of Elora, in 2016. Concerns were raised within the Township about potential commercial water takings at the Middlebrook well, and the future of the Township's municipal supplies, given the amount of expected population growth.

This garnered awareness at the provincial level and resulted in a Minister Environment and Climate Change request to the Lake Erie Source Protection Region to initiate the Tier 3 water budget study. The study is 'scoped' because at the time the Tier 3 study began, the Township had not started their Water Supply Master Plan and not all the information was available to assess future municipal demand.

In addition to the technical components of this study, this project has also developed a community engagement process to keep local stakeholders and Township residents updated on the study as it progresses. This is the first Tier 3 study in the province to incorporate community engagement into a project work plan.

Community engagement is being addressed through the development of a Community Liaison Group (CLG). The CLG was established to provide a forum for community members to discuss and review the study as it progresses and consists of representatives from a wide range of stakeholders including local businesses, industrial water users, commercial/communal water users, agriculture, environment, conservation, and the general public.

CLG meetings are held at regular intervals as a part of the physical characterization, groundwater model development, and risk assessment phases of the study.

In addition to CLG meetings, the GRCA is providing updates to Township Council, and have a dedicated, publically accessible project web page (www.sourcewater.ca/CW-Scoped-Tier3) containing meeting summaries, presentations, and reports.

The project is currently in the groundwater modelling phase of the study, which is being completed this spring. The risk assessment phase of this study is planned to be completed by the end of 2018.

City of Guelph – Township of Guelph/Eramosa Tier 3

The City of Guelph and Township of Guelph-Guelph/Eramosa Tier 3 study was completed in 2017, after almost a decade of technical work.

As the City of Guelph is a single tier municipality, most of the City's municipal supply wells are located within the City limits. The risk assessment portion of the Tier 3 study resulted in the City's WHPA-Q and water quantity-related intake protection zone (IPZ-Q) extending into the surrounding townships within the County of Wellington, the Municipality of Halton, and the Region of Waterloo. WHPA-Q and IPZ-Q delineations are shown on Figure 2. The WHPA-Q and IPZ-Q have been classified as having a significant risk level, which has triggered the requirement to develop water quantity related policies within these areas. Policies must address risks from consumptive water takings and reduction in recharge.

A two-pronged approach, which includes further technical work in tandem with municipal and community engagement, is being applied to develop water quantity policies, as illustrated in Figure 3.

The technical work evaluates and determines the water takings that have the greatest impact on the municipal drinking water systems. Using the Tier 3 model, risk management measures are being evaluated to determine the most effective approach for the City's and Township of Guelph/Eramosa's municipal systems. Risk management measures that will be evaluated include options such as optimized municipal pumping; water conservation, water loss management and education and outreach programs.

In parallel to the technical work, input is being sought on the development of a discussion paper on the legislated framework and policy options through an Implementing Municipalities Group (IMG) and Community Liaison Group (CLG). The IMG is comprised of municipal representatives from within the WHPA-Q and IPZ-Q. This includes the City of Guelph, Township of Guelph/Eramosa, Township of Puslinch, Township of Erin, Regional Municipality of Halton, and Regional Municipality of Waterloo. The CLG is representative of local organizations within the business, industrial/commercial/institutional (ICI) water use, agricultural, environment/conservation, and general public sectors.

The results of these two approaches will be used to help guide the development of Source Protection Plan water quantity policies within the WHPA-Q and IPZ-Q. The Lake Erie Region Source Protection Committee, working with the municipal partners, and with significant public consultation, will prepare an update to the Approved Grand River Source Protection Plan that will include the new technical work and water quantity policies. The process outlined on Figure 3 is expected to be completed by the end of 2018.

Summary

A high level overview of the issues addressed by the Tier 3 water budget studies is provided in Figure 4. The studies are expected to be completed by the end of 2018, with the results from the Whitmans, Region of Waterloo, and Guelph-Guelph/Eramosa studies to be included in the Lake Erie Source Protection Region Updated Assessment Report, which is anticipated to be available for public consultation in early 2019. The Township of Centre Wellington Scoped Tier 3 results may not be included in the updated

Assessment Report as the risk assessment portion of the study may not be completed in time for the update.

Groundwater Model Governance

The GRCA, Region of Waterloo and the City of Guelph are currently working with a consultant to explore options on how to manage and maintain the investment in the conceptual models, numeric models and the related data. This work will identify alternative approaches to ensuring that the investment in the modeling work is not diminished over time. In addition, this work will inform the three agencies on options to ensure that these tools are used in both policy development and in day-to-day decisions relating to the protection of groundwater resources.

Financial implications:

The 2018 Source Protection Program budget includes \$680,000 for Tier 3 studies. It is expected the costs associated with the source water protection Tier 3 studies in the 2018 budget will be fully funded the Ministry of Environment and Climate Change.

Other department considerations:

None

Prepared by:

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Senior Hydrogeologist

Approved by:

Martin Keller
Source Protection Program Manager

Figure 1: Tier 3 water budget study areas within the Grand River watershed.

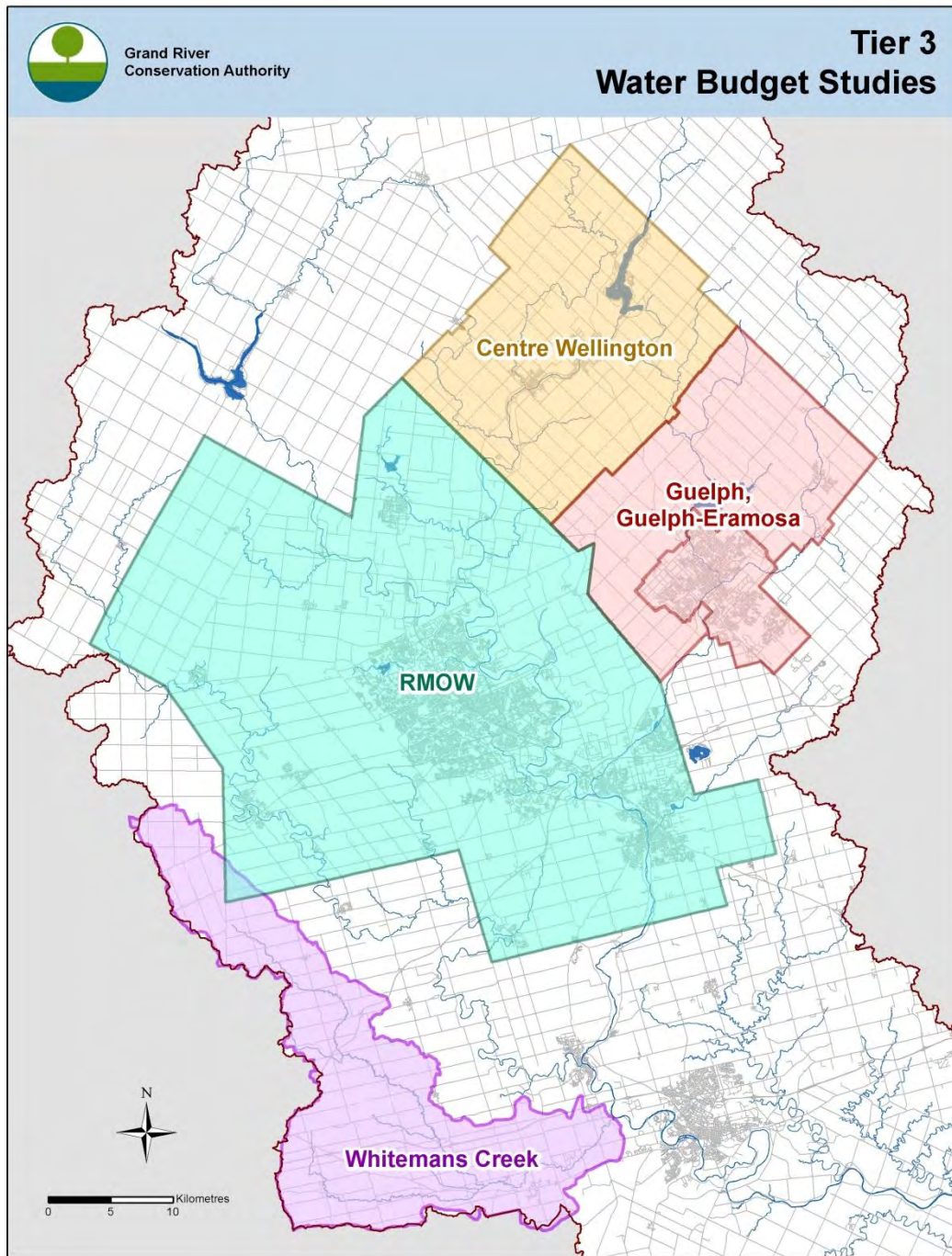


Figure 2: City of Guelph WHPA-Q and IPZ-Q locations

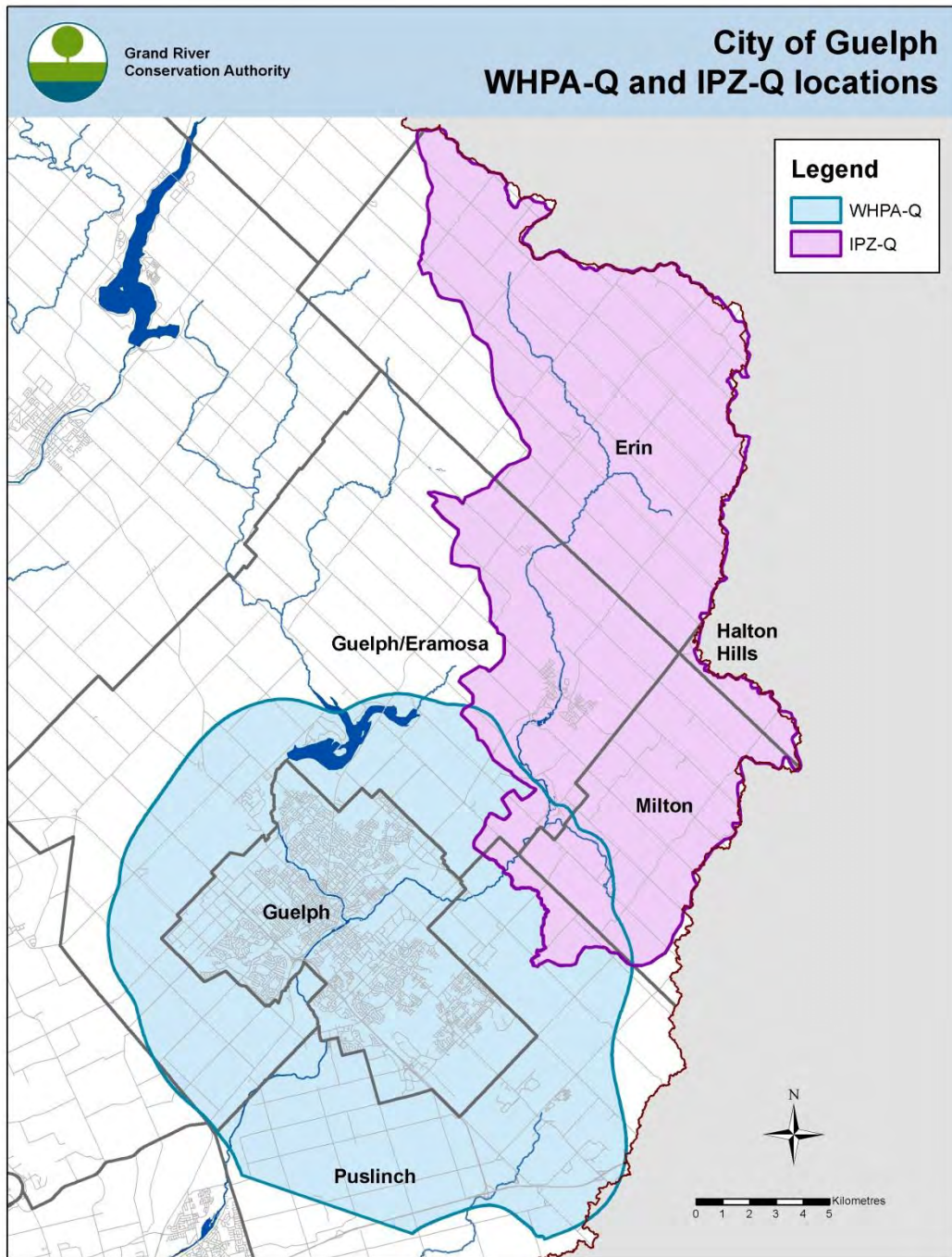


Figure 3: Approach to WHPA-Q and IPZ-Q policy development

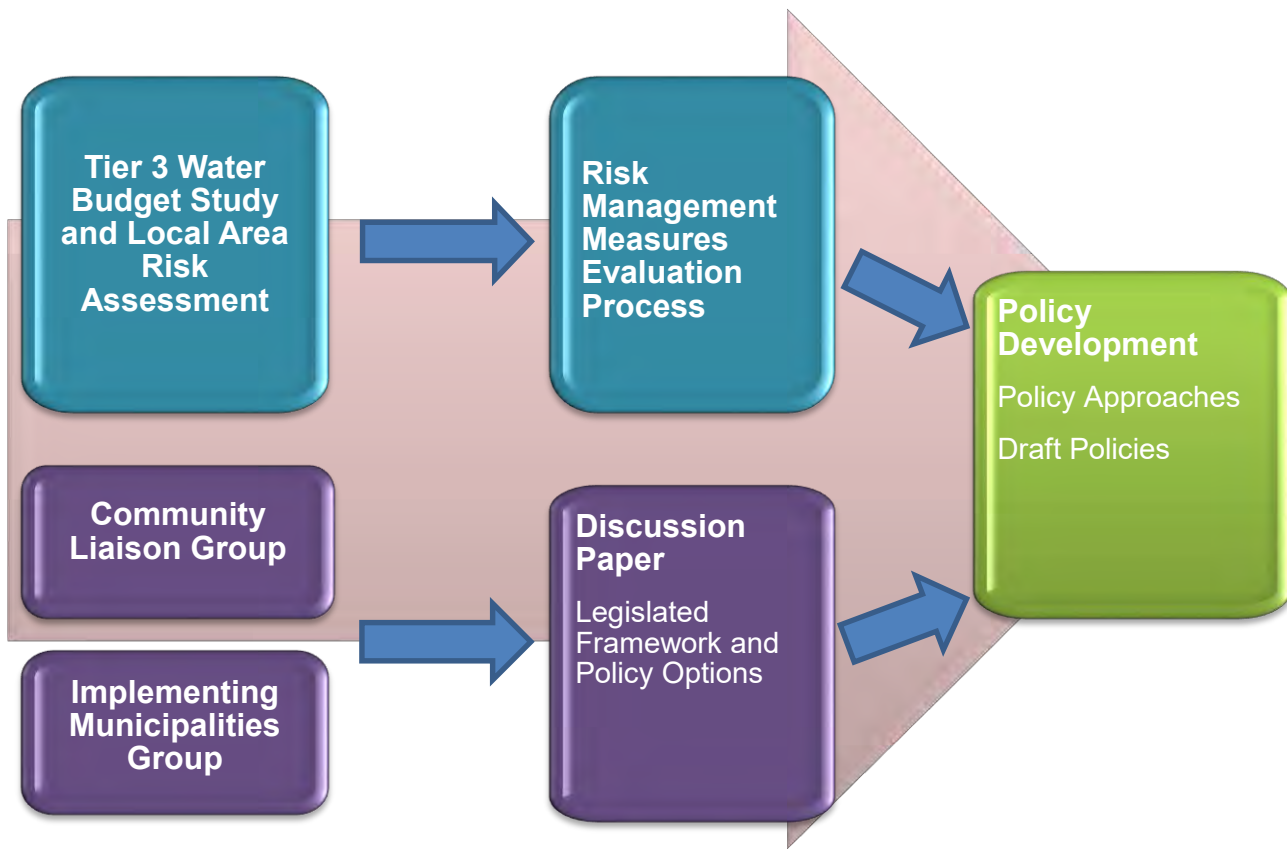
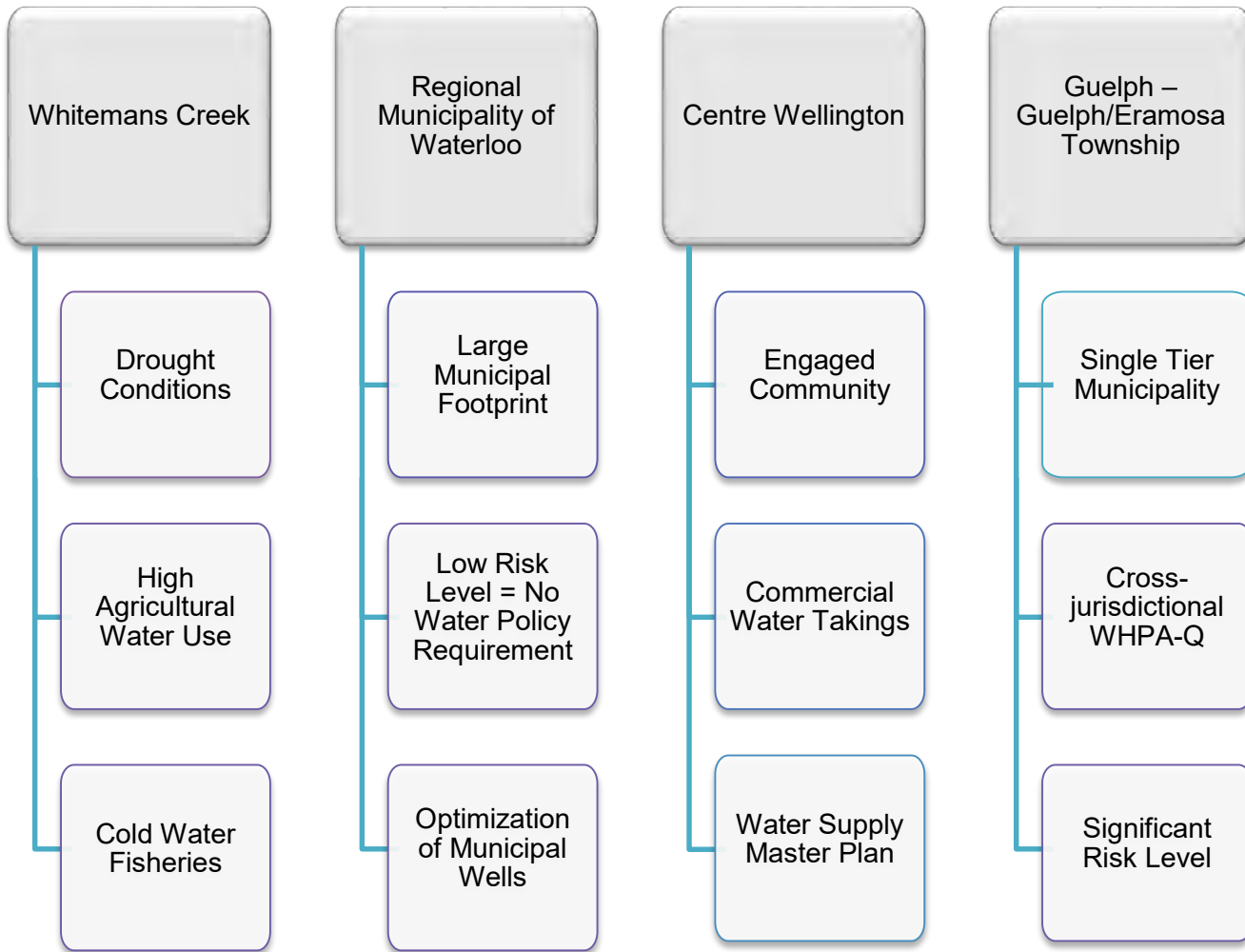


