



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

PUBLIC

Friday, November 23, 2018

Immediately following the Source Protection Authority Meeting
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 of November 23, 2018, be approved as circulated.

5. **Declarations of Pecuniary Interest**
6. **Minutes of the Previous Meeting**

THAT the minutes of the General Membership Meeting of October 26, 2018, be approved as circulated.

7. **Business Arising from Previous Minutes**
8. **Hearing of Delegations**
9. **Presentations**
10. **Correspondence**

THAT Correspondence from Hon. Sylvia Jones, MPP regarding GRCA's comments on Bill 148 be received as information.

a.	Hon. Sylvia Jones, MPP - Bill 148 Response	11
11.	1st and 2nd Reading of By-Laws	
12.	Reports:	
a.	GM-11-18-118 - Chief Administrative Officer's Report	12
	THAT Report Number GM-11-18-118 – Chief Administration Officer’s Report be received as information.	
b.	GM-11-18-110 - Cash and Investment Status	14
	THAT Report Number GM-11-18-110 Cash and Investment Status – October 2018 be received as information.	
c.	GM-11-18-116 - Financial Summary	16
	THAT the Financial Summary for the period ending September 30, 2018 be approved.	
d.	GM-11-18-113 - Reserves 2018	20
	<i>See report for Resolution</i>	
e.	GM-11-18-114 - Proposed 2019 Outdoor Education User Fees	31
	THAT the proposed Outdoor Education User fees for School programs be approved and become effective on September 1, 2019 until June 30 2020.	
	AND THAT the proposed ski program fees and the Outdoor Education User fees for non-school programs become effective January 1, 2019.	
f.	GM-11-18-115 - 2019 Complimentary Membership Passes	41
	THAT Report GM-11-18-115 – 2019 Complimentary GRCA Membership Passes be received as information.	
g.	GM-11-18-112 - Provincial Offences Officer Designations	43
	THAT the Grand River Conservation Authority designates Joao (John) Brum, Ashley Graham, Patricia (Trisha) Hughes and Ashley Rye as Provincial Offences Officers.	
h.	GM-11-18-111 - Environmental Assessments	45
	THAT Report Number GM-11-18-111 Environmental Assessments be received as information.	

- i. GM-11-18-117 - Current Watershed Conditions

THAT Report Number GM-11-18-117 – Current Watershed Conditions as of November 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 a potential litigation matter.

- a. Minutes of the previous closed meeting
- b. Litigation or Potential Litigation

18. Next Meetings

- General Membership - December 14, 2018 at 9:30 a.m.
- General Membership - January 25, 2019 at 9:30 a.m.

19. Adjourn

Regrets only to:

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

THAT the General Membership Meeting be adjourned.



Sylvia Jones, MPP
Dufferin-Caledon

November 2, 2018

Ms. Helen Jowett
Chair of the Grand River Conservation Authority
400 Clyde Road P.O. Box 729
Cambridge, Ontario
N1R 5W6

Tel. (519) 941-7751
Fax (519) 941-3246
1-800-265-1603
E-mail: sylvia.jonesco@pc.ola.org

Dear Ms. Jowett:

Thank you for copying me on your letter to Minister Scott regarding *Bill 148, the Fair Workplaces, Better Jobs Act, 2017*.

Our government had a priority during the campaign that we would revisit *Bill 148*. This Bill has led to a reduction of jobs across Ontario through higher operating costs for businesses.

Our government's priority is to reduce red tape and make Ontario a job-creation engine. Premier Ford has vowed to repeal *Bill 148* to reduce regulations in the province.

We have participated in consultations with business owners across the province and have learned the value of lower regulations in the workplace. The previous government created regulations that reduced economic growth and job creation across Ontario.

Everything that we have accomplished is focused on creating long-term, sustainable, and high paying jobs for the people of this province. We have announced plans to reduce regulations on businesses to increase jobs across the province.

I appreciate knowing your own concerns regarding Bill 148 and how it has impacted your organization.

Sincerely,

Sylvia Jones, MPP
Dufferin-Caledon



Grand River Conservation Authority

Report number: GM-11-18-118
Date: November 23, 2018
To: Members of the Grand River Conservation Authority
Subject: Chief Administration Officer's Report

Recommendation:

THAT Report Number GM-11-18-118 – Chief Administration Officer's Report be received as information.

Report:

This report provides a brief overview of current activities. It covers programs and activities that are not included in monthly reports.

1. Conservation Area Update: The camping season ended on October 15. Year round day use will continue at Belwood Lake, Guelph Lake, Laurel Creek, Pinehurst Lake, Rockwood, and Shades Mills Conservation Areas. Revenue to October 31 is \$9.05 million, compared to an annual revenue budget of \$8.00 million.
2. Head Office roof replacement: A building condition assessment has been completed, and the consultant recommended replacement of the roof on the head office building. A tender call is planned for late 2018, with an estimated cost in excess of \$500,000. Work would be completed over a four week period during the summer. There are sufficient funds in the Building and Mechanical Equipment reserve to cover the cost.
3. Board Orientation: Following the October municipal election, watershed municipalities are in the process of appointing GRCA board members. Staff are preparing an orientation program for early in 2019. The program will include an overview of the Conservation Authorities Act, GRCA By-laws and strategic plan, followed by program area presentations on the priorities in the strategic plan. If there is sufficient interest, staff can schedule a half day orientation session for new board members, and any interested returning board members.
4. City of Hamilton's application for judicial review of the Mining and Lands Commissioner's decision regarding the NPCA's apportionment - On October 30th, at the hearing for the judicial review application in Divisional Court, the City of Hamilton brought a new motion requesting that the judicial review be heard by a bilingual panel due to the City of Hamilton's contention that the French version of s. 27 of the *Conservation Authorities Act* is relevant and will assist the Court in interpreting the meaning and legislative intent of the

provisions at issue. The panel granted the City's request. Therefore, a bilingual panel will be constituted and this matter will be heard at the next sittings of the Divisional Court, which is in February of 2019. .As a result, the outcome of the proceedings will not likely be known prior to the budget and general levy vote in February 2019.

Submitted by:

Joe Farwell, P.Eng.
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-11-18-110

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Cash and Investment Status – October 2018

Recommendation:

THAT Report Number GM-11-18-110 Cash and Investment Status – October 2018 be received as information.

Summary:

The cash position as at October 31, 2018 was \$32,403,875 with outstanding cheques written in the amount of \$377,773.

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
Deputy CAO/Secretary Treasurer

**Grand River Conservation Authority
Cash and Investments Status Report
October 31, 2018**

BANK ACCOUNTS	Location	Type	Amount	Interest Rate
	CIBC	Current Account	4,538,122	2.15%
	RBC	Current Account	157,387	nil
	Wood Gundy	Current Account	36,537	0.20%
	CIBC - SPP Holding	Current Account	251,592	2.15%
	TOTAL CASH - CURRENT ACCOUNT		4,983,638	

INVESTMENTS	Date Invested	Location	Type	Amount	Face Value Interest Rate	Yield Rate	Date of Maturity	2018 Total Interest Earned/ Accrued
	September 9, 2009	CIBC Renaissance	High Interest Savings Account	1,725,484	1.35%	1.35%	not applicable	35,590
	October 1, 2014	CIBC Trust Savings	High Interest Savings Account	2,230,354	1.35%	1.35%	not applicable	26,153
	July 15, 2016	One Investment Savings	High Interest Savings Account	4,130,353	2.165%	2.165%	not applicable	82,946
	December 8, 2014	Laurentian Bank	Bond	1,578,000	2.81%	2.364%	June 13, 2019	37,697
	January 28, 2015	CIBC	Step up bond	726,046	1.80%	1.80%	May 15, 2019	13,545
	September 3, 2015	CIBC	Step up bond	2,000,000	2.25%	2.25%	September 3, 2025	45,326
	October 14, 2015	Laurentian Bank	Bond	1,996,000	2.50%	2.62%	January 23, 2020	51,814
	March 1, 2016	CIBC	Bond	1,300,000	1.70%	1.80%	March 1, 2023	23,293
	September 16, 2016	CIBC	Bond	1,184,000	1.30%	1.30%	March 13, 2020	15,868
	August 24, 2017	Bank of Montreal	Bond	1,550,000	1.61%	2.01%	October 28, 2021	30,781
	March 15, 2018	Bank of Nova Scotia	Bond	2,000,000	3.036%	2.20%	October 18, 2019	36,266
	July 16, 2018	Bank of Nova Scotia	Bond	1,000,000	2.27%	2.23%	January 13, 2020	10,178
	October 11, 2018	National	Bond	2,000,000	2.404%	2.326%	October 28, 2019	10,266
	October 11, 2018	RBC	Bond	2,000,000	2.35%	2.34%	December 9, 2019	10,328
	October 11, 2018	Bank of Nova Scotia	Bond	2,000,000	2.27%	2.399%	January 13, 2020	10,445
	TOTAL INVESTMENTS			27,420,237				\$440,496

TOTAL CASH AND INVESTMENTS **\$32,403,875**

* Reserve Balance at December 31st, 2017 21,774,572

Investment By Institution

	<u>% of Total Portfolio</u>
C.I.B.C.	33%
Bank of Nova Scotia	18%
Bank of Montreal	6%
Royal Bank	7%
National	7%
Laurentian	13%
One Investment Program	15%
	<u>100%</u>

* Reserve balances are reviewed annually by the Board in November.