Figure 4: Summary of Tier 3 water budgets within the Grand River watershed



Grand River Conservation Authority – Report

Report number: GM-03-18-39

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Lake Erie Region Source Protection Program Update

Recommendation:

THAT Report number GM-03-18-39 – Lake Erie Region Source Protection Program Update be received for information.

Summary:

The Revised Updated Long Point Region Assessment Report and Source Protection Plan was officially approved by the Long Point Region Source Protection Authority and submitted to the Ministry of the Environment and Climate Change (MOECC) for approval in January 2018. Following submission of the Long Point Region Assessment Report and Source Protection Plan, efforts have shifted to the Grand River watershed as Lake Erie Region staff prepare to update the Grand River Assessment Report and Source Protection Plan. Updates to the Plan will incorporate water quantity study components from the Whitemans Creek, Region of Waterloo, Guelph and Guelph/Eramosa and Centre Wellington Tier 3 studies and, water quality studies aimed at updating the wellhead protection areas (WHPAs) for new or expanding drinking water systems in Brant County, the City of Hamilton, County of Oxford, Region of Waterloo, Township of Southgate and Guelph/Eramosa Township.

Lake Erie Region staff have recently provided comments to the MOECC regarding proposed regulation changes to the *Clean Water Act, 2006* and the *Safe Drinking Water Act, 2002*, continue to support implementing bodies through regular the Lake Erie Region Source Protection Plan Implementation Working Group (IWG) meetings, and are preparing to submit the first Catfish Creek and Kettle Creek Annual Progress Reports and Annual Progress Reporting Supplemental Forms to the MOECC. With the Lake Erie Region Source Protection Committee now at its full member compliment, Lake Erie Region staff also plan to re-evaluate the need for a committee succession plan.

Report:

This report provides an overview and status update of the work done in the Lake Erie Source Protection Region to protect current and future sources of municipal drinking water as part of the Source Protection Program under the *Clean Water Act, 2006*. The Lake Erie Source Protection Region is comprised of the Kettle Creek, Catfish Creek, Long Point Region, and Grand River watersheds. All four Source Protection Plans, one for each watershed, are approved and in effect.

Long Point Region Watershed Update

On January 10, 2018, the Long Point Region Source Protection Authority approved the submission of the Revised Updated Long Point Region Assessment Report and Source Protection Plan to the MOECC. The submission marks the culmination of two years of work by the Source Protection Committee, municipalities, and Lake Erie Region staff to update wellhead protection areas for new wells or where new information became available, undertake a water budget study for Simcoe in Norfolk County, including water quantity policy development, and address elevated nitrate levels in the wells for the Village of Richmond (Municipality of Bayham) drinking water system. A timeline for provincial plan approval has not been provided by the Ministry.

Grand River Watershed Update

With the recent submission of the Revised Updated Long Point Region Assessment Report and Source Protection Plan, the focus has now shifted from Long Point Region to the Grand River. Under the direction of the Lake Erie Region Source Protection Committee (SPC), Lake Erie Region staff will be working towards updating the Grand River Assessment Report and Source Protection Plan over the next several months as technical studies are completed and new water quantity policies developed.

The current timeline anticipates that an Updated Grand River Assessment Report and Source Protection Plan will be presented to the Lake Erie Region Source Protection Committee by end of 2018. Formal public consultation, release of the documents to the Grand River Source Protection Authority and submission to the MOECC is anticipated in early 2019. Affected municipalities will be requested to endorse the amendments prior to formal public consultation.

Water Quantity

One of the main reasons for updating the Grand River Source Protection Plan is to include the water quantity components which were not ready to be included in the currently approved plan. Tier 3 Water Budget studies have been undertaken or are currently ongoing in four areas of the Grand River watershed, including Whitemans Creek, Region of Waterloo, Guelph and Guelph Eramosa, and Centre Wellington. These studies represent a major investment and effort to better understand the sustainability of the municipal drinking water source from a water quantity perspective. The Centre Wellington and Guelph-Guelph/Eramosa studies are each led by a multi-agency project team comprised of conservation authority, municipal, and provincial staff. A major component is also the establishment of a community liaison group (CLG) for each of these studies to ensure the local community and stakeholders are involved. The numerical models developed as part of these studies reflect the most up to date technical and scientific understanding of municipal water supplies in the study areas and will provide an invaluable tool for the province, municipalities and conservation authorities to make informed decisions for managing water quantity. Report GM-03-18-30 - Update on Tier 3 Water Budget Studies in the Grand River Watershed provides a more detailed update of the Water Budget studies in the Grand River watershed.

Water Quality

In addition, there are a number of studies aimed at updating the wellhead protection areas (WHPAs) for new or expanding drinking water systems, and where new information has become available, e.g., through the Tier 3 models. These studies include:

- St. George (Brant County) and Lynden (City of Hamilton) development of Wellhead Protection Areas (WHPA) and Vulnerability and Threats Assessment for new wells
- Dundalk (Township of Southgate) development of WHPA and Vulnerability and Threats Assessment for new wells
- Bethel (Brant County) update WHPAs and vulnerability assessment for existing wells based on new information available
- Bright (County of Oxford) update WHPAs and vulnerability assessment for existing wells based on new information available
- Hamilton Drive and Rockwood (Guelph/Eramosa Township) update WHPAs and vulnerability assessment for existing wells based on new information available
- Region of Waterloo update to WHPAs and vulnerability assessment based on the Region of Waterloo Tier 3

Proposed Regulatory Changes

The MOECC recently posted two proposed regulation changes on the Environmental Registry, both of which closed on February 20, 2018. EBR #013-1839 proposes amendments to O. Reg. 287/07 – “General” under the *Clean Water Act, 2006* (CWA), primarily the formal addition of liquid hydrocarbon pipelines to the list of prescribed threats in the regulation that need to be assessed as part of the source protection program. Liquid hydrocarbon pipelines are already included in the Source Protection Plans in the Lake Erie Region following provincial approval of a local threat request. The proposed regulation amendments would also include the addition of other types of minor changes to Source Protection Plans that do not need Minister approval, such as the removal of wellhead protection areas where the wells have been properly decommissioned. Lake Erie Region staff are generally supportive of the proposal, and provided comments to the MOECC.

EBR #013-1840 proposes a new regulation under the *Safe Drinking Water Act, 2002* that would put in place requirements for municipalities to ensure that certain work under the CWA is being completed before they could apply for a drinking water works permit for new or expanded drinking water systems. Lake Erie Region staff are concerned about the potential implications this proposal may have for municipalities with large integrated urban systems with more frequent infrastructure changes and the associated challenges with undertaking the necessary source protection work prior to the drinking water works permit application. Lake Erie Region staff provided comments to the MOECC and the concerns are being discussed with Ministry staff.

Partner Meetings

With approved source protection plans in effect implementation support is one of the mandated tasks under the program funding agreement. In the Lake Erie Region, plan implementation is primarily a responsibility of municipalities and provincial ministries. The role of the Grand River Source Protection Authority as the lead authority in the Lake Erie Region is to support implementing bodies, i.e., municipalities so they can best do their work. Lake Erie Region staff continue to provide support to municipalities through Lake Erie Region Source Protection Plan Implementation Working Group (IWG) meetings as the main vehicle for plan implementation support. The working group is focusing on data management, collaborative approaches to education and outreach initiatives, and other aspects that help municipalities implement the source protection plans.

Annual Progress Reporting

Lake Erie Region is required to submit to the MOECC its first Catfish Creek and Kettle Creek Annual Progress Reports and Annual Progress Reporting Supplemental Forms by May 1, 2018; Grand River and Long Point Region reporting requirements are due May 1, 2019.

Annual Progress Reports are compiled by using annual reporting data that has been submitted to staff by municipalities, Risk Management Officials (RMOs), and provincial ministries on February each year since plan approval, as required by regulation. These reports cover and capture the source protection work undertaken by these agencies in the previous calendar year.

To facilitate the preparation and submission of annual progress reporting material to the Province, a protocol has been established and endorsed by the Lake Erie Source Protection Region Management Committee (LERMC) (see attachment for LERMC report 17-01-03).

Draft Annual Reports for each watershed are presented to the Lake Erie Region Source Protection Committee for their comment, finalized and released to the respective Source Protection Authority for their endorsement and submission to the MOECC. The first Annual Progress Reports for the Grand River watershed will be developed next year, presented to the SPC, and released to the Grand River Source Protection Authority in April 2019.

SPC Member Succession

In 2016 regulation governing the Source Protection Committees (SPC) was amended to allow for increased flexibility with regard to committee size and members terms of appointments. The Lake Erie Source Protection Region Management Committee at that time decided against changing the size of the SPC for the near future and felt that securing member replacements for recently resigned members should be the priority.

Since 2016, three new members have been appointed: one from the agriculture sector, one municipal and one public sector. As a result of natural turnover on the committee, Lake Erie Region staff put development of a succession plan on hold. With the committee at its full member complement, Lake Erie Region staff plan to re-evaluate the need for a SPC succession plan to balance member turnover with maintaining an experienced and knowledgeable committee. The Grand River Source Protection Authority continues to play an important role in ensuring timely appointment of members to the Lake Erie Region Source Protection Committee.

Financial implications:

The 2018 budget for the Source Protection Program is \$1,575,000. It is expected the costs associated with updates to the Grand River Assessment Report and Source Protection Plan, annual progress reporting, the IWG and SPC in the 2018 budget will be fully funded the Ministry of Environment and Climate Change.

Prepared by:

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Source Protection Program Assistant

Approved by:

Martin Keller
Source Protection Program Manager

Grand River Conservation Authority

Report number: GM-03-18-34

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Seasonal Camping Program

Recommendation:

THAT Report Number GM-03-18-34 – Seasonal Camping Program and the Seasonal Campground Operating Procedure outlined in the report be received as information.

Summary:

Seasonal camping is available at seven GRCA conservation areas. Seasonal campsites provide the public with the opportunity for extended camping experiences beyond the typical nightly or weekly stay. The seasonal campground program currently operates under the terms and conditions of a license agreement. There are however variations in how the agreement is implemented, particularly with respect to on-site storage of trailers during the off-season.

In order to provide a standardized approach to the seasonal camping program a Seasonal Campground Operating Procedure has been prepared to provide direction to GRCA staff. The procedure outlines the rules for campground use as well as the terms under which a seasonal camper is permitted to occupy a campsite for the season.

Existing seasonal campers are currently able to reserve their site for the following season. This practice makes it difficult for new seasonal campers to reserve a site. A lottery system was assessed as an alternative method of assigning seasonal campsites. While a lottery system would provide a more equitable method of assigning sites there would be considerable business risk associated with this process. It is recommended that the existing method of reserving seasonal campsites be continued but alternatives be explored to balance the number of seasonal versus nightly campsites, to make more serviced sites available to the public and to consider other forms of extended duration camping.

Report:

The Grand River Conservation Authority (GRCA) operates campgrounds at eight conservation areas. Camping is available on a nightly basis at all areas and seasonal camping is available at seven of the eight conservation areas. Seasonal campsites are typically serviced with water and hydro. At Brant Park and Elora Gorge seasonal sites with sanitary connections are also available. In some cases seasonal sites with no services are also offered to campers.

The ratio of nightly campsite to seasonal campsites varies from one conservation area to another. The number of seasonal sites at an individual conservation area has evolved over time in response to local market situations that may favour longer duration camping stays or high demand for nightly camping. Table 1 below illustrates the split between nightly and seasonal campsites at each conservation area. These numbers do not include group or youth sites.

Table 1: Nightly & Seasonal Campsites by Conservation Area (2017)

Park Name	No. of Nightly Campsites	No. of Seasonal Campsites	Total No. of Campsites	Seasonal Sites as % of Total Sites
Brant Park	182	202	384	52.6%
Byng Island	173	182	355	51.3%
Conestogo Lake	115	54	169	32.0%
Elora Gorge	362	87	449	19.4%
Guelph Lake	248	44	292	15.1%
Laurel Creek	64	42	106	39.6%
Pinehurst Lake	129	102	231	44.2%
Rockwood	105	0	105	0.0%
Total	1378	713	2091	34.1%

There are no hard and fast rules with regard to the optimum split between nightly and seasonal campsites. At Rockwood Conservation Area the demand for nightly camping, and the relatively small number of total campsites, resulted in the elimination of all seasonal camping. At other parks, such as Laurel Creek Conservation Area, the demand for nightly camping is relatively low and the provision of seasonal campsites helps to maintain camping revenues. The ratio of nightly to seasonal campsites is often a function of local supply and demand.

Trends in camping are towards larger trailers and a higher level of comfort and convenience. As a result, the demand for serviced campsites is growing. Table 2 below lists the number of serviced sites at each conservation area and the allocation of those sites between nightly and seasonal camping.

Table 2: Number of Serviced Campsites by Conservation Area (2017)

Park Name	No. of Serviced Nightly Campsites	No. of Serviced Seasonal Campsites	Total No. of Serviced Campsites	Serviced Seasonal Sites as % of Total Serviced
Brant Park	56	94	150	62.7%
Byng Island	44	101	145	69.7%
Conestogo Lake	38	51	89	57.3%
Elora Gorge	148	87	235	37.0%
Guelph Lake	74	35	109	32.1%
Laurel Creek	30	38	68	55.9%
Pinehurst Lake	68	99	167	59.3%
Rockwood	62	0	62	0.0%
Total	520	505	1025	49.3%

There is considerable variation in the ratio of nightly versus seasonal serviced campsites. Serviced campsites are expensive to develop but also generate the highest revenues. The return on investment for the creation of a new serviced site can be as little as four years. However, before new serviced campsites are created, an economic analysis of the camping program should be conducted to determine what the demand is for serviced sites and what balance between seasonal and nightly will generate the most beneficial financial return. The analysis would also assess the balance between recreational uses and environmental features. This analysis will be done as part of the conservation area business plan updates to be completed through 2018/19.

A “Seasonal Camping Update” report was presented to the General Membership at the October 27, 2017 meeting. That report outlined the status of the GRCA seasonal camping program, details related to current operational practices and the importance of the seasonal camping program for the financial stability of the conservation areas. Table 3 below shows revenues from nightly (including group sites) and seasonal camping for each conservation area.