Grand River Conservation Authority

Report number: GM-11-18-116

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Financial Summary for the Period Ending October 31, 2018

Recommendation:

THAT the Financial Summary for the period ending September 30, 2018 be approved.

Summary:

The Financial Summary includes the 2018 *actual* year-to-date 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 \$133,000 at year-end is anticipated.

Report:

The Financial Summary is attached.

- A. Total Expenditures increased by \$40,000.
 - Operating Expenses increased by \$40,000.
 - Legal expenses related to enforcement of planning regulations increased by \$40,000 due to increased activity related to planning disputes
- B. NET Funding from Reserves increased by \$40,000.
 - Transfer from the Planning Enforcement reserve increased by \$40,000 to fund legal expenses in excess of budget.

Financial implications:

The activity summarized will result in a \$133,000 surplus 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
FINANCIAL SUMMARY - FORECAST**

General Membership November 23, 2018

FORECAST - SEPTEMBER 30, 2018 - NET RESULT **\$133,000**

CHANGES - October 2018

Sch 4	Resource Planning	(\$40,000) Legal Expenses	\$0
		\$40,000 Funding from Resource Planning Reserve increased	

FORECAST - OCTOBER 31, 2018 - NET RESULT **\$133,000**

**GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING October 31, 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	10,302,000	10,302,000	10,302,000	0
General Municipal Levy (Capital)	various	1,050,000	1,050,000	1,050,000	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	1,591,034	830,000	830,000	0
		12,207,936	12,332,000	13,042,445	12,332,000	12,332,000	0
Government Grants							
MNRF Transfer Payments	various	871,073	871,073	871,073	871,073	871,073	0
Source Protection Program-Provincial	various	1,570,408	1,575,000	1,016,792	1,435,000	1,435,000	0
Other Provincial	various	933,723	1,432,500	1,078,841	1,632,500	1,632,500	0
Federal	various	433,700	70,000	337,232	205,000	205,000	0
		3,808,904	3,948,573	3,303,938	4,143,573	4,143,573	0
Self Generated							
User Fees and Sales							
<i>Enquiries and Permits</i>	4	515,729	491,400	426,950	491,400	491,400	0
<i>Plan Input and Review</i>	4	457,368	410,000	398,104	410,000	410,000	0
<i>Nursery and Woodlot Management</i>	5	460,894	465,000	403,253	475,000	475,000	0
<i>Consulting</i>	4	0	0	3,726	0	0	0
<i>Conservation Lands Income</i>	10	53,610	71,000	46,738	71,000	71,000	0
<i>Conservation Areas User Fees</i>	13	8,480,836	8,000,000	9,061,308	8,950,000	8,950,000	0
<i>Nature Centres and Camps</i>	8	928,125	942,000	863,653	972,000	972,000	0
<i>Merchandising and Sales</i>	8	473	0	955	0	0	0
Property Rentals	11	2,937,919	2,900,700	2,771,462	2,870,700	2,870,700	0
Hydro Generation	12	572,154	470,000	443,331	470,000	470,000	0
Land Sales	10	0	0	1,166,343	1,168,000	1,168,000	0
Grand River Conservation Foundation	various	698,380	399,000	265,489	399,000	399,000	0
Donations	various	72,602	314,000	349,763	314,000	314,000	0
Landowner Contributions	5	200,118	200,000	189,648	200,000	200,000	0
Investment Income	14	442,984	450,000	332,614	450,000	450,000	0
Miscellaneous Income	various	98,391	48,000	17,711	58,000	58,000	0
Total Self-Generated Revenue		15,919,583	15,161,100	16,741,048	17,299,100	17,299,100	0
TOTAL REVENUE		31,936,423	31,441,673	33,087,431	33,774,673	33,774,673	0

**GRAND RIVER CONSERVATION AUTHORITY
STATEMENT OF OPERATIONS
FOR THE PERIOD ENDING October 31, 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	1,635,030	2,200,300	2,200,300	0
Flood Forecasting and Warning	2	700,905	800,400	628,613	800,400	800,400	0
Water Control Structures	3	1,550,381	1,725,700	1,382,030	1,725,700	1,725,700	0
Resource Planning	4	1,872,317	1,977,900	1,560,828	1,977,900	2,017,900	40,000
Forestry & Conservation Land Property Taxes	5	1,339,953	1,376,500	1,216,410	1,416,500	1,416,500	0
Conservation Services	6	764,450	861,000	663,741	861,000	861,000	0
Communications & Foundation	7	595,594	714,900	516,079	714,900	714,900	0
Environmental Education	8	1,326,109	1,316,400	1,201,214	1,346,900	1,346,900	0
Corporate Services	9	2,917,332	3,399,987	2,381,333	3,148,487	3,148,487	0
Conservation Lands	10	1,758,357	1,947,000	1,607,173	1,931,500	1,931,500	0
Property Rentals	11	2,178,441	1,595,400	1,421,548	1,690,400	1,690,400	0
Hydro Production	12	177,078	130,000	100,530	150,000	150,000	0
Conservation Areas	13	6,903,045	7,110,000	7,015,893	7,560,000	7,560,000	0
Miscellaneous	14	109,038	70,000	47,764	70,000	70,000	0
Information Systems	16	1,100,195	1,136,000	942,880	1,136,000	1,136,000	0
Motor Pool	16	789,383	898,000	750,647	898,000	898,000	0
Less: Internal Charges (IS & MP)	16	(1,889,578)	(2,034,000)	(1,693,527)	(2,034,000)	(2,034,000)	0
Total OPERATING Expenses		24,187,193	25,246,987	21,378,186	25,593,987	25,633,987	40,000
CAPITAL							
Water Resources Planning & Environment	1	73,117	110,000	72,880	110,000	110,000	0
Flood Forecasting and Warning	2	204,172	190,000	150,291	190,000	190,000	0
Water Control Structures	3	1,112,074	1,500,000	535,030	1,900,000	1,900,000	0
Nature Centres	8	0	0	0	0	0	0
Conservation Areas	13	859,691	1,820,000	1,343,484	1,820,000	1,820,000	0
Corporate Services	9	0	0	0	0	0	0
Information Systems	16	227,780	200,000	221,488	250,000	250,000	0
Motor Pool	16	170,756	500,000	347,544	500,000	500,000	0
Less: Internal Charges (IS & MP)	16	(461,383)	(410,000)	(697,305)	(440,000)	(440,000)	0
Total Capital Expenses		2,186,207	3,910,000	1,973,412	4,330,000	4,330,000	0
SPECIAL							
Water Resources Planning & Environment	1	279,571	285,000	240,776	335,000	335,000	0
Flood Forecasting and Warning	2	132,927	850,000	98,069	910,000	910,000	0
Forestry	5	185,284	270,000	150,980	270,000	270,000	0
Conservation Services	6	1,281,536	936,000	763,615	961,000	961,000	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	128,903	95,000	95,000	0
Conservation Lands	10	553,129	420,000	179,129	420,000	420,000	0
Property Development	11	0	50,000	0	50,000	50,000	0
Hydro Generation	12	112,472	300,000	70,921	0	0	0
Miscellaneous	14	28,890	35,000	28,236	35,000	35,000	0
Source Protection Program	15	1,570,408	1,575,000	1,118,731	1,435,000	1,435,000	0
Total SPECIAL PROJECTS Expenses		4,543,884	4,721,000	2,779,360	4,511,000	4,511,000	0
Total Expenses		30,917,284	33,877,987	26,130,958	34,434,987	34,474,987	40,000
Gross Surplus		1,019,139	(2,436,314)	6,956,473	(660,314)	(700,314)	(40,000)
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	0	381,000	421,000	40,000
NET SURPLUS		412,314	0	7,272,305	133,000	133,000	0

Grand River Conservation Authority

Report number: GM-11-18-113

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Reserves 2018

Recommendation:

THAT the *Property and Liability Insurance* Reserve be maintained at an amount equal to opening balance, less significant uninsured losses, and no interest to be allocated to this reserve for 2018;

AND THAT the *Building and Mechanical Equipment* Reserve be maintained at an amount equal to opening balance, less expenses or any unspent budgeted building maintenance and equipment amounts be transferred to this reserve for future expenditures, and no interest to be allocated to this reserve for 2018;

AND THAT the *Small Office Equipment* Reserve be maintained at an amount equal to opening balance, plus interest;

AND THAT the *Personnel* Reserve be maintained at an amount equal to opening balance, plus any NEER Rebate assessed by Worker's Safety Insurance Board (WSIB) less expenditures or accruals for sick leave, vacation, staff restructuring and/or termination of employees, and no interest be allocated to this reserve for 2018;

AND THAT the *Nature Centre* Reserves be maintained at amounts equal to opening balance, less expenses related to major maintenance of the Nature Centre buildings, plus \$30,000 to Guelph Nature Centre Reserve for purposes of putting aside funding towards the construction of a new Guelph Nature Centre, plus interest;

AND THAT the *Information Systems and Technology* (formerly Computer Replacement) Reserve be maintained at a level where interest income and charge-out rates equal total operating and capital costs over the long run;

AND THAT the *Cottage Lot Program* Reserve be maintained at an amount equal to the opening balance, plus unspent 2018 budgeted cottage lot expenses, less unbudgeted expenses related to EAB infestation, plus interest;