Table 3: Camping Revenue by Conservation Area (2017)

Park Name	Nightly Camping Revenue	Seasonal Camping Revenue	Total Camping Revenue	Seasonal Revenue as % of Total
Brant Park	\$322,544.78	\$383,104.74	\$705,649.52	54%
Byng Island	\$329,678.85	\$362,990.78	\$692,669.63	52%
Conestogo Lake	\$119,737.49	\$107,598.93	\$224,336.42	48%
Elora Gorge	\$543,867.57	\$183,654.87	\$727,522.44	25%
Guelph Lake	\$345,276.54	\$90,676.02	\$435,952.56	21%
Laurel Creek	\$117,018.51	\$82,810.70	\$199,829.21	41%
Pinehurst Lake	\$289,368.05	\$209,718.53	\$499,086.58	42%
Rockwood	\$382,051.47	\$0	\$382,051.47	0%
Total	\$2,449,543.26	\$1,420,554.59	\$3,870,097.85	37%

Seasonal Campground Operating Procedure

Seasonal campers enter into a licence agreement with the GRCA for the term of the camping season. The licence agreement contains terms and conditions that govern the use of the campsite and stipulate the responsibilities of both the camper and the GRCA. The “Rules, Regulations and Campsite Standards” that the camper is expected to follow are included as a Schedule to the agreement.

While a consistent set of rules and standards are outlined in the licence agreement, exceptions have been permitted at individual conservation areas in response to local conditions. One purpose of this report is to present operating procedures, and recommendations for further action, with the goal of achieving a more consistent approach to the seasonal camping program.

Seasonal Campground Operating Procedures have been prepared to provide direction to GRCA staff and to provide seasonal campers with a clear understanding of the campground rules. The draft operating procedures are attached as Appendix A to this report.

The terms and conditions contained within the current licence agreement form the basis for the operating procedure. GRCA staff reviewed the seasonal camping policies and procedures from provincial park systems, conservation authorities and a number of

private campgrounds to identify best practices that could be incorporated into the GRCA's procedures. The major changes proposed in the new operating procedures are as follows:

- Requirement for all trailers to be licensed and insured for road use
- Clarification that on-site storage of camping units is not permitted unless specifically authorized by the GRCA
- Waiting lists will be maintained for a single season
- Sites that are vacant for the following season will be assigned through a lottery system
- Added rules prohibiting the verbal or physical abuse of GRCA staff
- Requirement for written approval for the addition of structures to the site and a formalized process for issuing that approval
- Further clarification regarding acceptable structures including size and manufacture
- Added rules prohibiting the planting of non-native plant species
- Added requirements for contractors working on seasonal sites to provide proof of insurance and WSIB coverage

A Seasonal Camping Guide has also been prepared to provide campers with a plain language version of GRCA's Seasonal Campground Operating Procedure. The guide also contains general campground information, the seasonal camping application form, the fee schedule and the permission form for adding equipment or structures to a campsite.

Off-season Storage of Trailers on Campsites

The existing seasonal camping licence agreement requires that trailers be removed from campsites at the end of the camping season. Park specific exemptions have been made to allow off-season storage of trailers on campsites at Byng Island, Elora Gorge, and Pinehurst Lake Conservation Areas. This practice will be discontinued at Elora Gorge in 2018 in conjunction with ongoing servicing upgrades and proposed new campsite development.

In the past trailers were removed from sites each year at Byng Island Conservation Area. Byng Island has heavy, clay soils and the site often remains wet well into the camping season. The movement of trailers onto the sites in the spring resulted in damage to the internal road system and to the individual campsites. In order to avoid expensive repairs, approval was granted to allow trailers to remain on the seasonal campsites year round.

From an operations perspective the preference is that all trailers be removed from the sites at the end of each year. This provides GRCA staff with the opportunity to make necessary repairs or upgrades to the campground without having to work around trailers. However there may be situations, such as at Byng Island, where there are technical reasons for allowing trailers to remain on the campsite during the off-season.

The seasonal campgrounds at Byng Island and Pinehurst Lake Conservation Areas will be assessed to determine if there are legitimate technical reasons to exempt those campgrounds from the requirement to remove trailers during the off-season. Approval for individual exclusions would be made by the Chief Administrative Officer.

If no technical rationale exists, or if the exemption is not approved, a transition period would be provided to allow existing seasonal campers time to make alternative

arrangements for their trailers. After the transition period all trailers would be removed annually.

Seasonal Campsite Reservations

The current practice has been to allow existing seasonal campers to reserve their site for the following season if they are in good standing with the GRCA (i.e. no rule infractions and are current with fees). This practice is consistent with the seasonal camping programs at all conservation authorities and is the predominant practice at the private campgrounds reviewed by staff. Where a seasonal campsite is not reserved for the following season by the current site holder that site is offered to the general public either on a first-come, first-served basis or to individuals on a waiting list.

Waiting lists are currently maintained at the conservation areas shown below. For most conservation areas the wait list size far exceeds the number of sites that would reasonably come available over a short number of years. In Table 4 below Byng Island maintains a very large wait list. The size of the wait list is partially a reflection of the desirability of the area but also a function of the current operating practice where camping units are allowed to remain on the site during the off-season. This is a significant advantage to a seasonal camper as it reduces the inconvenience and cost of moving the trailer twice per year. The operating procedure proposes that wait lists be maintained for a single year and that wait list size limits be considered.

Table 4: Current Seasonal Campsite Wait Lists

Conservation Area	Wait List Size
Brant Park	54
Byng Island	315 – for serviced seasonal sites 59 – for non-serviced seasonal sites
Conestogo Lake	0
Elora Gorge	6
Guelph Lake	0
Laurel Creek	23
Pinehurst	35
Rockwood	No Seasonal Sites

Concerns related to the equity of the existing practice for assigning seasonal campsites were raised at the October 2017 meeting of the General Membership. It was suggested that there should be an equal opportunity for all campers to reserve a seasonal site. One way to achieve this would be through a lottery system as is used in some provincial park systems and municipal campgrounds.

A typical lottery process requires campers to apply for seasonal sites at the end of the camping season. The prospective camper submits an application accompanied by a deposit on the reservation. The lottery is held on a predetermined date. Applicants may be required to be present during the lottery to select their sites. Alternatively, a lottery may be held without the public present and sites assigned based on a submitted list of preferred sites. If the applicant is not selected for a site, or declines the site assigned, they are removed from the lottery and their deposit is returned.

Both the existing system of reserving campsites and a lottery system have advantages and disadvantages. The table below presents the advantages and disadvantages for each option as identified by conservation area staff.

Table 5: Advantages and Disadvantages of Campsite Reservation Options

	Advantages	Disadvantages
Existing System	<ul style="list-style-type: none"> • Fewer compliance issues • Reduced demand on conservation area staff • Places the GRCA on the same competitive footing as other conservation area and private campgrounds. • Provides financial certainty for a significant portion of the annual revenue budget • Less impact on infrastructure compared to nightly campers • Campers assist staff by identifying and reporting problems. 	<ul style="list-style-type: none"> • Relatively low number of sites available each year for new campers. • More requests for campsite additions such as decks, sheds & gardens.
Lottery System	<ul style="list-style-type: none"> • Open competition for available seasonal campsites. Eliminates having individual campers monopolize a campsite for an extended period of years. • Fewer demands for campsite additions such as decks, sheds & gardens 	<ul style="list-style-type: none"> • High risk of losing business to other campgrounds where campers can reserve the same site annually • Time consuming and increased business cost to conduct lottery system process (713 seasonal sites) • Increased staff time required for campground security and enforcement Significant dissatisfaction from current seasonal campers could impact public image

The implementation of a lottery system for assigning seasonal campsites would provide an equitable and open process. However, it would also involve a high degree of business risk in terms of lost customers and reduced revenues. Seasonal campers desire a location that they can count on year after year as their “home away from home”. A lottery system removes that locational certainty and would undoubtedly make seasonal camping in a GRCA conservation area less attractive.

Based on the advantages and disadvantages of the two campsite reservation options it is staff’s recommendation that the existing system of reserving campsites be continued. However, measures can be taken within the existing system to improve access to serviced campsites and to provide longer duration camping opportunities.

- 1) Complete a financial analysis of the seasonal campgrounds to identify where the number of seasonal campsites could be reduced to make more serviced sites available for nightly camping without impacting conservation area revenues;
- 2) Explore the potential for designating additional campsites for longer duration stays such as monthly rentals; and

- 3) Offer unreserved seasonal sites to the general public through a lottery system rather than on a first-come, first-served basis.

It is proposed that the new Seasonal Campground Operating Procedure will come into effect for the 2019 camping season. This will provide time to communicate the changes with the existing seasonal campers and to put new administrative processes in place.

Financial implications:

Seasonal camping generated \$1.42 million in 2017 which was approximately 37% of the total camping revenues. This provides a steady financial foundation for the overall conservation area operations budget as this amount is not weather dependent and is consistent from year to year.

Other department considerations:

The Communications department will provide assistance with the messaging of the proposed changes, and for the format and content of the Seasonal Camping Guide.

Prepared by:

Pam Walther-Mabee
Manager of Conservation Areas

Approved by:

Joe Farwell
Chief Administrative Officer

Dave Bennett
Director of Operations

APPENDIX A: Seasonal Camping Operating Procedure

Introduction

The Grand River Conservation Authority operates fee-for-use conservation areas that provide a range of recreational opportunities including camping. Camping permits are issued based on the duration of stay which may include nightly, weekly, monthly or seasonal camping. Seasonal camping is currently provided at the following conservation areas:

- Brant Park Conservation Area
- Byng Island Conservation Area
- Conestoga Lake Conservation Area
- Elora Gorge Conservation Area
- Guelph Lake Conservation Area
- Laurel Creek Conservation Area
- Pinehurst Lake Conservation Area

Seasonal camping licenses grant the right to occupy a specified campsite for the period listed on the permit which is generally from May 1st to October 15th. Seasonal campsites are typically serviced with water, hydro and, in some cases, sanitary services. Seasonal campsites may however be provided in some locations with reduced or no services.

Intent

The intent of the Seasonal Campground Operating Procedure is to provide guidance to Park Superintendents in the operation of the seasonal camping program and to balance visitor demand for extended stay camping opportunities with campground operational requirements.

Goals

Through its conservation area operations, the Grand River Conservation Authority has the following goals and objectives for the seasonal camping program:

- To connect people with the environment through outdoor experiences.
- To ensure that procedures are in place to conserve the natural environment within seasonal campgrounds.
- To discourage activities that may negatively impact on the visitor experience for seasonal campers and other conservation area visitors; and
- To establish policies and guidelines that contributes to a positive camping experience that will allow the GRCA to remain competitive with other seasonal campground providers.

Definitions

Camping Season The camping season is typically from May 1st to October 15th. The exact dates will be confirmed on an annual basis and may be adjusted to align with calendar days of the week.

Camping Unit A camping unit may consist of a tent, tent-trailer, camper-truck, camping trailer, fifth-wheel trailer or motor home.

Off-Season The off-season is defined as the day after the close of the camping season to the day before the opening of the next camping season.

GRCA Seasonal Campground Procedures

General Requirements

- 5.1 The GRCA reserves the right to designate those sites that will be made available for seasonal camping.
- 5.2 Occupants of seasonal campsites must maintain a separate, permanent residence.
- 5.3 Permission to occupy a GRCA campsite for the duration of a camping season requires the payment of the applicable fee. Fees for individual sites are based on the service type and site amenities. Fees are determined annually by the GRCA General Membership.
- 5.4 Seasonal campers must enter into, and abide by the terms and conditions outlined in, the Seasonal Camping License Agreement.
- 5.5 Seasonal camping licenses are subject to the same Conservation Area rules that apply to regular nightly, weekly or monthly camping permits.
- 5.6 Payment in full for the seasonal campsite is due upon occupancy of the site or May 15th whichever date comes first. Missing this deadline without notifying the Park Superintendent will result in cancellation of the campsite reservation. If an extension is granted by the Park Superintendent a late fee will be applied. Failure to pay fees by May 30th will result in cancellation of the campsite reservation.
- 5.7 The GRCA may require structures and equipment to be removed from the campsite at any time to facilitate campsite maintenance.
- 5.8 Seasonal camping permits are neither transferrable nor refundable. Renting, subletting or assigning camping units, camping privileges or campsites is not permitted.
- 5.9 Insurance and Trailer Licence – Proof of insurance for the camping unit must be provided to the Park with the seasonal camping application. All camping units are required to be licenced and plated for road use by the appropriate provincial ministry.
- 5.10 No refunds will be issued when ground conditions, capital improvements or other reasons beyond the control of the GRCA prevent occupancy of the campsite between May 1st and May 15th. If occupancy is delayed beyond May 15th partial refunds may apply.

Seasonal Campsite Reservations

- 5.11 Seasonal campers may apply to reserve at campsite for the next camping season by completing the Seasonal Campsite Licence Application form. Applications must be accompanied by a deposit fee. Payment of the deposit fee does not constitute acceptance of the reservation.
- 5.12 All Seasonal Campsite Licence Applications must be approved by the Park Superintendent or GRCA designate prior to entering into a Seasonal Camping Licence Agreement.
- 5.13 Cancellations of seasonal camping reservations must be made in writing to the attention of the Park Superintendent. Notifications received by March 15th will be

eligible for a refund of the deposit less an administrative fee. No refunds of the deposit will be granted for notifications received after March 15th.

- 5.14 Existing seasonal campers will be permitted to reserve their site for the following season if they are in good standing (no rule infractions and current with campground fees) with the GRCA. A Seasonal Campsite Licence Application must be submitted, along with the applicable deposit. Applications must be received by October 1st or the campsite will be declared vacant for the following season.
- 5.15 Vacant seasonal campsites will be assigned through a lottery process. Individuals may apply to a waiting list for sites that come available during the camping season and to be considered for the lottery of vacant seasonal sites. Waiting lists will be maintained for a single season and waiting list size limits may apply.

Off-Season Storage

- 5.16 Seasonal campers wishing to store their camping unit at the conservation area must pay the applicable fee and enter into a storage agreement.
- 5.17 Sheds and decks may be permitted to remain on the campsite in the off-season at the discretion of the Park Superintendent.
- 5.18 No camping units, structures or equipment will be permitted to remain on campsites in areas that are prone to flooding or other hazards.
- 5.19 On-site storage of camping units is not permitted except where specifically authorized by the GRCA.
- 5.20 Camping units may not be used for accommodation during the off-season.
- 5.21 Seasonal campers wishing to access their camping unit during the off-season must make arrangements with the Park Superintendent.

Permitted Activities

- 5.22 Permitted activities must be in accordance with the rules outlined in the Seasonal Camping Licence Agreement, and regulations made under the *Conservation Authorities Act*, R.R.O. 1990; Regulation 106: Conservation Authority – Grand River. All other activities are prohibited in accordance with the provisions of the *Trespass to Property Act*.
- 5.23 ATV's and golf carts are not allowed in the campground or anywhere on GRCA property. E-bikes are permitted on conservation area roadways only. Use of e-bikes is prohibited on any conservation area trail system. All other power assisted, low speed vehicles are not permitted with the exception of assistive devices specifically intended to improve accessibility.

Campground Etiquette

- 5.24 Quiet Time - campground quiet time is between 11 pm and 7 am. Loud music or other noise is not permitted during this time. Indoor radios, televisions and other entertainment equipment must not be heard outside of the camping unit or negatively affect other campers.
- 5.25 Permit holders must ensure that they and others occupying the site do not interfere with quiet, peaceful use and enjoyment of conservation authority lands by other campers and park visitors. Excessive noise or disturbance is not permitted at any time. This includes fighting, yelling, playing loud music, using insulting or obscene language, drunkenness and damaging property. No detachable, external amplified speakers are allowed.

- 5.26 Conservation area personnel must be treated with respect. Verbal / physical abuse or threatening behaviour toward GRCA staff members will not be tolerated and may result in immediate eviction from the campground and termination of the licence agreement.
- 5.27 Guests to the seasonal campsite must pay the applicable admission fee to the conservation area or have a valid GRCA Membership Pass. A maximum of six (6) people are allowed to camp overnight on the campsite. The permit holder is responsible for the behaviour of their guests and will be held accountable for any infringement of the campground rules by the guest(s).
- 5.28 Campground visitors are permitted between 8 am and 9 pm daily. No new visitors will be admitted after 9 pm. Campground hours may be restricted as necessary.
- 5.29 Consumption of alcohol is permitted on the campsite only. Alcohol bans, which prohibit the possession or consumption of alcoholic beverages during a specific time period, may be implemented in the conservation area and apply to the seasonal campground.
- 5.30 No more than two (2) pets are allowed on a campsite. Pet owners must comply with local animal control bylaws (i.e. dogs must be licensed). All pets must be on leashes with a maximum length of 2 metres at all times. Pets are not allowed in washrooms, on beaches or in swimming areas. Owners must clean up after their pets. No pets shall be left unattended or be allowed to disturb other campers. Any aggressive or inappropriate behaviour by any pet will require immediate removal of the pet from the conservation area.
- 5.31 No generators may be used at any time without the written permission of the Park Superintendent. Permission will only be granted for medical reasons or other exceptional conditions.