AND THAT the *Water Management Plan* Reserve be maintained at an amount equal to opening balance, less expenses related to updating the water management plan, plus interest;

AND THAT the *Planning Enforcement* Reserve be maintained at an amount equal to opening balance, plus any savings related to budgeted and unspent

legal fees, less any expenses in excess of budget related to enforcement of planning regulations, plus interest;

AND THAT the *Property Rental* Reserve be maintained at an amount equal to opening balance, less unbudgeted maintenance expenses related to rental properties, plus any unspent budgeted property repairs and maintenance expenses including demolition costs, plus interest;

AND THAT the *Forestry Management* Reserve be maintained at an amount equal to opening balance plus transfers to reserve of timber revenues, less expenses related to forest management expenses (including Emerald Ash Borer (EAB) expenses) as budgeted (or forecast), plus interest;

AND THAT the *Cambridge Desiltation Pond* Reserve be maintained at an amount that reflects the funds advanced to the Authority by the City of Cambridge, less actual cost to maintain the pond, plus interest;

AND THAT the *Completion of Capital Projects* Reserve be maintained at an amount that reflects obligations under outstanding capital contracts, less payments;

AND THAT the *Gravel* Reserve be maintained at an amount that includes all gravel income to date, less eligible expenditures, consistent with the original or subsequent agreements with the Ministry of Natural Resources and Forestry, plus interest;

AND THAT the *Land Sale* Reserves be maintained at amounts that include the proceeds of land sales, less costs (including interest charges) incurred to prepare lands for sale, less net expenditures and/or borrowing authorized by the Ministry of Natural Resources and Forestry (MNRF) and as per policy statement dated June 13, 1997, less unbudgeted hydro capital maintenance expenses, plus any repayment of the hydro loan, less spending on hazard tree management as approved by correspondence from MNRF dated April 25th, 2018, less floodplain mapping expenses, plus interest;

AND THAT the *General Capital* Reserve be maintained at an amount which reflects the surplus transferred in from the former Dunnville Lock reserve, less expenditures for any Water Management Capital projects approved by the General Membership, plus interest;

AND THAT the *Conservation Areas Capital/Stabilization* Reserve be increased by \$300,000 representing an amount to be set aside for future capital projects, increased by any surplus generated by the Conservation Areas in 2018, and less spending for trail development at Dickson Wildlife area, plus interest;

AND THAT the *Gauge* Reserve be maintained at an amount equal to opening balance less expenses related to gauge equipment and floodplain mapping projects as identified in the budget (or forecast) as applicable, plus interest;

AND THAT the *Watershed Restoration* Reserve be maintained at an amount equal to opening balance, plus special project funding surpluses, less expenditures for wetland acquisitions or enhancements in the watershed, less

expenditures for natural heritage restoration projects and conservation services watershed restoration projects as outlined in the budget (or forecast), plus interest;

AND THAT the *Water Control Structures Reserve* be maintained at an amount equal to the opening balance, less any funding required for spending in excess of budget, plus any unspent major maintenance budget amount, plus any unspent operating budget amount that was to be funded from general levy, plus interest;

AND THAT the *Motor Pool Equipment Replacement Reserve* be maintained at a target level of approximately 25% of replacement cost of the Motor Pool fleet, plus interest;

AND THAT the *Motor Pool Insurance Reserve* be maintained at an amount equal to the opening balance, plus interest, less significant uninsured losses.

Summary:

The Grand River Conservation Authority's reserves are established by Resolutions of the General Membership and are presented in the audited financial statement as a part of the "Accumulated Surplus", in accordance with Generally Accepted Accounting Principles (GAAP). Details of reserve amounts are also provided in the notes to the audited financial statements. This report outlines the nature of movements to and from reserves and provides estimates of reserve balances for 2018.

By year-end 2018 reserves are forecast to be \$22.6 million which represents a decrease of \$100,000.

Report:

Reserves are established and confirmed annually by Resolution of the Board. Some Reserves are required by provincial policies (Gravel and Land Sales) or agreements with other agencies (Nature Centre Capital) and some are discretionary and used to avoid constantly changing or special levies (Computer Replacement, Motor Pool Replacement, General Capital Reserve). Conservation Authorities are not allowed to debenture for expenditures, so it is important to anticipate needs and set aside funds for future projects in reserves. Interest is accrued to reserves where required by provincial policies and/or board direction.

A description of reserve activity during year 2018 is presented in the following two formats:

1. Breakdown by Operating, Capital, Motor Pool
2. Breakdown by "GRCA-controlled" reserves and reserves with "Outside Control"

Reserves are forecast to be \$22.6 million which represents a decrease of \$100,000.

Significant forecast reserve movements (approximate amounts) include:

Increases to Reserves:

• Land Sale Proceeds	\$ 1,170,000
• Conservation Area Surplus allocation & capital allocation	\$ 800,000
• Interest Income Earned	\$ 360,000
• Building Reserve (unspent HO budget)	\$ 150,000

Decreases to Reserves:

• Conservation Area Capital Projects	\$ 1,170,000
• Emerald Ash Borer Expenses	\$ 400,000
• Floodplain Mapping Project	\$ 340,000
• Water Control Major Maintenance expenses	\$ 200,000
• Land Sale/Purchase expenses	\$ 80,000
• Computer Reserve	\$ 110,000
• Motor Pool Reserve	\$ 150,000
• Contaminated Site Expenses	\$ 140,000

Land Sale Proceeds Reserves

These reserves have a provincial interest may be used for the following types of expenditures:

1. Acquisition of environmentally sensitive lands and ecologically significant lands.
2. Major maintenance of flood control structures.
3. Hazard land mapping in support of plan input or regulation programs.
4. Flood and erosion capital projects and related studies.
5. Watershed/Subwatershed management plans, which are inter-municipal in scope.
6. Other Capital Projects of provincial interest, with prior approval.

The Ministry of Natural Resources and Forestry (as per policy statement 6.3 dated June 13, 1997) retains the right to either deny use of reserves that have a provincial interest or to otherwise direct the use of such reserves.

Over and above the uses outlined above, GRCA obtained permission and plans to use the Land Sale Proceeds Reserve for the following activities:

- Emerald Ash Borer
- Septic/Well Expenses

The Land Sale Proceeds reserve is forecast to be approximately \$6.2 million by yearend 2018. Following the 2018 June provincial election the Lieutenant Governor in Council assigned ministerial power for conservation authorities from MNR to the Ministry of Environment, Conservation and Parks (MECP). Staff have requested (MECP) approval to utilize this reserve to update/complete master plans for GRCA lands. In April 2018 GRCA received permission from

MNRF to utilize \$1.8 million of the Land Sale Proceeds reserve for hazard tree management during the period 2018 to 2021. During the five year forecast exercise staff will consider if certain expenditures might be funded via the Land Sale Proceeds reserve and seek board approval before submitting a request to MECF.

Attached Schedules:

- Schedule 1 Reserve Activity Detail – Forecast 2018
(by GRCA controlled and Outside Control)
- Schedule 2 Reserve Activity Detail – Forecast 2018
(by Operating, Capital, Motor Pool)
- Schedule 3 Graph of Reserves – 2009 to 2018
- Schedule 4 Purpose of Reserve and Guidelines for calculating amounts

Financial implications:

In 2018 it is forecast that reserves will decrease by \$ 112,000 to \$22,585,000. Reserves were budgeted to decrease \$2,024,000 in 2018.

Significant differences between budget and forecast are:

	Impact on Reserves Positive/(Negative)
• Land Sale Proceeds	\$ 1,200,000
• Conservation Area Surplus to reserves	\$ 500,000
• Parkhill Hydro Project cancelled	\$ 410,000
• Unspent Head Office capital budget to reserve	\$ 150,000
• Water Control capital spending increased	\$ (200,000)
• Land Sale/Acquisition expenses over budget	\$ (80,000)
• Contaminated Site expenses increased	\$ (140,000)

Other department considerations: None.

Prepared by:

Sonja Radoja
Manager Corporate Services

Approved by:

Karen Armstrong
Deputy CAO/Secretary Treasurer

SUMMARY RESERVE REPORT - FORECAST 2018

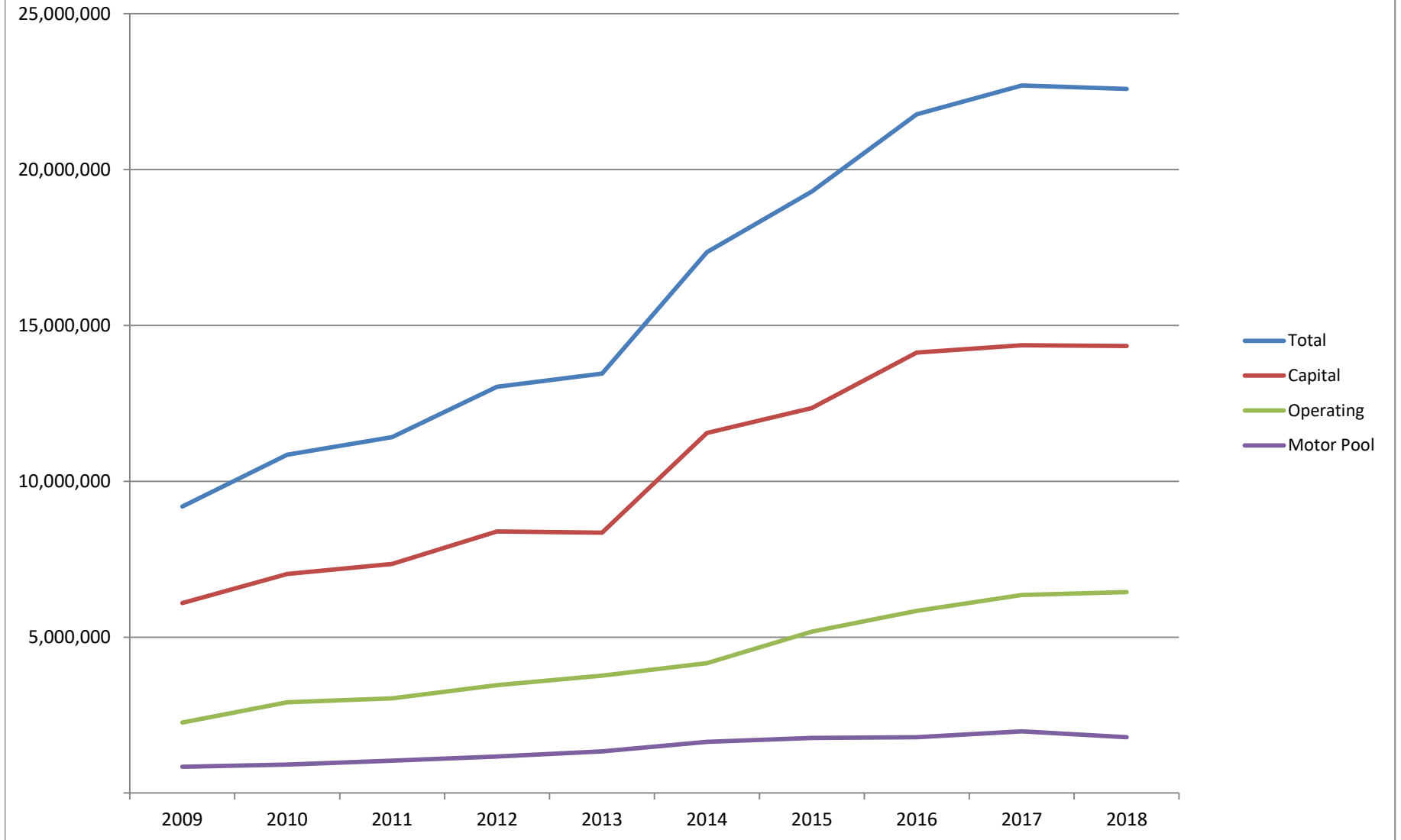
General Meeting - November 23, 2018

	ACTUAL 2017	"NET CHANGE" INCREASE/(DECREASE) 2017 VS 2018	DETAILS OF "NET CHANGE" FORECAST 2018			FORECAST 2018
			Transfer In (Interest Income)	Transfer In	Transfer Out Description of Transfer	
Type A: GRCA Controlled						
Operating Reserves (designated)						
Property & Liability Insurance	270,383	0	0			270,383
Building & Mechanical Equipment	1,496,833	150,000	0	150,000	IN-Unspent Head Office Major Maintenance Expenses	1,646,833
Small Office Equipment	7,257	133	133			7,390
Personnel	1,037,112	0	0			1,037,112
Forestry	648,359	11,869	11,869			660,228
Information Systems and Technology	1,197,993	(89,764)	21,671	1,274,565	(1,386,000) IN-Chargebacks; OUT-Operating/Capital costs	1,108,229
Cottage Operations	509,301	9,324	9,324			518,625
Grand River Watershed Management Plan	103,190	1,889	1,889			105,079
Planning Enforcement	417,142	(32,363)	7,637		(40,000) OUT-Legal Expenses	384,779
Property Rental Expenses	337,824	6,185	6,185			344,009
Watershed Restoration	103,552	1,896	1,896			105,448
Motor Pool Equipment	1,900,423	(189,603)	34,397	1,174,000	(1,398,000) IN-Chargebacks;OUT-Operating/Capital costs	1,710,820
Motor Pool Insurance	81,254	1,488	1,488			82,742
Capital Reserves (designated)						
Water Control Structures	2,812,749	(148,505)	51,495		(200,000) OUT-Major Maintenance Water Control Structures	2,664,244
Cambridge Desiltation Pond	8,022	(860)	140		(1,000) OUT-Cambridge Desiltation Pond costs	7,162
Completion of Capital Projects	147,000	0	0			147,000
Conservation Areas-Capital	1,240,000	(865,679)	0	300,000	(1,165,679) IN-\$300K Reserve for Capital spending, OUT-\$1,150K Cons Area Capital,\$15,679 Dickson Trail	374,321
Conservation Areas-Stabilization	3,034,499	577,726	77,726	500,000	IN-Conservation Area Surplus	3,612,225
Gauges	541,859	(40,080)	9,920		(50,000) OUT-Gauge Expenses	501,779
Capital Reserves (undesignated)						
General Capital Reserve	552,103	10,108	10,108			562,211
Total Type A: GRCA Controlled	16,446,855	(596,236)	245,878	3,398,565	(4,240,679)	15,850,619
Type B: Reserves with Outside Control						
With MNR Interest (Capital Reserves)						
Gravel	235,217	4,305	4,305			239,522
Woolner	1,932,841	(364,937)	35,063		(400,000) OUT-EAB \$400K	1,567,904
Contaminated Sites	(725,938)	(154,455)	(14,455)		(140,000) OUT-Contaminated Site expenses	(880,393)
Residential Property Sales	280,239	(5,223)	4,567		(9,790) OUT-Wells/Septic Expenses	275,016
Valley Lands - KW	1,484,148	27,172	27,172			1,511,320
Valley Lands - KW (Pioneer Towers)	1,977,775	158,634	33,463	162,000	(36,829) IN-Hydro Revenue \$50,000, Parkhill Cost Recovery \$112,000,OUT-Land Purchase	2,136,409
Valley Lands - Guelph	203,155	707,225	5,233	738,419	(36,427) IN-Land Sale Proceeds, OUT-Land Sale Expenses \$32,387, Demolitions \$4,040	910,380
Laurel Creek Land	526,954	(330,353)	9,647		(340,000) OUT-Floodplain Mapping Project	196,601
Blandford-Blenhiem Land Sales	0	(13,240)			(13,240) OUT-Land Sale Expenses	(13,240)
Puslinch Land	170,487	(10,498)	3,092		(13,590) OUT-Land Sale Expenses	159,989
Woolwich Land	20,089	368	368			20,457
Elora	(79,583)	430,908	2,984	427,924	IN-Land Sale Proceeds	351,325
With School Board Interest (Operating Reserves)						
App's Nature Centre	23,398	428	428			23,826
Laurel Creek Nature Centre	66,065	1,209	1,209			67,274
Guelph Lake Nature Centre	104,633	31,916	1,916	30,000	IN-allocation for new Guelph Nature Centre construction	136,549
Taquanyah Nature Centre	3,567	65	65			3,632
Shade's Mills Nature Centre	27,327	500	500			27,827
Total Type B: Outside Control	6,250,374	484,024	115,557	1,358,343	(989,876)	6,734,398
TOTAL	\$22,697,229	(112,212)	\$361,435	\$4,756,908	(\$5,230,555)	\$22,585,017