Permitted Equipment & Structures

- 5.32 A maximum of three (3) structures are permitted on a campsite which includes the camping unit(s), dining shelter and/or shed. No permanent structures are permitted.
- 5.33 Additions or modifications to the site to build decks, sheds, plant trees etc. are prohibited unless written approval has been received from the Park Superintendent prior to any modifications being done.
- 5.34 Camping units permitted include tents, tent-trailers, camper-trucks, camping trailers, fifth wheel trailers and motor homes. Trailer size is limited to a maximum of 12.2 metres (40 feet) long by 2.6 metres (8.5 feet) wide (based on manufacturers specifications and excluding slide outs). All camping units (except tents) must be equipped with manufacturer installed tanks for potable water, grey water and black water. All camping units (except tents) must be registered, insured and display a valid motor vehicle license.
- 5.35 One (1) ground level deck or patio is permitted on each campsite. The deck, patio or combination of deck and patio must have a maximum site coverage of 18.58 m² (200 ft²) and be no more than 2.44 metres (8 feet) wide. The deck or patio must fit within the site and not encroach on green buffer spaces or other sites, be made of wood, patio stones or carpet and be aesthetically pleasing. Decks may not exceed the body length of the trailer and may not protrude past the front or rear wall of the trailer. Decks must be removable by hand (sectioned), affixed at ground level and may not be physically attached to the camping unit. No cement posts are allowed.
- 5.36 Awnings attached to the camping unit must be pre-manufactured and approved by the Park Superintendent prior to installation. Awnings may not extend beyond the

end of the trailer. Awnings must either be retractable or, if hard surface, be able to be lowered or removed easily.

- 5.37 Add-a-room structures must be made of canvas or vinyl with screening material as are commonly sold with trailers or specifically manufactured to be attached to trailers or recreational vehicles. No wooden or metal additions to the camping unit will be permitted. The add-a-room must not exceed 18.58 m² (200 ft²) in area and no more than 2.44 metres (8 feet) in width. In no case will a combination of add-a-room and deck/patio exceed 18.58 m² (200 ft²) or 2.44 metres (8 feet) in width.
- 5.38 One (1) storage shed is permitted on each site with a maximum size of 7.4 m² (80 ft²). Electricity is not permitted inside the shed either through direct wiring or extension cords. All sheds and their location must be pre-approved by the Park Superintendent.
- 5.39 Refrigerators or other electrical appliances (e.g. washer, dryer, etc) may not be kept in a shed. A limit of one (1) refrigerator outside of the camping unit is permitted. The outdoor refrigerator must be stored and used in a safe manner, on an elevated, level surface and protected from the elements. The refrigerator must be plugged directly into the trailer. The use of extension cords is prohibited. The refrigerator must be compact and restricted to a height of 90 centimetres (36 inches), a width of 60 centimetres (24 inches) and a maximum capacity of 73.75 cubic centimetres (4.5 cubic feet). All outdoor refrigerators are subject to the approval of the Park Superintendent.
- 5.40 Portable playgrounds and wading pools are not permitted.

Campsite Maintenance

- 5.41 Campsites must be kept neat and clean at all times and comply with the standards established by the Park Superintendent. Campers are responsible for grass cutting on their site.
- 5.42 The planting of gardens and other landscaping is discouraged to avoid the potential for introducing non-native species or invasive species into the natural environment.
- 5.43 The use of pesticides and herbicides is prohibited.
- 5.44 Equipment or structures that are in poor condition, deemed to be unsafe or unsightly must be removed from the site at the direction of the Park Superintendent. The GRCA has the sole discretion in determining the acceptable standard.

Campsite Servicing

- 5.45 No sewage or grey water of any kind may be dumped from the camping unit in any place except the sewage dumping station, or to sanitary sewers (if provided).
- 5.46 Camping units on campsites equipped with permanent sanitary sewer services provided by the GRCA are required to maintain a secure connection to the on-site hookup.
- 5.47 Alterations to GRCA hydro, water or sanitary services, including tampering with back flow prevention mechanisms, are prohibited.
- 5.48 Due to the Authority's desire to control water consumption, lawn watering and vehicle washing are not permitted.
- 5.49 To conserve on electricity usage campers are encouraged to manage their electricity use (e.g. turn off air conditioning when not in use).

- 5.50 All electrical power cords, hardware and connections to the on-site service panel must be in accordance with the Electrical Safety Code and are subject to inspection by the Electrical Safety Authority. Failure to meet this requirement will result in the disconnection of power to the camping unit.

Waste Disposal

- 5.51 Garbage must be bagged and deposited in the waste bins provided. Yard waste such as leaves, branches and grass clippings must not be discarded into rivers or lakes. This material must be composted whenever possible, either on the campsite or at a location provided within the park, or disposed of with the regular garbage.
- 5.52 Furniture, appliances, construction material and hazardous items must not be disposed of anywhere within the Conservation Area. Discarding these items into or beside the waste bins is prohibited.

Trees & Vegetation

- 5.53 Ropes around trees are permitted, but must be removed at the end of the season. Lights and decorations are not permitted to be affixed to trees.
- 5.54 Trees are permitted to be planted but species type, size and location must be approved by the Superintendent in writing. Once trees are planted they become the property of the GRCA and must remain on the specific site. Seasonal campers are not permitted to prune or trim trees without the approval of the Park Superintendent.
- 5.55 Seasonal campers should be aware that trees may be subject to a variety of pests, diseases and weather events which can weaken the tree structure. While the GRCA maintains an inspection program for tree hazards on all campsites, campers are encouraged to be aware of overhead hazards and to report any trees that they feel may be hazardous to the Park Superintendent.

Fires & Firewood

- 5.56 The use of chainsaws is not permitted.
- 5.57 Gathering of firewood from Authority property is prohibited. Unsightly wood piles or wood cutting on site is not allowed. Wood pallets or skids may not be used as firewood. Firewood is not permitted to be brought in from outside the local area to reduce the spread of invasive species.
- 5.58 Fires must be contained within an approved fire pit and under control at all times. Fires must not be left unattended.
- 5.59 In the event of a fire ban, all seasonal campers must comply with the order of the Fire Chief or Fire Marshall. Failure to do so could result in fines levied by the Fire Chief or Fire Marshall and/or eviction from the conservation area.

Contractors

- 5.60 Contractors working on seasonal campsites or camping units must be registered with the gatehouse at least 24 hours prior to arrival at the site. The Park Superintendent must be provided with the name of the company, a brief description of the work being performed and the expected date / time of arrival at the conservation area.

- 5.61 Prior to being granted entry to the conservation area the contractor will be required to provide the Park Superintendent with proof of adequate liability insurance and WSIB coverage.
- 5.62 In the case where emergency repairs are necessary the licensee must make all reasonable efforts to contact the Park Superintendent or Assistant Superintendent to let them know that a contractor will be on-site.

Grand River Conservation Authority

Report number: GM-03-18-31

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: 2018 Road Surface Treatment Tender Results

Recommendation:

THAT Grand River Conservation Authority award the tender for the 2018 road surface treatments to Cornell Construction Limited of Brantford, Ontario up to the amount of \$210,050.05 including HST.

Summary:

N/A

Report:

Grand River Conservation Authority (GRCA) constructs and maintains approximately 146 kilometres of paved roadways and 11.6 hectares of paved parking lots. Park roads and cottage lot roads are heavily used during the operating season and it is necessary to ensure that these roads are maintained to provide safe driving surfaces for GRCA patrons.

GRCA roads are maintained to provide an appropriate driving surface in keeping with the nature of the areas that the roads serve. Each year deteriorated portions of roadway are leveled and compacted. This work is completed using either in-house resources or through the use of external contractors. Once the road base has been prepared the road is resurfaced using a combination of emulsified asphalt and aggregate to form a paved surface. Application of this surfacing material requires specialized equipment and there are very few companies that specialize in this type of work.

The tender for the 2018 road surface treatments was publicly advertised on the Biddingo electronic procurement website. One complete tender package was submitted, although the Biddingo website lists ten registered document takers. In previous years, typically only one or two tenders have been received. The tender package was opened 1:00 p.m. on March 9, 2018 at the GRCA Administration Centre. The tender opening committee consisted of Joe Farwell, COA, David Bennett, Director of Operations, and Paul Lucier, Capital Projects Coordinator.

The results of the tender process are shown in Table 1:

The results of the tender process are shown below:

Table 1: Road Surface Treatment Tender Results

Contractor Name	Tender Amount	HST	Total Tender Amount
Cornell Construction Limited	\$185,885.00	\$24,165.05	\$210,050.05

The bid from Cornell Construction Limited meets all of the requirements outlined in the tender package. This company has successfully completed the annual road surface treatment contract for the GRCA in previous years, including 2014, 2015, and 2016. The unit prices tendered by Cornell Construction Limited are similar to those provided in 2016. As a result, it is recommended that the tender for the 2018 road surface treatment be awarded to Cornell Construction Limited, in the amount of \$210,050.05 including HST.

Financial implications:

Funding for road resurfacing is included in both the Conservation Area Capital and Property (Cottage Lot) budgets. The amount tendered by Cornell Construction Limited is within the amount budgeted for this purpose.

Other department considerations:

N/A

Prepared by:

Dave Bennett
Director of Operations

Approved by:

Joe Farwell
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-03-18-32

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Office Cleaning Contract – 2018-2021

Recommendation:

THAT the Grand River Conservation Authority award the Office Cleaning Services Contract to Corvin Building Maintenance Limited of Toronto, Ontario in the amount of \$121,691.95 including HST for the term of May 1, 2018 to April 30, 2021.

Summary:

N/A

Report:

Janitorial and cleaning maintenance of the Grand River Conservation Authority (GRCA) Administration Centre is contracted with an external company for a three year term. The current contract expires on April 30, 2018. As a result it is necessary to retender these services for the three period beginning on May 1, 2018 and ending on April 30, 2021. The contract covers the 32,000 sq. ft. office building and does not include any of the other facilities at the 400 Clyde Road, Cambridge location.

Tenders for the cleaning contract were publicly advertised on the Biddingo electronic procurement website. Seven complete tender packages were submitted by the close date and were opened at 1:00 p.m. on March 9, 2018. The tender opening committee consisted of Joe Farwell, CAO; David Bennett, Director of Operations; and Paul Lucier, Capital Projects Coordinator. The results of the tender process are shown in Table 1.

Table 1: Office Cleaning Tender Results

Contractor Name	Tender Amount	HST	Total Tender Amount
Corvin Building Maintenance Ltd.	\$107,691.99	\$13,999.96	\$121,691.95
Cheema Cleaning Services Ltd.	\$122,004.00	\$15,860.52	\$137,864.52
GDI Services (Canada) LP	\$138,401.89	\$17,992.25	\$156,394.14
SQM Janitorial Services Inc.	\$141,000.00	\$18,330.00	\$159,330.00
Power Cleaners	\$149,343.60	\$19,414.67	\$168,758.27
Silver Maple Maintenance	\$155,844.00	\$20,259.72	\$176,103.72
Domclean Ltd.	\$194,112.00	\$25,234.56	\$219,346.56

The bid from Corvin Building Maintenance Limited was the lowest tendered bid and meets all of the requirements outlined in the tender package. It is recommended that the Office Cleaning Services Contract for 2018-2021 be awarded to Corvin Building Maintenance Limited, in the amount of \$121,691.95 including HST.

Financial implications:

The amount tendered by Corvin Building Maintenance Limited represents an average annual cost of \$40,563.98 which is slightly lower than the last contract. The contract amount for 2018 is within the amount budgeted for this purpose.

Other department considerations:

N/A

Prepared by:

Dave Bennett
Director of Operations

Approved by:

Joe Farwell
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-03-18-33
Date: March 23, 2018
To: Members of the Grand River Conservation Authority
Subject: 2018 Loader Tractor Tender Results

Recommendation:

THAT Grand River Conservation Authority award the tender for the purchase of two (2) 30.7 kW (41.2 HP) PTO four wheel drive tractors with cab and front loader attachments to Premier Equipment for a total amount of \$106,147.02 (excluding HST).

Summary:

N/A

Report:

The Grand River Conservation Authority (GRCA) has 13 loader tractors in the fleet. These are distributed amongst the conservation areas, Burford nursery and Central Services. The effective life span for a tractor in the past was 20-25 years with a good maintenance program and in some cases could last much longer. Recent experience with newer tractors however suggests that the useful life has decreased to approximately 10-15 years.

Many of older GRCA tractors, as well as many of the more recent purchases, will be due for replacement in the next ten years. Motor Pool staff are proposing to replace two tractors per year over the next four years and then purchase one replacement tractor per year after that. The approved 2018 budget for motor pool included the replacement of the following tractors:

Unit No.	Unit to Replace	Age
M4046	Loader Tractor (Elora Gorge)	32 years
M4025	Loader Tractor (Rockwood)	16 years

A number of the tractors that have been purchased over the past ten years have had maintenance problems with frequent "out of service" issues and difficulty in accessing replacement parts. In addition, feedback from the users indicates that the tractors may be undersized for the tasks that they are being used for. As a result the tractor specifications have been revised to require technical features that will better meet the operational needs of the users and would minimize long term maintenance costs.

The 2018 Loader Tractor Tender was publicly advertised on January 26, 2018 on the Bidding electronic procurement website. Four bid submissions were received by the closing date of February 5, 2018. The tender opening committee consisted of Dave Bennett, Director of Operations, Sonja Radoja, Manager of Corporate Services, and Mark Slade, Supervisor of Central Services. The tender results are summarized below:

Dealer	Bid Amount (HST excluded)	Ranking	Met Specifications and Requirements
Coleman Equipment	\$102,956.00	3	no
Connect Equipment	\$93,303.00	4	no
Premier Equipment	\$106,147.02	1	yes
Stratford Farm Equipment	\$81,500.00	2	no

Three of the four bidders, including the low tender, did not meet the minimum specifications and requirements of the tender. Specifications that were not met included engine displacement, power take-off horsepower lower than specified, engine compartment not sealed, hydraulic capacity lower than specified as well as a number of other requirements. Post-tender it was confirmed with each of the bidders that there were tractors in their product line that could better meet the specifications in the tender. However, the various dealers chose to submit models that did not meet the specification but were less expensive models.

The lowest bidder, which met the required specifications, was Premier Equipment. It is recommended that the tender be awarded Premier Equipment at a bid price of \$106,147.02 (HST excluded).

Financial implications:

The replacement of these tractors was included in the 2018 Motor Pool Capital budget. The total cost of \$106,147 can be accommodated within the amount allocated in the 2018 budget. The units being replaced will be disposed of through public auction. Proceeds from the public auction will be transferred to the Motor Pool reserve.

Other department considerations:

None.

Prepared by:

Dave Bennett
Director of Operations

Approved by:

Joe Farwell
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-03-18-37

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: February 2018 Flood Event

Recommendation:

THAT Report number GM-02-18-37 February 2018 Flood Event be received as information.

Report:

This report provides a detailed overview of the February 19th to 22nd, 2018 weather event that triggered flooding across the Grand River watershed between February 22nd and February 25th.

Summary

An unseasonably cold winter resulted in significant ice accumulation on waterways throughout the entire Grand River watershed. Two relatively short-duration weather events in mid-January caused some of this strong, thick ice to release and begin to flow downstream, only to back up, causing significant ice jams to form in the communities of Cambridge, Brantford, and Cayuga. Cold temperatures returned to the watershed in early February and caused these ice jams to lock in place.

A strong frontal system in mid-February brought warm temperatures and heavy rainfall to much of southern Ontario. Temperatures and precipitation associated with this event were expected to melt the remaining snow pack throughout the watershed and cause significant runoff into the river system. Flows in the river system were expected to increase significantly, resulting in the release of the ice jams. Due to the unpredictable nature of ice jams, the timing and force associated with the release of these jams was unknown.

The ice jam in Cambridge released suddenly and without warning during this weather event causing significant infrastructure damage and flooding downstream and ultimately contributing to ice jam flooding in Brantford.

Pre-planning and early warnings were critical during this event and helped ensure municipal partners throughout the watershed were prepared and able to assist residents quickly.

Overview

Weather Events Leading to February 2018 Flood Event

A strong weather system brought rain and warm temperatures to Southern Ontario in mid-February, causing widespread flooding and severe ice jam flooding in many parts of the Grand River watershed.

A continuous spell of cold temperatures persisted throughout southern Ontario between December 7th and January 11th. Maximum daytime temperatures at Shand Dam only rose above zero degrees twice during this period. On December 19th and December 20th daytime maximums reached 3 degrees. The rest of this period saw many daytime maximum temperatures in the negative double digits and some overnight temperatures approached 30 degrees below zero.

This deep freeze combined with overcast days and limited snowfall, resulted in frozen ground conditions and the formation of strong (blue) ice throughout the watershed. As cold conditions persisted into January, the volume of ice continued to build in the river system.

A measurement of Cumulative Freezing Degree days is used to understand how cold a winter has been and helps determine the potential for the generation of river ice. Cumulative Freezing Degree days have been calculated for Shand Dam for the period 1940 to 2018. Figure 2 illustrates that by January 6th 2018, the winter of 2018 was the 11th coldest in 79 years of record. Recent winters with similar values were 1977, 1981, 1990 and 2001.

A warm front moved into the watershed on January 12th, accompanied by 30mm of rainfall and temperatures in excess of 10 degrees. The combination of warm temperatures and rainfall triggered runoff to waterways, resulting in minor flooding. Six flood warning messages were issued during this event. The ice sheet that had formed in the river began to break up with this event. Brief ice jams formed in many communities including West Montrose, resulting in minor flooding of low-lying areas and pushed large ice blocks up onto the floodplain in many areas. Some of the ice deposited in the floodplain in West Montrose and Conestogo measured up to 0.5m thick.

Three major breakup ice jams formed in the communities of Cambridge, Brantford and Cayuga. The ice jam in Cambridge formed just upstream of Parkhill Dam, held back in part, due to a thick sheet of intact ice above Parkhill Dam. The jam in Cambridge extended approximately 5km upstream from the railway bridge. While ice jams have formed in this reach in the past, an obstruction of this magnitude has not occurred since 1977. The formation of large ice in this area was also noted to have occurred in 1898 and 1928 based on the ice jam history listed in the 1982 Basin Management Plan.

In the City of Brantford an ice jam formed at the upstream end of the oxbow reach near Birkett Lane and extended approximately two kilometres upstream to the Lorne Bridge. The river slope flattens downstream of Brantford through the oxbow reach. This flatter river slope causes the river to flow very slowly and creates ideal conditions for a strong thick ice sheet to form downstream of Brantford. During the January 11th event, sheet ice from the Grand River downstream of Cambridge and from the Nith River broke up, flowed downstream and jammed against the strong ice in the oxbow near Birkett Lane. Like the Cambridge ice jam, this obstruction was comprised of very large, strong blocks of ice upwards of 0.5m thick. The Brantford gauge station indicated that this ice jam was approximately 2 metres deep. The top of the river flood wall through the dike reach is approximately 7 metres high, measured from the bottom of the channel. A similar ice jam formed through this reach in January 1996.

The reservoirs were operated to store water during the January 12th event. These operations helped reduce downstream flooding by holding back water during the event peak, and gradually releasing it once flows had begun to recede. Reservoir operations

also allowed for ice in the river system to erode and breakup without the added stress of flow from the areas upstream of the large dams. This worked effectively to reduce the impact of flooding through communities like West Montrose and Conestogo.

A flash freeze followed the January 12th melt event. Temperatures rapidly dropped below negative ten degrees. This rapid freeze resulted in ideal conditions to cause frazil ice formation in open water reaches of the river system. Frazil ice is similar in consistency to slushy wet snow and forms when cold air 'super cools' flowing open water. More frazil ice is formed in turbulent reaches of river where sheet ice is less likely to form and greater water surface area is exposed to the air. Frazil ice flowed downstream and plugged up openings in the ice jams in Cambridge and Brantford where water was previously able to flow through. This obstruction forces river flows to back-up behind the ice jam and flow over or around the blockage. Minor flooding occurred along portions of Blair Road and in the Preston area of Cambridge downstream of the King Street bridge.

More seasonable temperatures returned to the watershed toward the end of January. Another brief melt event occurred on January 23rd bringing 30 to 40mm of rainfall and maximum daytime temperatures of 4 degrees. Rainfall of this magnitude in January has only occurred twice in the 70 year history of records at Shand Dam. Similar to the event earlier in January, reservoirs were once again used to store runoff and later release it to the river, reducing the impact of downstream flooding. Another flash freeze occurred following this event causing some of the runoff and rainfall to freeze in fields on the landscape. This is referred to as water 'freezing in transit'. During a melt event, this water will end up in the river system eventually, but its volume is difficult to measure and include in flow forecast models.

Following the melt event and flash freeze in late January, another deep cold spell set in and continued through to February 15th. During this period overnight temperatures were once again in the negative double digits and daytime temperatures remained well below zero. This caused the ice jams in Cambridge and Brantford to further harden and lock in place. Some minor erosion of the frazil ice blockages occurred in Cambridge and Brantford during the late January melt but stronger blocks of ice remained intact. This erosion helped drop river levels by 2 metres on the Brantford gauge by mid-February. Levels had stabilized around 2.8 metres through this reach. Levels on the Brantford gauge for the 1996 and 2018 ice jams are presented by figure 6. The mid-February cold spell re-established sheet ice on many reaches of the river, reducing the amount of frazil ice being produced upstream.

Weather Forecasts Prior to February 21st Flood

Weather forecasts late in the week of February 12th began indicating a warm frontal system accompanied by rain would move into southern Ontario immediately following the Family Day weekend.

On Tuesday, February 13th a meeting was held with the City of Cambridge emergency control group to discuss the ice jam situation in the Grand River. The potential for flooding of Blair Road and portions of the Preston area of Cambridge downstream of King Street during a later spring runoff event (spring freshet) was discussed. The primary purpose of this meeting was to develop a plan for residential notification and detours in the event spring flooding were to occur. At the time of the meeting, weather forecasts were not predicting the severity of the weather event that would ultimately occur.

Forecast information available on Friday, February 16th predicted temperatures to reach upward of 12 degrees, accompanied by up to 40 mm of rainfall over a two-day period. The forecast temperature suggested there was sufficient energy to melt the entire snow pack. The snow pack in northern areas of the watershed contained approximately 75 to 100 mm of equivalent water content. The combination of rainfall and snow pack water content suggested 125 to 150 mm of water could impact the river system with this event. This volume of runoff would be typical of a late March or early April Spring melt. A decision was made to issue a Flood Warning message on Friday, February 16th based on the weather forecast. This also allowed time for residents in the floodplain and municipalities to prepare over the Family Day weekend. A Flood Watch was issued for the entire watershed and Flood Warnings were issued to the communities of Cambridge, Brantford, and Cayuga, where ice jams were intact. The City of Cambridge initiated a plan for emergency detour routes and went door-to-door to warn residents in the potential affected areas.

Updated weather forecast information was assessed on Sunday, February 18th. At this time, hourly weather forecast information was available 72 hours into the future. Forecast air temperatures had increased to 13 degrees and forecast rainfall increased to 60 mm over a two-day period. The forecast rainfall exceeded all previously observed two-day rainfall totals for the month of February. Based on the updated weather forecast a broad Flood Warning was issued for the entire Grand River watershed.

Movement of ice in the southern Grand River was anticipated based on the forecast. A request to the Canadian Coast Guard to dispatch an ice breaker to the mouth of the Grand River was coordinated through the Haldimand County Community Emergency Management Coordinator (CEMC). The Coast Guard responded to this request and dispatched the CCG Griffon to break up ice at the mouth of the river and out into Lake Erie. On Tuesday, February 21st and Wednesday, February 22nd, the ice breaker successfully cleared ice in this area, providing an area of relief for ice, water, and debris to flow once it reached the southern watershed.

February 20th – 21st Weather Event

The weather event moved into the watershed the evening of Monday, February 19th. Warm temperatures and rainfall, heavy at times, persisted through Tuesday evening. GRCA staff delivered a presentation to Cambridge City Council on Tuesday evening regarding the potential for ice jam flooding in portions of the city and actions taken to prepare for ice jam flooding. Temperatures remained well above freezing overnight, and were followed by a second heavy rainfall between 4:00 and 10:00 am Wednesday morning. Air temperatures dropped rapidly by late Wednesday morning and returned well below freezing by Wednesday night.

By the time the weather system moved out of the watershed, most of the snow pack had melted and 35 to 50 mm of rainfall occurred across the watershed. Warm temperatures associated with this event accelerated the runoff response into the river system.

Ice jams are unpredictable and can block and release without warning. A blockage formed in the ice jam upstream of Parkhill Dam and subsequently released, sending a surge of water downstream between 1:00 and 2:00 a.m. on Wednesday morning. This surge would have been similar to a dam breaking. This surge of water resulted in unanticipated flooding along the Grand River downstream of Cambridge and contributed to overtopping of dike floodwalls along River Road in the City of Brantford. Flood

Warning message #5 was issued at 4:15 a.m. requesting the City of Brantford to convene its Emergency Control Group and prepare to warn residents in the floodplain behind the dikes in the City of Brantford. The Flood Warning message was issued following direct phone calls to emergency response staff in the City of Cambridge, Brant County, North Dumfries and City of Brantford. The City of Cambridge installed temporary stoplogs in the Concession Street Bridge as a precaution against further ice jam flooding. A 24-inch water main located on the upstream side of the Concession Street bridge was damaged resulting in the temporary loss of water supply to a large portion of the City of Cambridge.

Flood Warnings Issued During Flood

A total of 9 Flood Warnings were issued from February 16 to February 26:

- Flood Message #1 - Issued Friday, February 16, 2018 at 11:45 AM
- Flood Message #2 - Issued Sunday, February 18, 2018 at 3:00 PM
- Flood Message #3 - Issued Tuesday, February 20, 2018 at 1:30 PM
- Flood Message #4 - Issued Tuesday, February 20, 2018 at 5:45 PM
- Flood Message #5 - Issued Wednesday, February 21, 2018 at 4:15 AM
- Flood Message #6 - Issued Wednesday, February 21, 2018 at 12:15 PM
- Flood Message #7 - Issued Thursday, February 22, 2018 at 1:15 PM
- Flood Message #8 - Issued Friday, February 23, 2018 at 2:30 PM
- Flood Message #9 - Issued Monday, February 26, 2018 at 1:00 PM

Flood Warning messages 1 and 2 were issued well in advance of the event based on weather forecasts. There was sufficient confidence in weather forecast and a high level of risk associated with ice jams to warrant issuing early Flood Warning messages, particularly given the Family Day weekend when many residents may have been travelling away from their homes and a full complement of municipal staff may not have been readily available. It is uncommon to have a spring freshet in February.

Flood Warnings were issued by email, automated voice phone call, personal phone calls to specific flood co-ordinators in affected areas, posted to the GRCA website, GRCA social media feeds, and issued directly to the media.

Role of GRCA Website

The GRCA website played an important role delivering information to the public and emergency responders. During the period February 19th to February 24th, pages were viewed more than 180,000 times. This compares to 46,500 pageviews for the same period in 2017. Statistics indicate that the GRCA website was receiving approximately 7,500 pageviews per hour during the peak of this event.

Web site statistics from the recent event are presented by figure 4. The chart presented by figure 4 presents pageviews data over a 5 day period, the y-axis of the chart presents the number of pageviews per hour.

Staffing of Flood Operations Centre

Beyond regular working hours, the Flood Operations Centre at the GRCA Administration Office was staffed continuously between 7:00 a.m. February 20th and 12:00 a.m. February 22nd. A Duty Officer remained on-call throughout the duration of the event for after-hours emergency calls. A Senior Operator was available continuously during the event.

Participation in Municipal Operations Centres

At 6:00 a.m. on Wednesday, February 21st staff went to the City of Brantford Emergency Operations Centre.

GRCA Senior Engineering staff attended the City of Brantford Emergency Operation Centre (EOC) to support the Brantford Emergency Control Group and Six Nations EOC Haldimand County EOC in Cayuga to provide advice and updated information. A press conference with the Provincial Premier at the request of the City of Brantford Mayor.

Resultant Flooding and Flood Reduction Provided by Major Dams

Table 1 presents a summary of observed and regulated flows with their effect of reservoir mitigation removed.

Table 1 Peak River Flows At Selected Locations February 21st Flood Event

Location	Water Course	Natural Flow (m ³ /s)	Regulated Flow (m ³ /s)	Flood Frequency		Flow Reduction %
				Natural (yr)	Regulated (yr)	
Legatt-Grand Valley	Grand River	245	--	20 to 50 yr		
Marsville	Grand River	350	--	10 to 20 yr		
Shand Dam	Grand River	402	164	10 to 20 yr		59%
Elora	Grand River	402	164	10 to 20 yr	2 to 5 yr	59%
Irvine Salem	Irvine River	151	--	5 to 10 yr		
West Montrose	Grand River	565	254	5 to 10 yr	2 to 5 yr	55%
Bridgeport	Grand River	1257	481	10 to 20 yr	2 to 5 yr	62%
Doon	Grand River	1265	513	10 to 20 yr	2 to 5 yr	59%
Galt (no ice)	Grand River	1408	730	10 to 20 yr	5 to 10 yr	48%
Galt (with ice jam)	Grand River	1408	1100	10 to 20 yr	20 to 50 yr	22%
Paris	Grand River	1408	1100	10 to 20 yr	20 to 50 yr	22%
Brantford (no ice)	Grand River	1921	1040	20 to 50 yr	5 to 10 yr	46%
Caledonia	Grand River	1955	1210	20 to 50 yr	10 to 20 yr	38%
York	Grand River	1955	1210	20 to 50 yr	10 to 20 yr	38%
Dunville	Grand River	2006	1226	50 to 100 yr	10 to 20 yr	39%
Above Drayton	Conestogo River	299	--	10 to 20 yr		
Drayton	Conestogo River	316	--	20 to 50 yr		
Moorefield	Moorefield Creek	100	--	5 to 10 yr		
Conestogo Dam	Conestogo River	480	169	10 to 20 yr		
Glen Allan	Conestogo River	480	169	10 to 20 yr	2 to 5 yr	65%
St. Jacobs	Conestogo River	555	174	10 to 20 yr	< 2yr	69%
Floradale	Canagagigue Creek	74	--		10 to 20 yr	
Woolwich Dam	Canagagigue Creek	80	15		10 to 20 yr	81%
Below Elmira	Canagagigue Creek	120	50		10 to 20 yr	58%
Armstrong Mills	Speed River	73	--	5 to 10 yr		
Guelph Dam	Speed River	103	35	5 to 10 yr		66%
Victoria Rd Gauge	Speed River	103	35	5 to 10 yr	5 to 10 yr	66%
Eramosa River	Eramosa River	47	--	20 to 50 yr		
Speed River Edinburgh	Speed River	146	98	10 to 20 yr	20 to 50 yr	33%
Speed River Beavertdale	Speed River	153	95	10 to 20 yr	10 to 20 yr	38%
Speed River Preston	Speed River	153	95	10 to 20 yr	10 to 20 yr	38%
Nithburg	Nith River	241	--	5 to 10 yr		
New Hamburg	Nith River	405	--	20 to 50 yr		
Ayr (estimated)	Nith River	439	--	20 to 50 yr		
Canning	Nith River	356	--	10 to 20 yr		
Whitemans Creek	Whitemans Creek	103	--	> 100 yr		
Note: Regulated Flow is with reservoir regulation; Natural Flow is without reservoir regulation						
Brantford is only reported with no ice jam,						
Galt is reported with no ice jam and the flow from the release of the ice jam						

The flood frequency columns show the severity of the event for Natural (effect of reservoir regulation removed) and Regulated (as observed). The relatively high flood frequency indicates the severity of the event across the watershed. Reservoir storage was used to reduce downstream flooding. The percentage flow reduction provides an indicator or measure of how reservoir operations reduced downstream flows. Without the influence of ice jams, this would have been an early, but typical large watershed-wide flood event.

The last watershed-wide flood of this magnitude occurred in December 2008 and February 2009. Flooding during the June 2017 event affected portions of the Grand River watershed, but not the full watershed as was the case with this event.

The most notable flood impact occurred on properties and municipal infrastructure in the communities of: Grand Valley, Waldemar, Drayton, Cambridge (Concession Street), Cambridge (Highway 24), Everglades Trailer Park, Glen Morris, Paris, City of Brantford (dike overtopping), Six Nations territories, Cayuga and Dunnville.

Trailer parks adjacent to the river system were also affected by flooding; City of Kitchener (Pioneer Sports Club), Brant Park and Byng Island Park. Nith River flooding occurred in the communities of New Hamburg, Ayr and Wolverton.

- Flows through the Community of Grand Valley were the highest-ever recorded on the Legatt gauge since it was installed in 1977. Flows of this magnitude are estimated to have a 4% chance of occurring any given year or may be referred to as a 25 year flood. Flows through community of Waldemar and Marsville were similar to flows observed in June 2017 in the 20-year flood range. Inflows to Shand Dam were lower than observed in June 2017.
- The large dams were operated to reduce the impact of downstream flooding and reduce the pressure or stress on downstream ice jams to provide as much time as possible for these ice jams to erode. No increases were made from Shand Dam on Tuesday February 20th. Stored water was released gradually as discharges were increased on February 21st. The operation of Shand Dam prevented significant flooding in the communities of West Montrose, Conestogo and other downstream communities.
- Inflows to Woolwich Dam were in the 20-year flood range. The operation of Woolwich dam prevented flooding along Canagagigue Creek through Elmira. Inflows to Woolwich dam were in the 70 m³/s range, inflows in the June 2017 event were in the 120 m³/s range.
- Flows in the Conestogo River through the community of Drayton were less than those in the June 2017 event and higher than the December 2008 flood. Portions of the community of Drayton were flooded.
- Inflows into Conestogo Dam were less than the June 2017 flood but are estimated to be the 4th highest inflow to Conestogo Dam since 1958 when the dam went into operation. Operation of this dam reduced downstream flooding.
- Flows through the communities of Waterloo and Kitchener were slightly higher than half of what was observed in the June 2017 event. Most campgrounds were not in operation reducing the impact to temporary infrastructure in the floodplain. Flooding of portions of the Pioneer Sportsmen Club trailer park was reported. Flows were estimated to be in a 2 to 5-year flood range due to operation of upstream reservoirs. Upstream reservoirs reduced flows by an estimated 60%.