<i>Balance</i>	OPERATING RESERVES	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Balance</i>	<i>Forecast</i>	<i>Fcst Change</i>	<i>Fcst</i>	<i>Recommended</i>	<i>Recommended</i>
<i>Dec 31 17</i>		<i>Income to Res</i>	<i>Interest</i>	<i>Outputs fr Res</i>	<i>Sept 30/18</i>	<i>Interest</i>	<i>Incr (Decr)</i>	<i>Dec 31/18</i>	<i>Changes</i>	<i>2017 Balance</i>
270,383	Property & Liability Insurance		-		270,383	0		270,383		270,383
1,496,833	Building & Mechanical Equipment				1,496,833	0	150,000	1,646,833		1,646,833
7,257	Small Office Equipment (consolidate)		100		7,357	33		7,390		7,390
1,037,112	Personnel Reserve		-		1,037,112	0		1,037,112		1,037,112
23,398	App's Nature Centre		321		23,719	107		23,826		23,826
66,065	Laurel Creek Nature Centre		907		66,972	302		67,274		67,274
104,633	Guelph Lake Nature Centre	30,000	1,437		136,070	479		136,549		136,549
3,567	Taquanyah Nature Centre		49		3,616	16		3,632		3,632
27,327	Shade's Mills Nature Centre		375		27,702	125		27,827		27,827
1,197,993	Information Systems and Technology	955,924	16,253	(1,085,960)	1,084,210	5,418	18,601	1,108,229		1,108,229
509,301	Cottage Lot Program		6,993		516,294	2,331		518,625		518,625
103,190	Water Management Plan		1,417		104,607	472		105,079		105,079
417,142	Planning Enforcement Reserve		5,728		422,870	1,909	(40,000)	384,779		384,779
337,824	Property Rental Expenses		4,639		342,463	1,546		344,009		344,009
648,359	Forestry Management Reserve		8,902		657,261	2,967		660,228		660,228
103,552	Watershed Restoration (Wetland Restoration)		1,422		104,974	474		105,448		105,448
6,353,936	TOTAL OPERATING RESERVES	985,924	48,543	(1,085,960)	6,302,443	16,181	128,601	6,447,225		6,447,225
(615,788)										
<i>Balance</i>	CAPITAL RESERVES	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Balance</i>	<i>Forecast</i>	<i>Fcst Change</i>	<i>Fcst</i>	<i>Recommended</i>	<i>Recommended</i>
<i>Dec 31 17</i>		<i>Income to Res</i>	<i>Interest</i>	<i>Outputs fr Res</i>	<i>Sept 30/18</i>	<i>Interest</i>	<i>Incr (Decr)</i>	<i>Dec 31/18</i>	<i>Changes</i>	<i>2017 Balance</i>
8,022	Cambrige Desiltation Pond		105	(552)	7,575	35	(448)	7,162		7,162
147,000	Completion of Capital Projects		0		147,000	0		147,000		147,000
235,217	Gravel		3,229		238,446	1,076		239,522		239,522
-725,938	Contaminated Sites		(10,841)	(140,000)	(876,779)	-3,614		-880,393		-880,393
1,932,841	Land Sale - Woolner		26,297	(149,667)	1,809,471	8,766	(250,333)	1,567,904		1,567,904
0	Land Sale - Horst		0		0	0		0		0
1,484,148	Land Sale - Valley Lands - KW		20,379		1,504,527	6,793		1,511,320		1,511,320
1,977,775	Land Sale-Valley Land-KW (Pioneer Tower)		25,097	(36,829)	1,966,043	8,366	162,000	2,136,409		2,136,409
203,155	Land Sale - Valley Land - Guelph	738,419	3,925	(36,427)	909,072	1,308		910,380		910,380
280,239	Land Sales - Residential Properties		3,425	(9,790)	273,874	1,142		275,016		275,016
526,954	Land Sale - Laurel		7,235		534,189	2,412	(340,000)	196,601		196,601
	Land Sale - Blandford-Blenheim		0	(13,240)	(13,240)	0		-13,240		-13,240
170,487	Land Sale - Puslinch		2,319	(13,590)	159,216	773		159,989		159,989
20,089	Land Sale - Woolwich		276		20,365	92		20,457		20,457
-79,583	Land Sale - Elora	427,924	2,238		350,579	746		351,325		351,325
552,103	General Capital Reserve		7,581		559,684	2,527		562,211		562,211
541,859	Water Gauges		7,440		549,299	2,480	(50,000)	501,779		501,779
4,274,499	Conservation Areas -Capital & Stabilization	500,000	58,294	(745,679)	4,087,114	19,431	(120,000)	3,986,545		3,986,545
2,812,749	Water Control Structures		38,621		2,851,370	12,874	(200,000)	2,664,244		2,664,244
14,361,616	TOTAL CAPITAL RESERVES	1,666,343	195,620	(1,145,774)	15,077,805	65,207	(798,781)	14,344,231	0	14,344,231
(615,788)										
<i>Balance</i>	MOTOR POOL RESERVE	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Balance</i>	<i>Forecast</i>	<i>Fcst Change</i>	<i>Fcst</i>	<i>Recommended</i>	<i>Recommended</i>
<i>Dec 31 17</i>		<i>Income to Res</i>	<i>Interest</i>	<i>Outputs fr Res</i>	<i>Sept 30/18</i>	<i>Interest</i>	<i>Incr (Decr)</i>	<i>Dec 31/18</i>	<i>Changes</i>	<i>2017 Balance</i>
1,900,423	Equipment Replacement	841,035	25,797	(970,896)	1,796,359	8,599	(94,139)	1,710,819		1,710,819
81,254	Insurance		1,116		82,370	372		82,742		82,742
1,981,677	TOTAL MOTOR POOL RESERVE	841,035	26,913	(970,896)	1,878,729	8,971	(94,139)	1,793,561	0	1,793,561
<i>Balance</i>	TOTAL RESERVES	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Year-to-date</i>	<i>Balance</i>	<i>Forecast</i>	<i>Fcst Change</i>	<i>Fcst</i>	<i>Recommended</i>	<i>Recommended</i>
<i>Dec 31 17</i>		<i>Income to Res</i>	<i>Interest</i>	<i>Outputs fr Res</i>	<i>Sept 30/18</i>	<i>Interest</i>	<i>Incr (Decr)</i>	<i>Dec 31/18</i>	<i>Changes</i>	<i>2017 Balance</i>
6,353,936	Operating Reserves	985,924	48,543	(1,085,960)	6,302,443	16,181	128,601	6,447,225		6,447,225
14,361,616	Capital Reserves	1,666,343	195,620	(1,145,774)	15,077,805	65,207	(798,781)	14,344,231		14,344,231
1,981,677	Motor Pool Reserves	841,035	26,913	(970,896)	1,878,729	8,971	(94,139)	1,793,561		1,793,561
22,697,229	TOTAL RESERVES	3,493,302	271,076	(3,202,630)	23,258,977	90,359	(764,319)	22,585,017	0	22,585,017

Grand River Conservation Authority Reserves 2009 to 2018

SCHEDULE 3



GRAND RIVER CONSERVATION AUTHORITY
PURPOSE OF RESERVES & GUIDELINES FOR CALCUALATING AMOUNTS

Reserves	Purpose and Guidelines
Property & Liability Insurance	For losses not covered by our property and liability insurance policies and to cover deductibles as necessary. Reserve was established with premium savings realized at the time GRCA increased the deductibles.
Building and Mechanical Equipment	For future head office large repairs and maintenance (office renovations, roof, roads, boiler room, air conditioning).
Small Office Equipment	For unbudgeted replacements of small office equipment.
Personnel	For unbudgeted expenses related to compensation and benefits including: restructuring, severance, sick leaves, vacation liability, emergency costs (i.e. flood overtime, pandemic), LTD severance.
Nature Centres	For building major maintenance and repairs.
Information Systems and Technology <i>(formerly called Computer Replacement)</i>	For computer equipment, telecommunications equipment and software. The reserve acts as a pool with operating and capital expenses funded by this reserve and then internal charges to departments used to replenish the reserve. Internal charges set to cover average annual cost (operating and capital) of information systems and technology.
Cottage Operations	For cottage lot program common area service expenses (i.e. roads and hazard tree maintenance). Allows for smoothing of costs included in annual operating budget and available to fund unanticipated unbudgeted costs.
Grand River Management Plan	For expenses related to implementing and maintaining the Grand River Management Plan. Established with surplus realized in 2008.
Planning Enforcement	For expenses related to enforcement of planning regulations.
Forest Management	For expenses related to forest management. Each year Timber Sale revenue allocated to the reserve and surplus from the Private Land Tree Planting program may be allocated to this reserve.
Property Rental	For unanticipated unbudgeted property rental expenses. Each year if the property rental program realizes a surplus an amount may be allocated to the reserve.

Reserves	Purpose and Guidelines
Cambridge Desiltation Pond	For expenses related to maintaining the City of Cambridge Pond as per agreement. City originally advanced funds to GRCA for this work. Each year actual expenditures funded by this reserve.
Completion of Capital Projects	For expenses related to projects underway (committed). This reserve includes funds set aside for Upper Grand Restoration Projects and each year actual expenditures funded through this reserve.
Gravel	For expenses that are in accordance with MNR policies (including land purchases) and for water treatment capital expenditures. Any gravel income would be added to this reserve.
Land Sale Proceeds	Reserve established via land sale proceeds net of selling costs and costs to prepare land for sale. Expenditures funded by this reserve must be in accordance with Ministry of Natural Resources and Forestry (MNRF) policies. Funds were borrowed from this reserve to fund major maintenance of GRCA turbines and the reserve is being repaid with hydro generation revenue over time (\$135,000 revenue budgeted to be allocated back to the reserve annually). To the extent that hydro revenue realizes a surplus in excess of budgeted amount, this excess is also repaid to the reserve. During 2018 approval received from MNRF to utilize up to \$1.8 million over the period 2018 to 2021 for hazard tree management. Following the 2018 June provincial election the Lieutenant Governor in Council assigned ministerial power for conservation authorities from MNRF to the Ministry of Environment, Conservation and Parks (MECP).
General Capital	For expenses related to GRCA water management capital projects. This reserve was originally established with funds held for the Dunnville lock project which never proceeded.
Gauges	For expenses related to construction of water monitoring gauges. Reserve established from prior years unspent gauge budgets.
Watershed Restoration (previously Wetland Acquisition)	For expenses related to wetland acquisitions or enhancements to wetlands in the watershed, natural heritage restoration projects, and conservation services watershed restoration projects. Reserve established from violation settlement proceeds, 2015 Biennial Tour surplus and 2015 COA funding.