- Flows through the Galt portion of the City of Cambridge were affected by the sudden blockage and release of the ice jam in Cambridge. An ice jam was in place upstream of Parkhill Dam. It appears that as that ice jam started to break up early in the morning of Wednesday, February 21st an unexpected blockage temporarily formed upstream of the rowing club. Release of this ice dam was similar to a dam break and sent a surge of water downstream. Flows at the Galt stream gauge downstream of the Concession Street bridge peaked at 1100 m³/s; the capacity of the Concession Street bridge. This peak was higher than flows in the 920 m³/s range experienced in June 2017. River flows at the time of the ice jam release were in the 590 m³/s range. Release of the ice jam resulted in flow almost overtopping of the Concession Street Bridge, damage of a watermain on the Concession Street bridge and flooding of Highway 24 downstream of Galt. Its estimated peak flows through the City without flow reduction by upstream reservoirs would have been in the 1400 m³/s range.
- Ice and water suddenly flooded onto Highway 24 downstream of Concession Street in Cambridge when the ice jam released. It is fortunate that this release occurred in the early morning hours when little or no traffic was present on Highway 24. If it had occurred during daytime hours, the risk of injury or loss of life would have been far greater.
- The ice jam in the dike reach through the City of Brantford combined with a sudden surge of ice and water from the release of ice jam in Cambridge resulted in overtopping of dikes. Flood waters overtopped dike flood walls along the River Road reach in the City of Brantford and flowed through stoplog openings in abandoned railways line through the dike. A similar ice jam occurred in 1996 where river levels approached the top of the floodwall along River Road, but no overtopping occurred. The surge of water from the upstream ice jam release contributed to the overtopping of the dike in Brantford. The City of Brantford Emergency Control group convened on short notice to manage the situation. Upstream reservoirs were operated to reduce pressure on the ice jam and provide as much time as possible for the ice jam to erode before reservoirs discharges were increased. Its estimated flows through the City of Brantford without the effect of the ice jam were reduced by 46% and would have been in the 1900 m³/s range. Regulated flows without the ice jam release are estimated to have been in the 900 m³/s range.
- An ice jam in Cayuga resulted in ice jam flooding in that community. Early notification of residents was completed by Haldimand County staff prior to the event. Minor flooding occurred through Dunnville as a result of high river flows. The ice went out above Caledonia Dam and Dunnville dam relatively easily compared to other areas. The work of the Canadian Coast Guard ice breaker avoided ice jam flooding in Dunnville and through Port Maitland.
- High flows were experienced on the Nith River. Flows recorded in New Hamburg were the third highest in the period of record since 1951. Flows of a similar magnitude last occurred in 2008 and prior to that, in 1977. Flows through the community of Ayr were similar to December 2008 and February 2009.
- GRCA staff also paid close attention to several small dams in watershed communities. New Dundee Dam, Wellesley Dam and Upper Ayr Dam required operation and supervision on Tuesday February 20th. A strong flow response was encountered at these dams. Staff remained on site until conditions stabilized and monitored these sites over the remainder of the week.

Lessons Learned and Actions Initiated

A series of debrief meetings are being held with municipal Flood Co-ordinators and the general public across the watershed following the February event.

The following actions and outcomes have occurred to-date:

- Staff from the Ministry of Natural Resources and Forestry were invited to visit the site of the Cambridge and Brantford ice jams on February 23rd to gain an understanding of the magnitude of these obstructions. Two MNRF staff attended from the MNRF head office in Peterborough. MNRF staff joined GRCA and City of Brantford public works staff on-site where Brantford public works staff answered questions about the event and toured the Brantford dike reach.
- Field photos and high water marks were documented over the weekend of February 24th and 25th for both the Cambridge and Brantford ice jams sites.
- Ice experts from KGS Consultants visited the Brantford ice jam site to document field information and prepare a proposal to investigate the cause and potential mitigation options that could be considered to reduce the potential for ice jams in the Brantford reach.
- Arrangements were made to have a Canadian ice expert from the Watershed Hydrology and Ecology Research Division, Canada Centre for Inland Waters, Environment & Climate Change Canada Burlington, visit the ice jam site upstream of Parkhill Dam on Tuesday, February 27th to view conditions in the field while remnant ice was still present. A forensic analysis of the ice jam that occurred in Cambridge will be prepared to better understand what occurred during breakup of the ice jam.
- On February 28th an Unmanned Aerial Vehicle flight was completed of the reach upstream of Parkhill Dam to document the remnant ice left after the ice jam. High definition photograph and elevation information was captured. This information will be used to support forensic analysis of this ice jam.
- Staff attended a public meeting in the City of Brantford to explain conditions that lead to ice jam flooding and dike overtopping in that community as well as answer questions posed by affected residents.
- Staff presented to the Region of Waterloo, Regional Emergency Planning Advisory Committee (REPAC) on March 6th to debrief this committee on the recent flood, speak to roles and responsibilities of the GRCA and municipalities, and receive their feedback.
- Staff are responding to a Brantford City Council resolution requesting City staff to work with the GRCA to:
 - Permanently close two gaps in the dike;
 - Conduct a study on the effectiveness of the retaining wall on River Road and provide recommendations to prevent ice floes from overflowing on the road;
 - Provide cost estimates for any recommended solutions;

- Provide a timeline for each solution with a completion deadline of no later than Nov. 1.
- A flood workshop has been organized by the Dufferin County CEMC for the communities of Grand Valley and Waldemar on the evening of Tuesday, March 20th in Grand Valley. GRCA staff will make presentations at this workshop regarding recent floods and present new flood inundation mapping prepared for these communities. Public feedback and public observations will be obtained from participants at this workshop regarding the mapping and recent floods.
- Brant County and Emergency Management Ontario are hosting a geographic information system emergency management workshop on Wednesday March 21st. GRCA staff have been invited to make a presentation and participate in discussions regarding flood emergency mapping.
- A meeting of CEMC's from across the watershed will be convened to debrief and obtain feedback and suggestions share experience gained during the flood and to share material created during the flood.
- River level monitoring will be installed at the Blair and Glen Morris Water Quality stations over the summer of 2018 to provide river level monitoring information from these locations. The monitoring at Blair can assist with identifying water backup due to ice jams and unexpected flooding for Blair Road. The monitoring at Glen Morris will provide information regarding flooding conditions along the west bank of the Grand River where residential houses are located in the floodplain and have experienced flooding during recent events.

Financial implications:

Not applicable. If requests that have budget implications result from the recent flood, these requests will be dealt with as budget forecast adjustments or as separate board reports brought back to the board.

Other department considerations:

Not applicable

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Figure 1 Shand Dam Daily Temperatures