Reserves	Purpose and Guidelines
Conservation Areas Capital/Stabilization	<p><u>Capital:</u></p> <p>For capital expenses that are unanticipated and/or budgeted for. There is an annual budgeted allocation of \$300,000 to this reserve for future capital projects. To the extent that capital projects were budgeted for and not completed by year-end, any unspent amount will be placed in this reserve.</p> <p><u>Stabilization:</u></p> <p>To fund operating shortfalls. This reserve is increased in years when the conservation areas achieve an overall surplus.</p>
Water Control Structures	<p>For expenses related to major maintenance of water control structures. To extent that capital projects were budgeted for and not completed by year-end, any unspent amount will be placed in this reserve. This reserve will also be increased by any operating surplus realized by the Dam program. Allows for smoothing of costs included in annual operating budget and available to fund unanticipated unbudgeted costs.</p>
Motor Pool Equipment Replacement	<p>For motor pool equipment. The reserve acts as a pool with operating and capital expenses funded by this reserve and then internal charges to departments used to increase the reserve. A target amount for this reserve is approximately 25% of replacement cost. Internal charges set to cover average annual cost (operating and capital) of motor pool operations.</p>
Motor Pool Insurance	<p>For expenses related to non-insured vehicle damage/loss including deductibles. Reserve was established with premium savings realized at the time GRCA increased the deductibles.</p>

Grand River Conservation Authority

Report number: GM-11-18-114

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Proposed 2019 Outdoor Education User Fees

Recommendation:

THAT the proposed Outdoor Education User fees for School programs be approved and become effective on September 1, 2019 until June 30 2020.

AND THAT the proposed ski program fees and the Outdoor Education User fees for non-school programs become effective January 1, 2019.

Summary:

This report outlines the proposed Outdoor Education fees for the upcoming calendar year and school year. The report includes recommendations to increase selected Nature Centre Outdoor Education program fees. These increases are necessary to ensure that revenues combined with the budgeted levy support meet annual expenses. As noted in Report GM-03-17-34 the largest challenge facing the Outdoor Education program is the funding gap for infrastructure and capital improvements of the buildings and learning grounds. The proposed increases assume that levy funding will continue to support approximately 24% of the program budget to reflect the watershed wide benefit of connecting and engaging residents in outdoor education.

Report:

The Outdoor Education Program at the GRCA is operated year round at four nature centres and seasonally at two. Strategic Priority 3 of the GRCA strategic plan is to connect people with the environment through outdoor experiences. The GRCA has operated an Outdoor Education program since the 1970's when the GRCA board recognized the importance of getting children outdoors and connected to nature. The Outdoor Education program provides children and adults with experiential learning in outdoor settings. These discovery based programs are designed to create memorable and positive connections with nature and the watershed environment. Through the Outdoor Education Program children and adults are encouraged to get their hands dirty, to learn how to enjoy the outdoors regardless of the weather and to appreciate the natural connections that exist in the watershed.

The Outdoor Education Program relies on three streams of funding, levy, self-generated funds and funds from the Grand River Conservation Foundation or other grants and sponsorships. In 2018 approximately 24% (\$354,000) of the \$1,346,000 budget is levy. Approximately 75% of the annual budget is self-generated through program fees and program delivery agreements. The Grand River Conservation Foundation supports a baseline contribution averaging \$50,000 annually. Table 1 shows the budgeted revenue for 2018.

As noted in Report GM-03-17-34 the largest challenge facing the Outdoor Education program is the funding gap for infrastructure and capital improvements of the buildings and learning grounds. The

annual revenue is set to cover operating costs. A capital forecast for the nature centres will be prepared in 2019.

Table 1- 2018 Budgeted Sources of Revenue

Source of Revenue	2018 Budget
General Levy	\$354,400
School Board Agreements	\$493,000
School Programs	\$85,000
Non School Programs	\$33,000
Day Camps	\$331,000
Grand River Conservation Foundation	\$50,000
Total Revenue	\$1,346,400

The central principle in reviewing and setting fees is to control dependency on the Authority levy funds by recovering as much of the program costs as the market will bear. There is recognition that connecting people to the environment provides a wider benefit to watershed health and the profile of the GRCA than the benefit to the individual user. To achieve this wider goal it is important to keep the programs accessible to watershed residents. To determine the fees charged for each of the outdoor education programs a number of factors are considered including:

- the availability of similar services
- fees charged for similar services
- demand for the program
- benefitting user of the program

This report includes the proposed fees for school programs, group programs and day camp for 2019. The report also provides general criteria for setting program fees for workshops, speciality programs and events.

In addition to programs that have associated fees the Outdoor Education staff are involved in community outreach and promotion of the GRCA at a variety of events such as water festivals, Youth Outdoors Day, environmental events, educational workshops and other community events. These outreach opportunities include promotion of parks, nature centre programs and GRCA activities. These activities benefit the profile of the GRCA and increase knowledge of programs and services offered by the GRCA.

School Program

a) Regular School Programs

Curriculum based outdoor education programs are the core business of the Nature Centres. The programs are offered throughout the school year at Apps’ Mill, Laurel Creek, Guelph Lake and Shade’s Mills Nature Centres. Programs are offered in the spring and fall at Taquanyah Nature Centre and Rockwood Nature Centre (trailer). Programs are available for preschool to grade 12. The majority of the programs are delivered through annual contracts negotiated with the Wellington Catholic District School Board, Waterloo Catholic District School Board, Brant Haldimand Norfolk Catholic District School Board and the Grand Erie School Board. These agreements account for approximately 80% of the school programs delivered at the Nature Centres. These agreements

account for approximately 35% of the self-generated revenue for the program. Through the agreements with these school boards the GRCA provides outdoor learning opportunities to more than 1000 school classes. These school boards have been partners in outdoor education for more than 30 years and the agreements are reviewed and renewed annually.

In addition to the programs delivered through the agreements, many teachers book field trips to the Nature Centres. On average 250 school classes not covered by the school board agreements attend programs at the Nature Centres. These classes come from schools located both outside and inside the watershed. The current fee for a class to attend a program at a nature centre is \$350 for a full day. There has been a \$25 discount for booking two classes for the same day. The fee for two full day classes is \$675. A half day program is \$200 per class or \$375 for two classes at the same time. The maximum number of students per class is 30.

It is proposed that the discount for booking the second class be eliminated and that the full day fee increase to \$360 per class. Half day programs will remain at \$200 per class and eliminate the discount for booking the second class.

b) Cross Country Ski Programs

Cross Country skiing is available Shade’s Mills Nature Centre in partnership with the Conservation Area. Outdoor education staff provides students with basic ski instruction and safety. Once the class is comfortable on their skis the instructor leads the classes on the trails, providing additional instruction, tips and nature observations along the way. If the conditions do not allow for skiing the class is provided with an outdoor discovery program.

Ski equipment repair and replacement has a higher cost than regular outdoor programs resulting in a higher fee. The current fee for cross country skiing is \$375 for a full day or \$225 for a half day. This fee is not adequate to deal with additional equipment costs. It is proposed that this program fee be the same as a regular school program \$360 plus \$5 per participant equipment rental. It is proposed that January 2019 the fee be \$350 per class plus \$5 per participant for equipment rental.

c) Specialist High Skills Major Certification Programs

Specialist High Skills Majors (SHSM) is a Ministry of Education approved program that allows grade 11 and 12 students to focus their learning on a specific economic sector while meeting the requirements to graduate from secondary school. The GRCA currently offers six specialized certifications for the environmental SHSM. There is also a cross sectoral certification offered in Innovation, Creativity and Entrepreneurship (ICE) where students seek creative solutions to multi-sectoral challenges. In the case of ICE programs offered at the GRCA nature centres the challenges relate to multi-sectoral environmental issues. These programs require additional preparation and evaluation of the student achievement during the program. These certifications are currently offered at \$375 per day and in 2019 it is proposed that the fee be \$400 per day.

Table 2 - Proposed 2019 School Program Fees

	2018 Program Fees	2019 Proposed Fees
Full Day Program	\$350	\$360
Full Day additional class	\$325	\$360
Half Day Program	\$200	\$200
Half Day additional class	\$175	\$200

	2018 Program Fees	2019 Proposed Fees
Cross Country Ski Full Day	\$375	\$360 plus \$5 per participant
Cross Country Ski Day additional class	\$325	\$360 plus \$5 per participant
Cross Country Ski Half Day	\$225	\$200 plus \$5 per participant
Cross Country Ski Half Day additional class	\$175	\$200 plus \$5 per participant
SHSM Certification Programs	\$375	\$400

Non School Programs

Weekend and weeknight programming expands the usage of the existing infrastructure as well as expanding the reach of GRCA programming to a wider audience. The programs offered on weekends, week nights and during school breaks engage more people with nature and the environment and . Most of the current programs are targeted to youth such as day camps, youth groups and birthday parties. New programs to encourage participants of all ages are being developed.

Non school program revenue represents approximately 31% of the self generated revenue with the majority of the revenue attributed to summer day camp.

a) Organized Groups and Clubs

Outdoor discovery and adventure programs are very popular with Brownies, Sparks, Cubs, Scouts and Guides. The GRCA offers a number of badge programs for these groups. There are also variety of outdoor skills and discovery programs for organized groups such as church youth groups, naturalist clubs and teams. These programs include but are not limited to snow shoe hikes, survival skills, orienteering, or evening hike. Programs are offered as two or three hour programs. For most groups a three hour program includes an outdoor campfire as a wrap up.