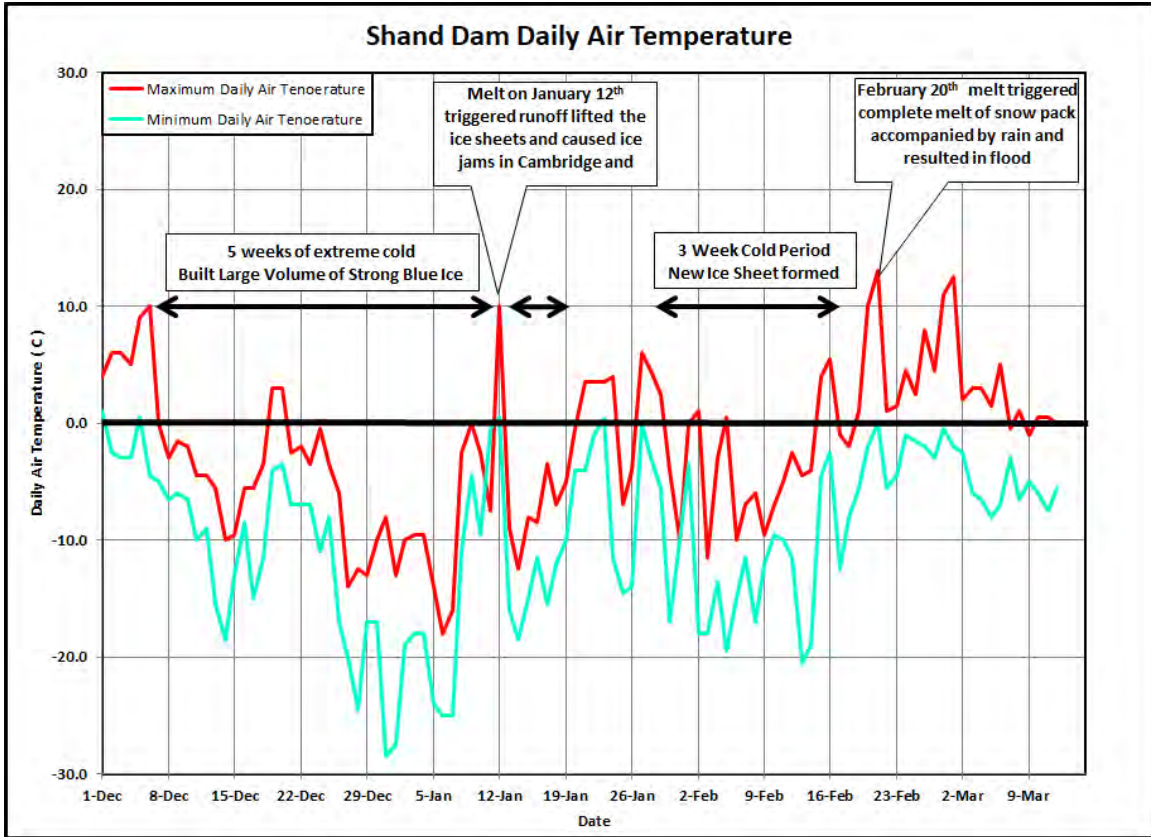


Figure 2 Shand Dam Freezing Degree Days

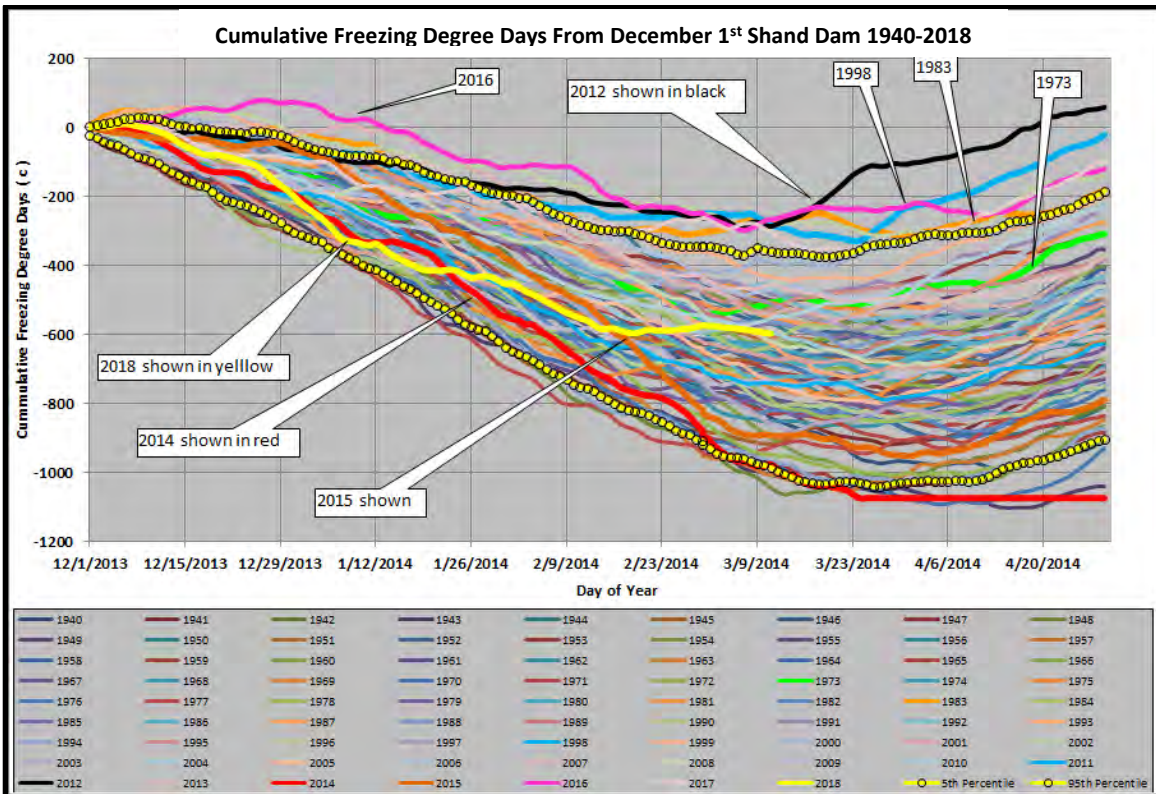


Figure 3 Shand Dam Daily Temperatures and Rainfall

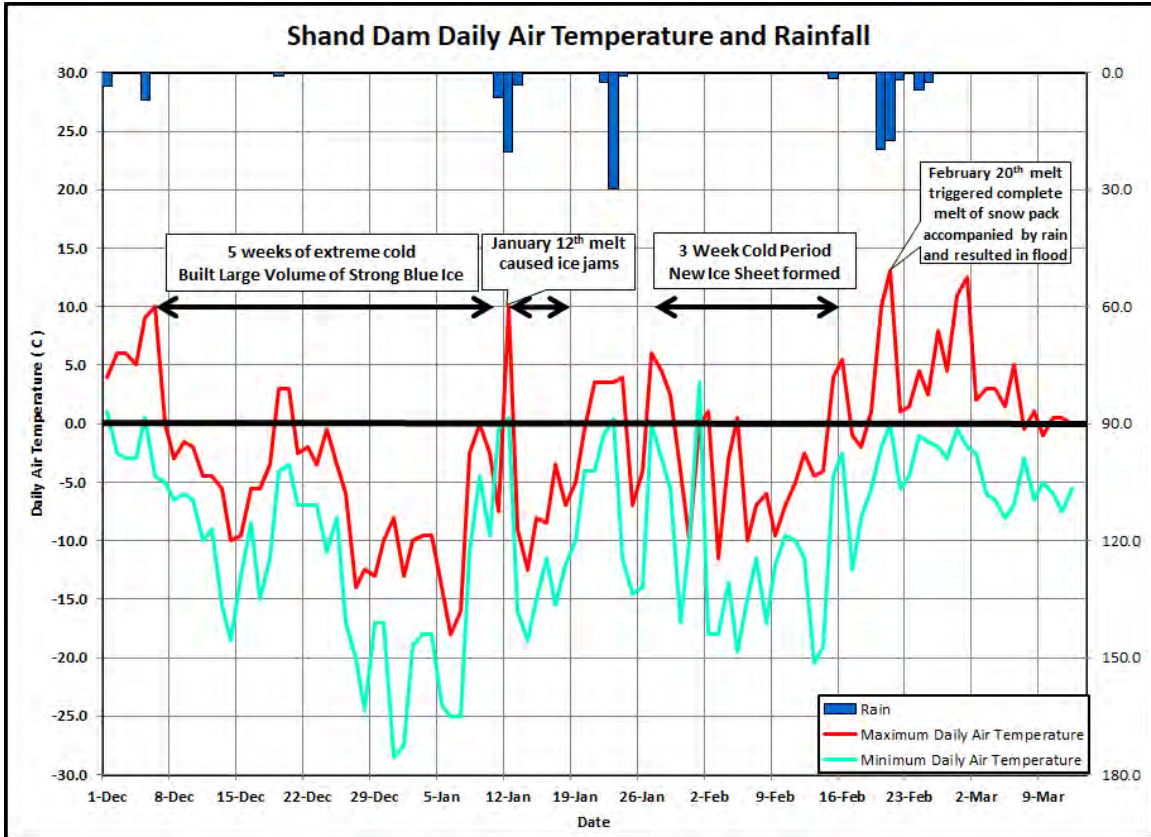


Figure 4 GRCA Website Statistics During February 21st Flood Event

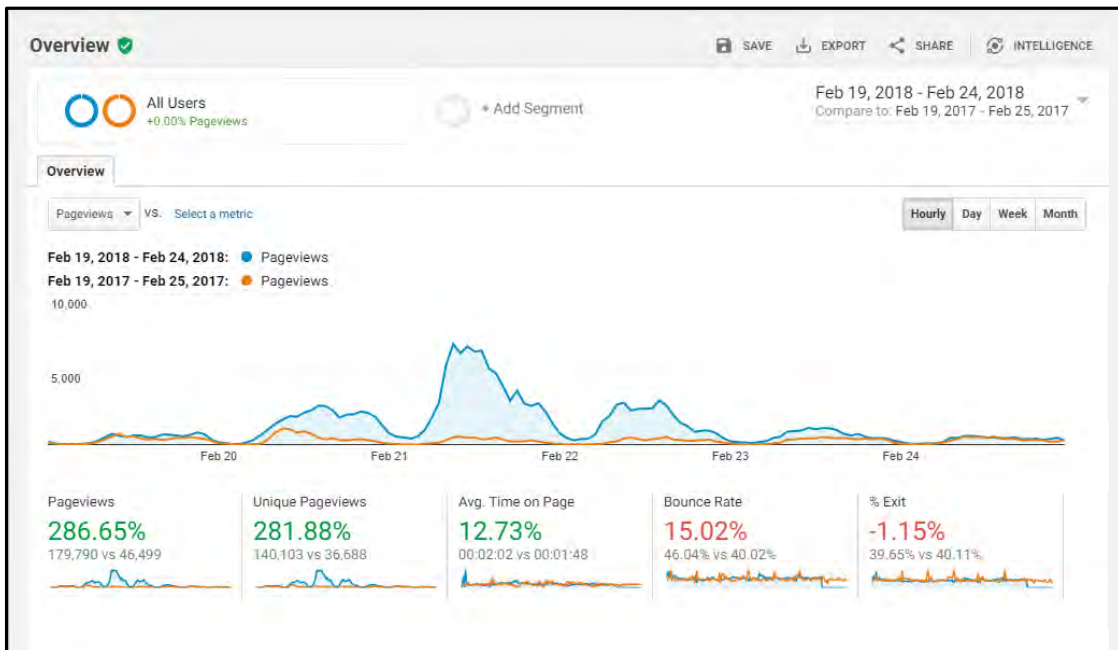


Figure 5 Ice Dam and Ice Jam Release Grand River Cambridge

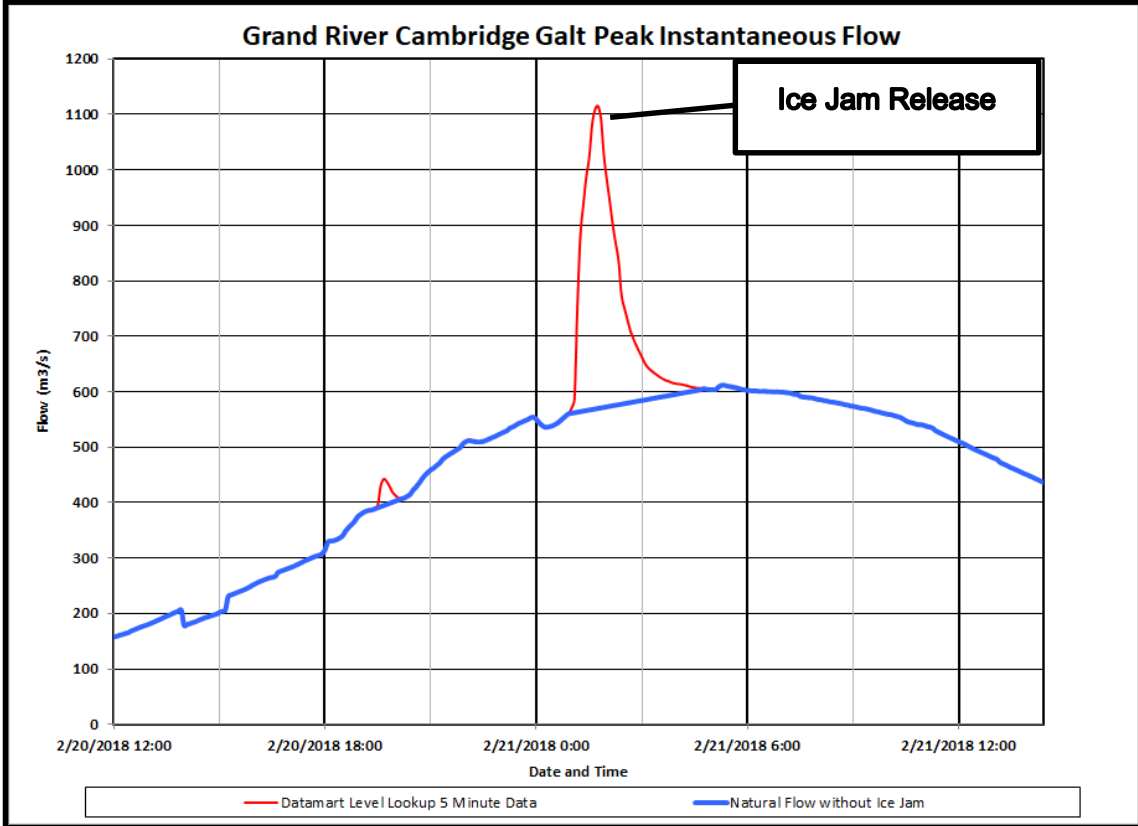
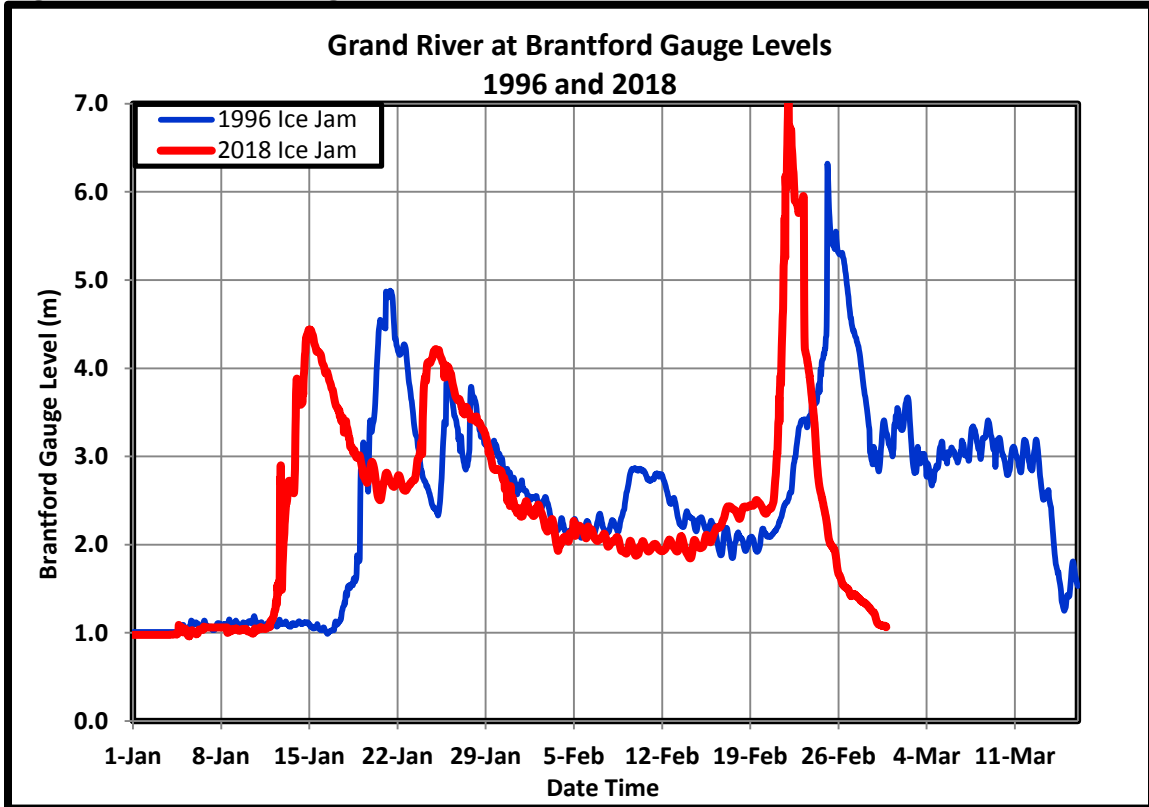


Figure 6 Brantford Gauge Station Levels 1996 and 2018 Ice Events



Grand River Conservation Authority

Report number: GM-03-18-38

Date: March 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Current Watershed Conditions as of March 14, 2018

Recommendation:

That Report Number GM-03-18-38 – Current Watershed Conditions as of March 14, 2018 be received as information.

Report:

Precipitation

Precipitation in the first part of March was well below the long term average across the watershed. Although precipitation was recorded on many days, the precipitation has been fairly light snow with very little water content. The snowpack melted during the February flood event and snow cover remains quite spotty across the watershed. The next snow survey is scheduled for March 15th.

February was a wet month with approximately one and a half times the normal precipitation across the watershed. Early in the month snow was the dominant form of precipitation, until a significant rain event moved into the watershed on February 19th and 20th. This rain event brought over 35 to 50 mm of rain to the entire watershed and coincided with a warm spell that melted the snowpack. The combination of rain and snowmelt resulted in high levels of runoff and flows throughout the watershed.

Monthly precipitation at the Shand and Shades climate stations from 2014 to 2018 is shown in Figure 1. Table 1 includes monthly and recent precipitation trends for select watershed climate stations.

Table 1: Precipitation Averages at Watershed Climate Stations

Station	Monthly Precipitation		Percentage of Long Term Average					
	14-Mar (mm)	Long Term Average (mm)	Current Half Month	Last Full Month	Last 3 Full Months	Last 6 Full Months	Last 12 Full Months	Last 15 Full Months
Shand	4.1	59.5	14%	145%	116%	101%	116%	126%
Conestogo	17.8	62.2	57%	150%	106%	103%	122%	123%
Guelph	2.6	57.6	9%	164%	120%	105%	122%	128%
Luther	6.5	64.0	20%	163%	122%	110%	130%	132%
Woolwich	4.9	50.4	19%	156%	130%	115%	116%	118%
Laurel	12.8	59.3	43%	149%	115%	98%	113%	116%
Shades	10.1	61.5	33%	148%	114%	94%	117%	124%
Brantford	22.7	53.1	85%	197%	119%	98%	111%	119%

*precipitation data was not available for the Brantford Airport station. The value for Brantford in Table 1 is from the Burford Tree Nursery Climate Station

Air Temperatures

The average air temperature in the first two weeks of March was above the long term average. At the Shand Dam climate station, overnight low temperatures have been below freezing throughout the month, while daytime high temperatures often are above or near freezing. This pattern is very characteristic of March and the transition between winter and spring.

February was a month of extremes. The first half of the month had below normal temperatures and was more typical of winter conditions. The second half of the month had well above normal temperatures that were more typical of spring conditions. The abrupt change in temperature patterns mid-month resulted in the loss of the snowpack. The warm second half of the month pushed the average monthly temperatures above normal across the watershed. At the Shand Dam climate station the February monthly average temperatures was -4.5 degrees or about 2.9 degrees above the long term average.

Figure 2 presents recent mean monthly air temperature departures from the long term average recorded at Shand Dam. Long term average temperatures were updated in January 2018 and cover the period of 1986 to 2016.

Lake Erie Conditions

The level of Lake Erie continues to be above the long term average. The average lake elevation in February was 174.43m, which is approximately 0.45m above the long term average. Lake Erie has very little ice cover with most of the remaining ice on the American side of the Eastern Basin.

Forecast water levels into the summer period where available from the Canadian Hydrographic Service. They indicate that the lake will likely reach a very similar high level this June as last year, which was the highest observed since 1998. High static lake levels increase the risk of shoreline flooding.

Figure 3 presents current and forecast Lake Erie level from the Canadian Hydrographic Service.

Reservoir Conditions

The four large reservoirs were used during the February event to reduce peak flows downstream. Following the event, water was released from the reservoirs to regain flood storage and bring water levels near to normal levels. At present, Shand and Conestogo reservoirs are below their normal operating levels for this time of the year given the loss of the snow pack in February. A combination of snow melt and rainfall is used to fill the large dams to their April 1st operating levels. Guelph and Luther reservoirs are slightly above their normal operating level due to the loss of the snowpack.

The months of March and April are the main filling months of the reservoirs. During these months water levels vary depending on the timing of the melt of the snowpack and the arrival of spring rains. Filling of the reservoirs must be balanced with maintaining sufficient flood storage. As the spring progresses, available water will be taken into storage following normal reservoir operating procedures.

Reservoir levels for 2018 are shown in Figures 4 and 5 for Shand Dam, Conestogo Dam, Guelph Dam, and Luther Dam.

Long Range Outlook

Environment Canada's seasonal forecasts are predicting above normal temperatures for the March to May period. Precipitation is predicted to be near normal for the same period.

For the near term, Environment Canada is predicting near normal temperatures for the remainder of March. The two week forecast from the Weather Network is similar with near seasonal temperatures and some periodic snowfall.

Flood Preparedness

Conditions are being monitored closely. Staff continue to hold weekly Senior Operator meetings as part of overall succession planning initiatives and flood emergency preparedness.

A floodplain mapping technology transfer workshop was held in the Vaughn area March 5th to March 8th. GRCA, Conservation Ontario and CWRA assist MNRF with planning and organizing the workshop. MNRF and NRCA provide funding to offset the cost of the workshop. Out of Province speakers attended from Alberta, Quebec and California. The first day of the workshop was a working session with the US Army Corps of Engineers, William Scharffenberg the lead HEC-HMS attended and presented material. Several staff participated and presented at the workshop. The fourth day of the workshop was a NRCAN flood risk assessment workshop. NRCA is preparing flood risk assessment guidelines for the federal government. The purpose of NRCAN workshop day was to receive input on the flood risk assessment guidelines.

Financial implications:

Not applicable

Other department considerations:

Not applicable

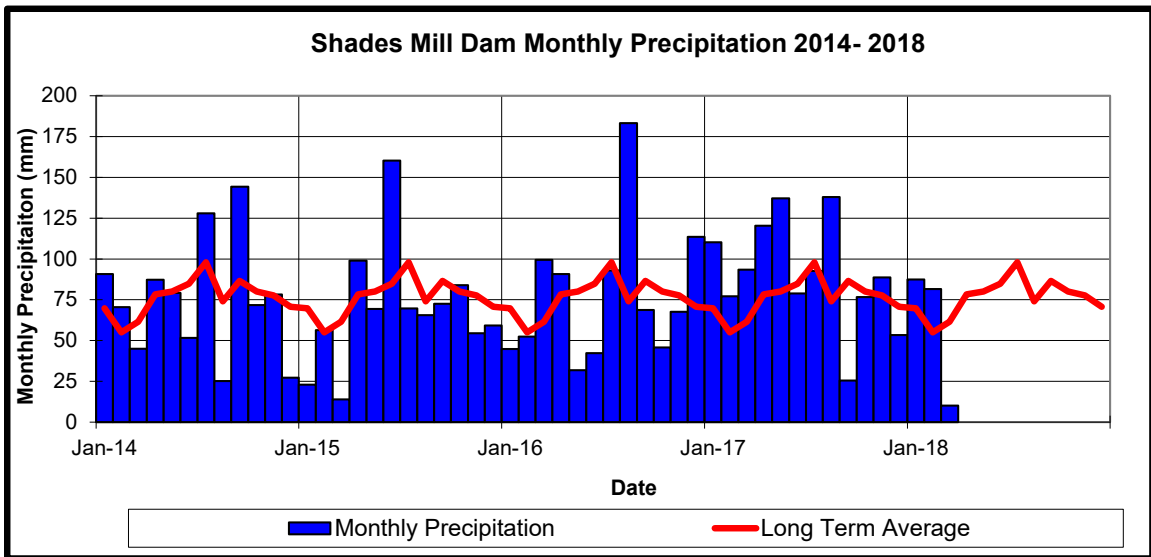
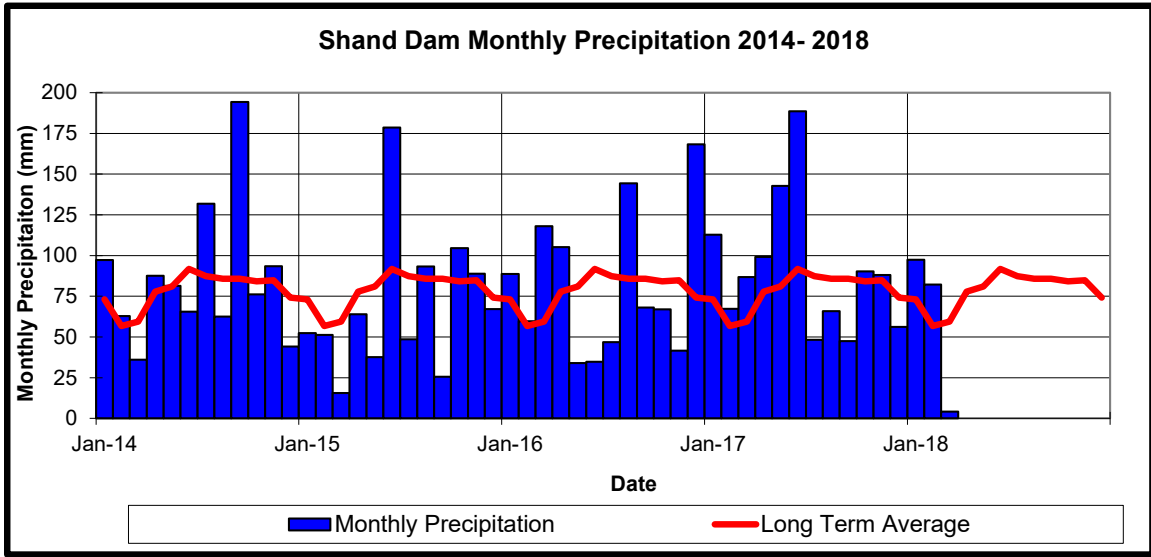
Prepared by:

Stephanie Shifflett
Water Resources Engineer

Approved by:

Dwight Boyd
Director of Engineering

Figure 1: Precipitation at Shand Dam and Shades Mill Dam 2014 to present



* Long term average precipitation updated to cover the 1986 to 2016 period

Figure 2: Departures from Average Air Temperatures

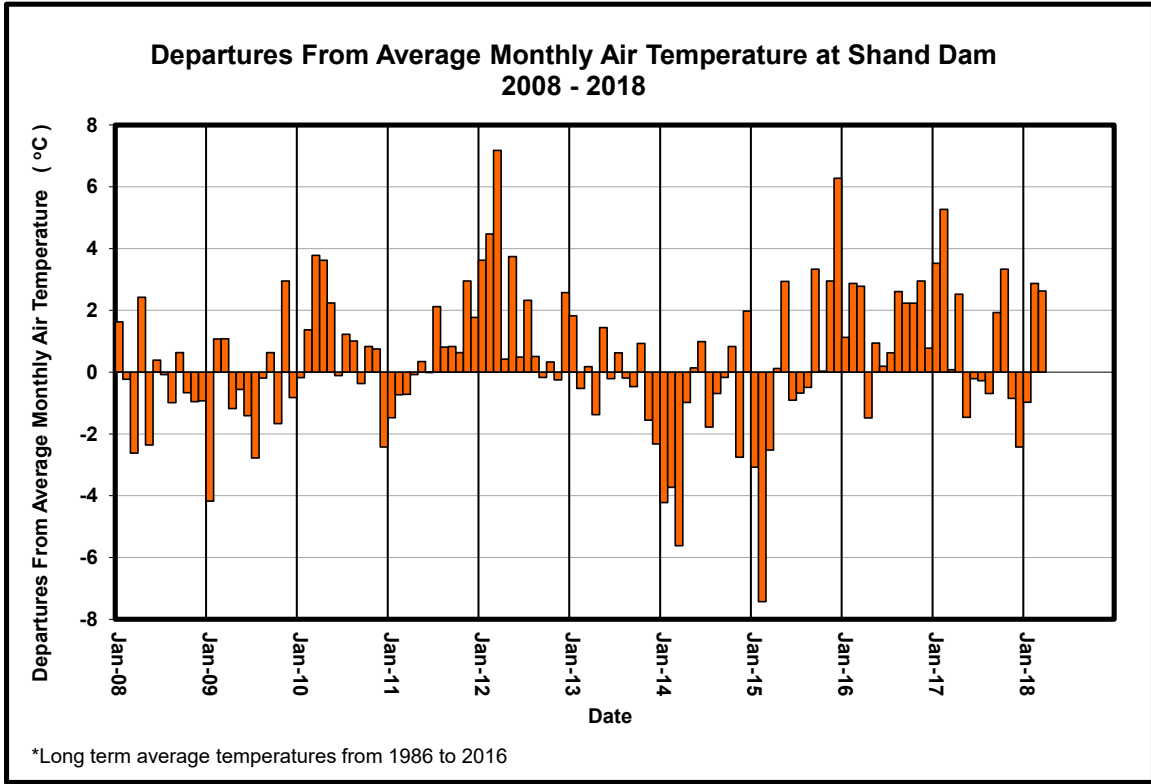


Figure 3: Forecasted Lake Erie Levels

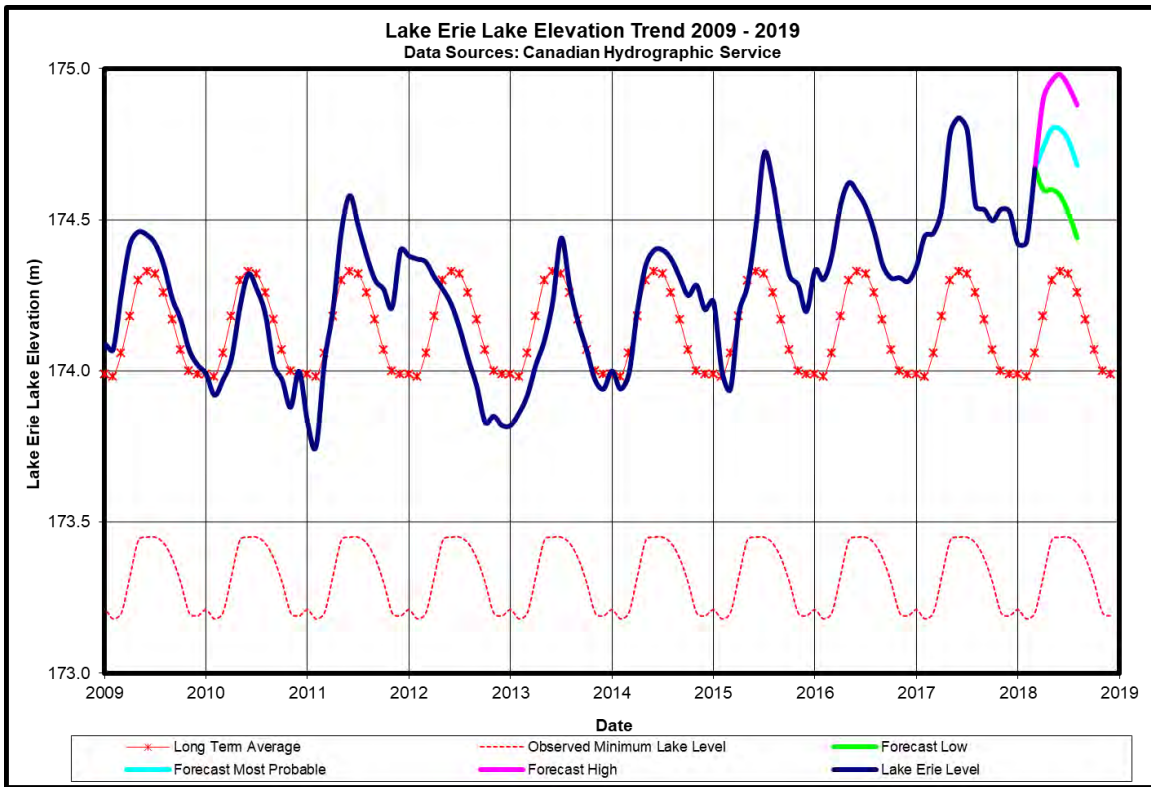


Figure 4: Shand and Conestogo Reservoir Elevation Plots

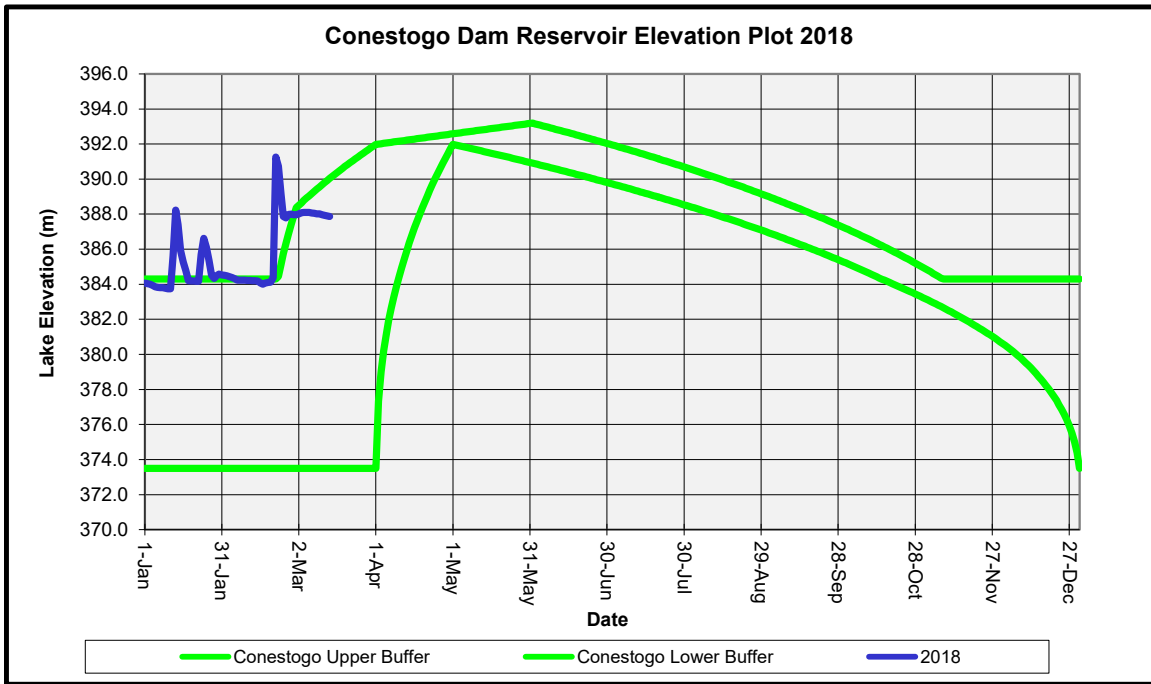
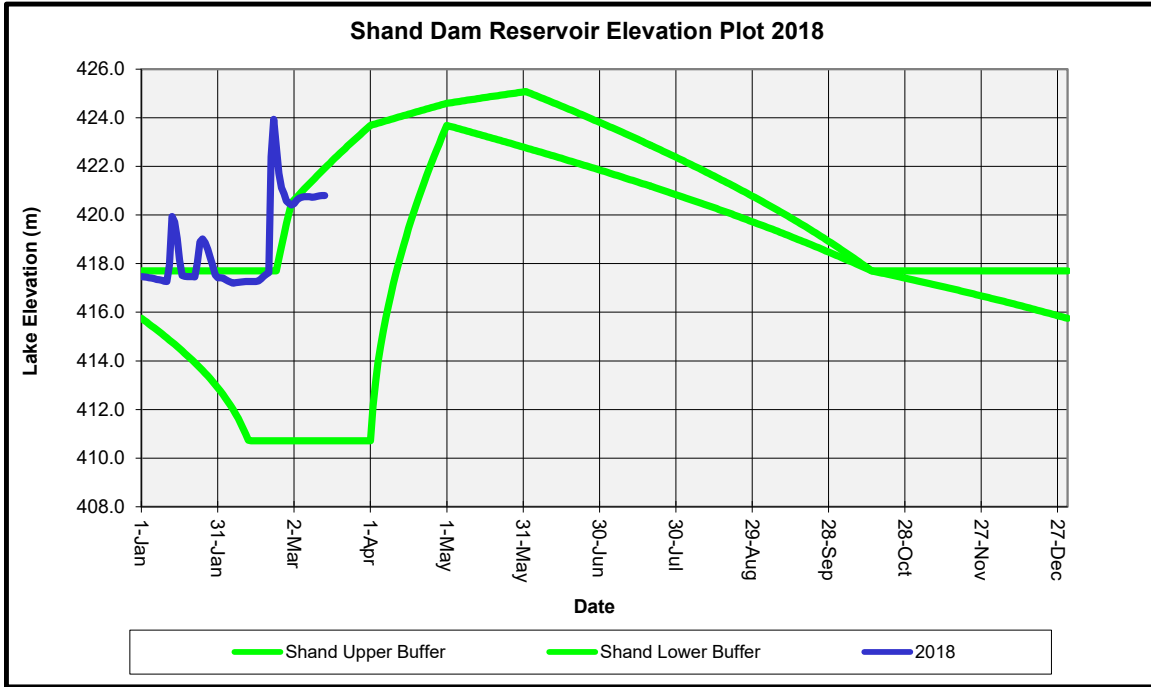
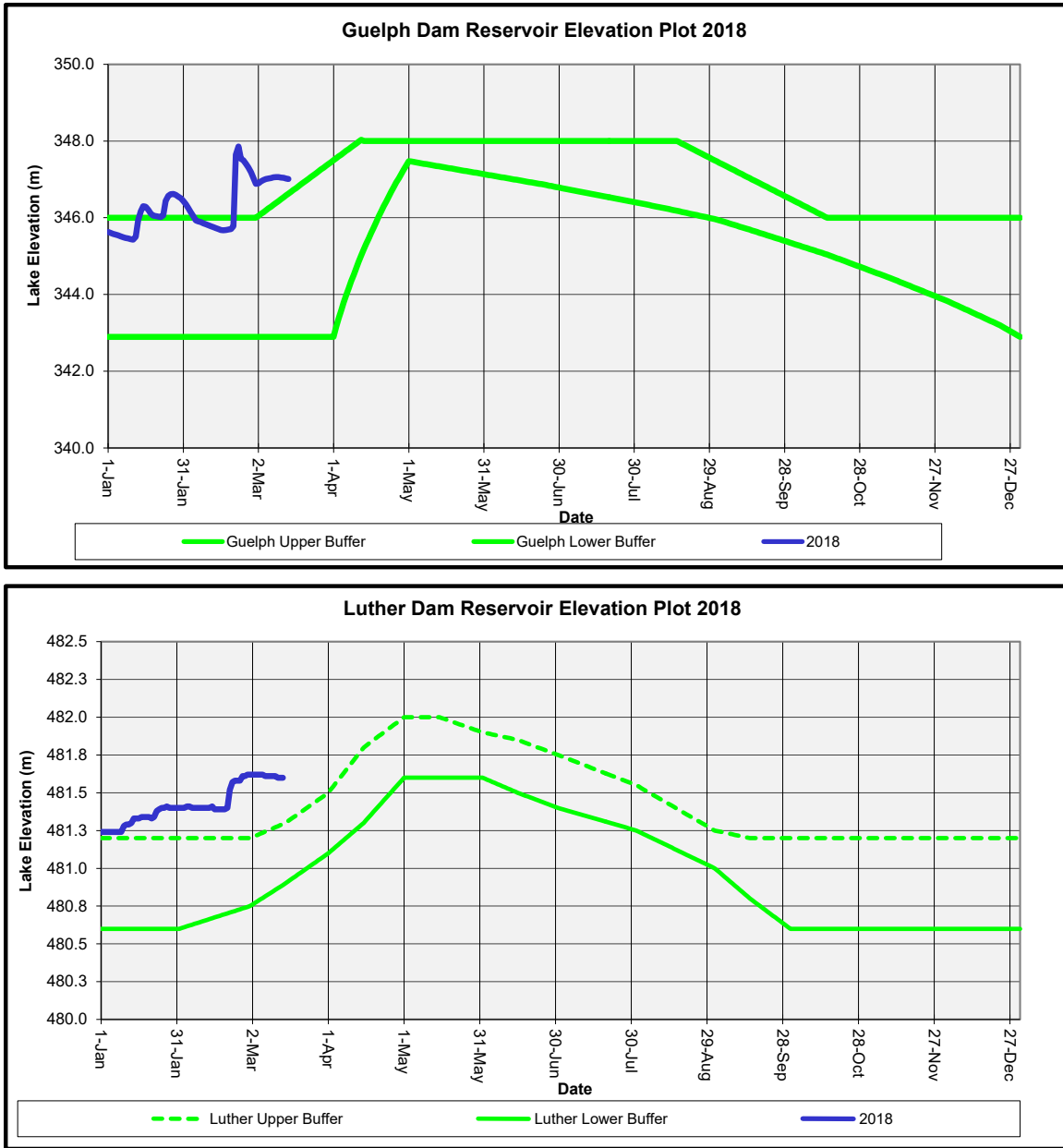


Figure 5: Guelph and Luther Reservoir Elevation Plots



Luther Dam Operating Curves

Luther Dam primarily provides a flow augmentation function to the upper Grand River and to Shand Dam. While it does provide some benefits from a flood control perspective, these benefits are limited due to the small drainage area regulated by Luther Dam.

The buffers between March 1st and September 30th define the operating range to meet downstream low flow targets. The lower buffer defines the lowest operating range for flow augmentation before reducing downstream flow augmentation targets. The earlier winter (January 1st to March 1st) and late fall (October 1st to December 31st) upper buffer curve is defined from ecologic considerations from the Luther Marsh Master Plan.



**Grand River Conservation Authority
Addendum - General Meeting**

Friday, March 23, 2018

9:30 a.m.

Auditorium

Grand River Conservation Authority
400 Clyde Road, Box 729
Cambridge, ON N1R 5W6

Pages

10. Correspondence

e. Township of East Garafraxa - 2018 Budget

1



TOWNSHIP OF EAST GARAFRAXA
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March 22, 2018

Grand River Conservation Authority
Joe Farwell, Chief Administrative Officer
400 Clyde Road, PO Box 729
Cambridge, ON N1R 5W6

Dear Mr. Farwell,

Re: Grand River Conservation Authority 2018 Budget

At the regular meeting of Council held March 13, 2018, the following resolution was carried:

Moved by T. Nevills – Seconded by J. Stirk

Be it Resolved That:

Council do hereby support the Grand River Conservation Authority's 2018 Budget / General Levy in the amount of \$11,352,000.00; East Garafraxa's share being \$24,356.00, for operating and \$2,482.00 for capital, for a total of \$26,838.00.

Should you require anything further please do not hesitate to contact this office.

Yours truly,

A handwritten signature in cursive script that reads "Susan M. Stone".

Township of East Garafraxa
Susan M. Stone, A.M.C.T.
CAO/Clerk-Treasurer

SMS/jk