The current fee for a 2 hour program for an organized group is \$150 and a three hour program is \$200. It is proposed that the fees increase to \$155 for a two hour program and \$210 for a three hour program.

b) Eco-Adventure Birthday Parties

Eco-Adventure birthday parties are offered at the Nature Centres on weeknights and weekends. These programs are suitable for children from ages 4 and up. There are a number of environmental and nature based themes to choose from. A two hour party includes a guided outdoor activity, time indoors to meet the animals and time for birthday snacks or presents. A three hour party includes a camp fire and longer outdoor activity. The current fee for a two hour birthday party is \$150 and a three hour party is \$200. It is proposed that the fees increase to \$165 for a two hour party and \$220 for a three hour party.

c) Day Camp

The GRCA Day Camp program is growing in popularity. The day camps focus on getting kids outdoors and exploring nature. The program has been expanding each year and in addition to increasing the number of camps and camper spaces at each nature centre the program has also expanded to offer March Break, Christmas Break and Professional Development Day Camps.

The day camp program primarily serves children ages 6-14 although speciality camps are offered for naturalists in training, ages 14-16. In 2018 the GRCA offered approximately 10,000 camper days of camp.

The basic fee for a week of day camp in 2018 was \$200. The Naturalist in Training camp was \$400 per camper and includes a week of camp with a one night camp out and a week of being a counsellor/naturalist in training. Speciality camps which include canoeing were \$240 to \$270 per week. The PD day camps throughout the school year were \$50 per day.

It is proposed that for 2019 the fee for a basic week of day camp increase to \$205. Speciality camps with additional activities will range from \$255 to \$300 based on the cost of providing the enhanced offerings. Naturalist in Training Camp will remain at \$400 and eliminate the evening camp out, which will reduce costs. PD day camps and those offered throughout the school year will increase to \$51 per day.

a) Special Programs

To expand the opportunity to get people connected to nature and outdoors, a number of new programs have been developed. This includes skills based programs such as “Introduction to Canoeing” or “Fire Making Skills. Other programs cater to specific groups or ages such as Home School Programs and programs for pre-school children and parents. Fees for these programs are based on the proposed expenses and anticipated enrollment. The fees are set to cover costs which include labour, materials and overhead. All fees are published the GRCA website.

Table 3 - 2019 Proposed Non School Program Fees

	2018 Program Fees	2019 Proposed Fees
Birthday Party – 2 hour	\$150	\$165
Birthday Party – 3 hour	\$200	\$220
Group Program – 2 hour	\$150	\$155
Group Program – 3 hour	\$200	\$210
PD Camp/day	\$50	\$51
Day Camp NIT/week	\$400	\$400
Day Camp/week	\$200	\$205
Day Camp Specialized/week	\$175	\$250 - \$300

Fee Rate Comparison

Accompanying this report in Appendix B and C is a comparison of program fees from other Conservation Authorities, and Outdoor Education providers. Each year the GRCA compares proposed fees against similar organizations to ensure that the proposed fee structure is in line with the rates charged by other outdoor education providers. It can be misleading since the provision or field trips, birthday parties and day camps could be enlarged to a wider range that includes sports, arts and culture. The competition for business is not just limited to outdoor experiences and it is important to consider that competitors include arts, culture and sports providers. Parents have a wide number of providers to choose from. Educators also have limited days to take students out of the classroom and they have many options to choose from.

The scan of other Conservation Authorities and Outdoor Education providers illustrates a wide range of program fees. The fee comparisons in Appendix A are for 2018 fees. Since some providers offer a per participant fee versus a flat program fee, fees are equalized at an average number of students per program for comparison.

This comparison is used to inform the fee setting process to ensure that the fees are not significantly higher than area providers.

Financial implications:

The Outdoor Education program receives approximately 24% of the program revenue from general levy. In 2018 the levy portion was \$354,000. The program relies on fees to fund the remaining annual operating expenditures. In addition to fee revenues, donations, and ad hoc government grants may be available to fund capital projects. The program occasionally operates with a surplus and many years has a deficit. A small surplus is anticipated in 2018. A nature centre reserve fund has been established to invest in the renewal of aging infrastructure or new capital projects such as the Guelph Lake Nature Centre. The reserve is currently at \$259,000. A portion of the reserve could be available to fund an operating deficit should the need arise.

A capital forecast for the Nature Centres is being developed based on recent building assessments. A report will be brought to the General Membership in 2019.

Other department considerations:

Not applicable.

Prepared by:

Tracey Ryan
Manager of Education and Restoration

Approved by:

Joe Farwell, P.Eng.
Chief Administrative Officer

APPENDIX A: 2019 PROPOSED NATURE CENTRE PROGRAM FEES

<i>School Programs</i>	
Full Day Program	\$360
Half Day Program	\$200
Cross Country Ski Full Day	\$360 plus \$5/participant
Cross Country Ski Half Day	\$200 plus \$5/participant
SHSM Certification Programs	\$400
<i>Non School Programs</i>	
Birthday Party – 2 hour	\$165
Birthday Party – 3 hour	\$220
Group Program – 2 hour	\$155
Group Program – 3 hour	\$210
PD Camp	\$51
Day Camp NIT	\$400
Day Camp	\$205
Day Camp Specialized	\$250 - \$300

APPENDIX B: SCHOOL PROGRAM FEE COMPARISON

	<i>Minimum number of students</i>	<i>Half day</i>	<i>Half-Day fees Equalized at 23 students</i>	<i>Full day</i>	<i>Full-Day fees Equalized at 23 students</i>	<i>SHSM Certification</i>	<i>Snow Shoe and/or Ski - half day</i>	<i>Snow Shoe and/or Ski - full day</i>
GRCA – 2018 Rates								
Single class		\$200		\$350		\$375	\$225	\$375
Two classes same school same day		\$375		\$675		\$700	\$400	\$700
Conservation Authorities								
Upper Thames River *	17	\$7 (\$119)	\$161	\$14 (\$238)	\$322	\$20 - \$60 (\$400)		
Hamilton		\$275		\$550				
Long Point Region *		\$8 (\$105)	\$184	\$11 (\$135)	\$253			
Ausable Bayfield *	17	\$7 (\$119)	\$161	\$12(\$204)	\$276	\$12 (\$275)	\$100 plus \$5/person	\$275 plus \$5/person
Nottawasaga Valley *	20	\$10.25 (\$201)	\$235.75	\$15 (\$300)	\$345	\$25- \$70 (\$375-\$1050)		
Halton Conservation		\$9	\$207	\$16	\$368			
Credit Valley Conservation *						\$45		
Toronto and Region Conservation		\$200		\$400		\$625 - \$1250		
Ganaraska Conservation				\$430				\$430**
Private/Municipal/other								
rare charitable reserve	15	\$9.00 (\$135)	\$207	\$15 (\$195)	\$345			
Guelph Outdoor School (provide 2 instructors/class)				\$550				
Focus On Nature (Guelph)				\$330				
Waterloo Region Museum*		\$5.50	\$126.50	\$10	\$230			
Ki-Wa-Y Outdoor Centre				\$25	\$575			
Cambridge Butterfly Conservatory		\$7.50 (\$127)	\$172.50					

	<i>Minimum number of students</i>	<i>Half day</i>	<i>Half-Day fees Equalized at 23 students</i>	<i>Full day</i>	<i>Full-Day fees Equalized at 23 students</i>	<i>SHSM Certification</i>	<i>Snow Shoe and/or Ski - half day</i>	<i>Snow Shoe and/or Ski - full day</i>
Private/Municipal/other								
Camp Brebeuf (Rockwood)				\$17	\$391			
Circle R Ranch (London)		\$15.50 (\$125)	\$356.50	\$46 (\$125)	\$1058		\$26 -\$29	
Heartland Forest (Niagara)	20	\$7 (\$140)	\$161	\$10 (\$200)	\$230			
Highlands Outdoor Education Centre (Duntroon)	10	\$10 (\$150)	\$230	\$14 (\$300)	\$322		\$15-\$20	\$20 -\$25
Grand River Rafting	15	\$15(\$225)	\$345	\$20 (\$225)	\$460			
Royal Botanical Gardens	20	\$8.50 (\$170)	195.50	\$15 (\$300)	\$345			
Camp Kawartha Outdoor Education	25			\$30 (\$750)	\$750			
Nature's Calling*	15	\$7(105)	\$161	\$10(\$150)	\$230			

*listed by student, minimum fee for program (\$)

** fee for 1-15 students

APPENDIX C: Rate Comparison for Non School Programs

	<i>Day Camps</i>	<i>Organized Groups</i>	<i>Birthday Parties</i>
2017 GRCA Program Fees			
Week of Day Camp	\$200 - \$250		
PD Day Camp/day	\$50		
2 hour Program		\$150	\$150
3 hour Program		\$200	\$200
Conservation Areas (2017)			
Upper Thames River *		\$7 (\$120)	
Hamilton			
Long Point Region *			
Ausable Bayfield		\$70-\$130	
Nottawasaga Valley *		\$10.25 - \$15	\$200/\$300
Halton Conservation *	\$255 - \$327	\$8.50	\$200
Credit Valley Conservation *		\$10	
Toronto and Region Conservation	\$250-\$280		
Private Campgrounds			
YWCA Cambridge	\$160 - \$235		
Cambridge Butterfly Conservatory	\$230		
The Museum *			\$15.99
rare charitable reserve	\$180		
City of Waterloo			\$171.60
YMCA Cambridge			\$153 - \$175
Ki-Wa-Y	\$238		
Guelph Civic Museum	\$182		\$180
STEM Cambridge	\$245		
Royal Botanical Gardens	\$250		\$200 - \$300
K-W Humane Society	\$200- \$230		\$175 - \$220
Emmanual Brighton Child Care Forest Camp	\$239		
Camp Brebeuf Rockwood	\$150		
Focus on Nature	\$275		

Grand River Conservation Authority

Report number: GM-11-18-115

Date: November 23, 2018

To: Members of Grand River Conservation Authority

Subject: 2019 Complimentary GRCA Membership Passes

Recommendation:

THAT Report GM-11-18-115 – 2019 Complimentary GRCA Membership Passes be received as information.

Summary:

NA

Report:

Each year Grand River Conservation Authority (GRCA) sells Membership Passes for its conservation areas in accordance with an approved fee schedule. The GRCA Membership Pass admits the vehicle and a maximum of six passengers to any GRCA Conservation Area for day use. The Membership Pass is valid for one year from the date of issue. The use of these passes provides good value for frequent conservation area users, saves staff time in dealing with vehicles entering the parks and allows access through automatic gates for year round access to some areas.

Complimentary Grand River Conservation Area Membership passes are issued each year to:

- Members of GRCA
- Members of the Grand River Conservation Foundation
- GRCA regular, part-time, seasonal, temporary and casual staff
- GRCA retirees
- Living members of GRCA's Honour Roll
- GRCA watershed MPs
- GRCA watershed MPPs
- Municipal Heads of Council

The complimentary Conservation Area Membership passes will be issued in January, 2019. Additional passes can be issued on authorization of the Chair or Chief Administrative Officer.

Financial implications:

The 2019 draft Budget allows for the issuance of these complimentary passes. The proposed price for a 2019 pass is \$130 including HST, which is the same price charged in 2018.

Other department considerations:

Not applicable

Prepared by:

Pam Walther-Mabee
Manager of Conservation Areas

Dave Bennett
Director of Operations

Approved by:

Joe Farwell, P. Eng.
Chief Administrative Officer

Grand River Conservation Authority

Report number: GM-11-18-112

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Provincial Offences Officer Designations

Recommendation:

THAT the Grand River Conservation Authority designate Joao (John) Brum, Ashley Graham, Patricia (Trisha) Hughes and Ashley Rye as Provincial Offences Officers.

Summary:

The designation of Planners as Provincial Offences Officers allows them to complete the duties assigned to the position.

Report:

As a Provincial Offences Officer, John Brum, Ashley Graham, Trisha Hughes and Ashley Rye will be responsible for inspections, investigations and enforcement of the Grand River Conservation Authority (GRCA) Development, Interference with Wetlands and Alterations to Shorelines and Watercourses regulation, Ontario Regulation 150/06.

The Conservation Authorities Act, s. 28 (1) (e) and Ontario Regulation 150/06, s. 10 allows the GRCA to appoint persons to act as officers with all of the powers and duties to enforce Ontario Regulation 150/06.

The Planners have over two years work experience as Resource Planners and are responsible for violations of Section 28 in this role. Ashley Rye has completed the Municipal Law Enforcement Officers Foundations Training in 2017 and Conservation Ontario Level 2 Compliance Training in 2018. John Brum, Ashley Graham and Trisha Hughes completed the Conservation Authority Compliance Training – Level 1 Foundations Course in 2018.

Based upon their enforcement training and work experience, each of these staff members have met the requirements, established by the Regulatory Compliance Committee of Conservation Ontario, to be designated as Provincial Offences Officers.

Financial implications:

Not applicable

Other department considerations:

Not applicable

Prepared by:

Beth Brown
Supervisor of Resource Planning

Approved by:

Nancy Davy
Director of Resource Management

Grand River Conservation Authority – Report

Report number: GM-11-18-111
Date: November 23, 2018
To: Members of the Grand River Conservation Authority
Subject: Environmental Assessments

Recommendation:

THAT Report Number GM-11-18-111 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 November 23, 2018

A. New Environmental Assessments Received

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

1. First Notice – Watercourse Erosion Master Plan, City of Waterloo

The City of Waterloo is undertaking a Watercourse Erosion Master Plan. This study will follow the Master Planning approach in accordance with Municipal Class Environmental Assessment process. The main goal of the study is to provide a series of preferred alternatives for the protection, management and restoration of the watercourses within the City of Waterloo and to prioritize the identified works.

The study area, being all watercourses within the City of Waterloo, is within areas of interest to the GRCA, and staff have requested participation in the 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 – None for this report.

Major Impacts – None for this report.

Financial implications: Not Applicable

Other department considerations: Not Applicable

Prepared by:

Beth Brown
Supervisor of Resource Planning

Approved by:

Nancy Davy
Director of Resource Management

Grand River Conservation Authority

Report number: GM-11-18-117

Date: November 23, 2018

To: Members of the Grand River Conservation Authority

Subject: Current Watershed Conditions as of November 14, 2018

Recommendation:

THAT Report Number GM-11-18-117 – Current Watershed Conditions as of November 14, 2018 be received as information.

Report:

Precipitation

Precipitation to date in November has been well above the long term average. The first week of November was especially wet with many of the climate stations reporting over 50mm of rain. By the middle of the month, the Guelph Dam climate station already recorded more precipitation than the long term average for November. This is significant since this station was one of the driest during the summer period. Rain has been the predominant form of precipitation, but snow has also been recorded throughout the watershed since late October.

October was also a wet month with most climate stations reporting above normal precipitation. The only station to not follow this trend was Brantford in the southern part of the watershed, which recorded just below the long term average in October. Precipitation was well spread out throughout the month with most days recording some precipitation. Heaviest rainfall was recorded at the end of the month, leading into the wet conditions during first week of November.

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

Table 1: Precipitation Averages at Watershed Climate Stations

Station	Monthly Precipitation		Percentage of Long Term Average					
	14-Nov (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	65.7	84.9	155%	116%	86%	75%	91%	89%
Conestogo	57.6	95.1	121%	105%	89%	78%	94%	96%
Guelph	84.0	80.4	209%	103%	88%	88%	98%	96%
Luther	64.0	92.5	138%	111%	109%	97%	103%	99%
Woolwich	59.1	69.7	170%	158%	107%	90%	101%	101%
Laurel	77.3	83.5	185%	134%	118%	100%	105%	102%
Shades	75.9	77.7	195%	116%	129%	104%	110%	108%
Brantford	52.2	73.6	142%	91%	111%	97%	106%	100%

Air Temperatures

Temperatures in the first half of November were close to or below the long term average across the watershed. Daytime highs have stayed above freezing for the most part, although there have been a few days at or below freezing at some of the northern parts of the watershed. Overnight low temperatures were above freezing for the first week of November, but were generally below freezing for the second week.

October started as a warm month, but ended with much colder temperatures. The first few weeks of October had many days with temperatures above 20 degrees and some even close to 30 degrees. The last half of the month had many days below 10 degrees and overnight temperatures at or below zero. At the Shand Dam climate station, the average temperature in October was 7.5 degrees which was 0.8 degrees below the normal average of 8.3 degrees. This was the first month below normal since April.

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 October was 174.59m, which is approximately 0.52m above the long term average. Forecast water levels into early 2019 were available from the Canadian Hydrographic Service. They indicate that lake levels will likely recede over the next few months, but stay well above the long term average.

A high lake level conditions statement was issued on October 12 warning of an increased risk of shoreline flooding and erosion due to the high static lake level. This conditions statement is in effect for the fall of 2018 through to the summer of 2019. On November 5, a High Lake Level Warning message was issued based on a prediction for water levels to peak just below critical due to high winds.

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

Reservoir Conditions

Wet conditions at the end of October and for the first two weeks of November resulted in higher inflows to the large reservoirs. Shand, Conestogo and Guelph reservoirs were all below normal operating levels at the start of the month and have since recovered. As of November 14th, Shand and Conestogo reservoirs were slightly above normal operating levels and were being drawn down gradually. While Guelph was within normal operating levels and water was being taken into storage. Luther reservoir remains very close to the normal operating level.

With higher inflows to Shand dam earlier this month, discharges were increased to stabilise the lake level. When the gates at the dam were opened and there was also discharge through the valves, there were observations of a number of dead fish downstream. The dam operator observed that the fish were coming through the valves. It is likely that the change of flows around the dam structure due to the gate operation pushed the fish towards the valve openings. Operation of the dam was modified over a couple of days to try to reduce the amount of fish being pulled through the dam. When both valves were closed and discharge occurred through the gate only there were no

longer observations of fish passing through the dam. The situation will continue to be monitored as discharge is decreased and the turbine restarted.

Reservoir levels are shown in **Figures 4** and **Figure 5** for the four large reservoirs.

Long Range Outlook

Environment Canada's seasonal forecasts are predicting above normal temperatures and near normal precipitation for the November to January period.

NOAA released its El Nino Impacts and Outlook for the Great Lakes Region in October. Although it is focused on impacts south of the Canadian Border, it is predicting above normal temperatures and below-normal precipitation for the Great Lakes region. The prediction is for a moderate El Nino to develop during the winter period.

Flood Preparedness

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

Staff attending Incident Management System training put on by the City of Cambridge and Emergency Management Ontario. The training will help staff coordinate flood operations and participate in municipal emergency operations centers during incidents.

Financial implications:

Not applicable

Other department considerations:

Not applicable

Prepared by:

Stephanie Shifflett
Water Resources Engineer

Approved by:

Joe Farwell, P.Eng.
Chief Administrative Officer

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

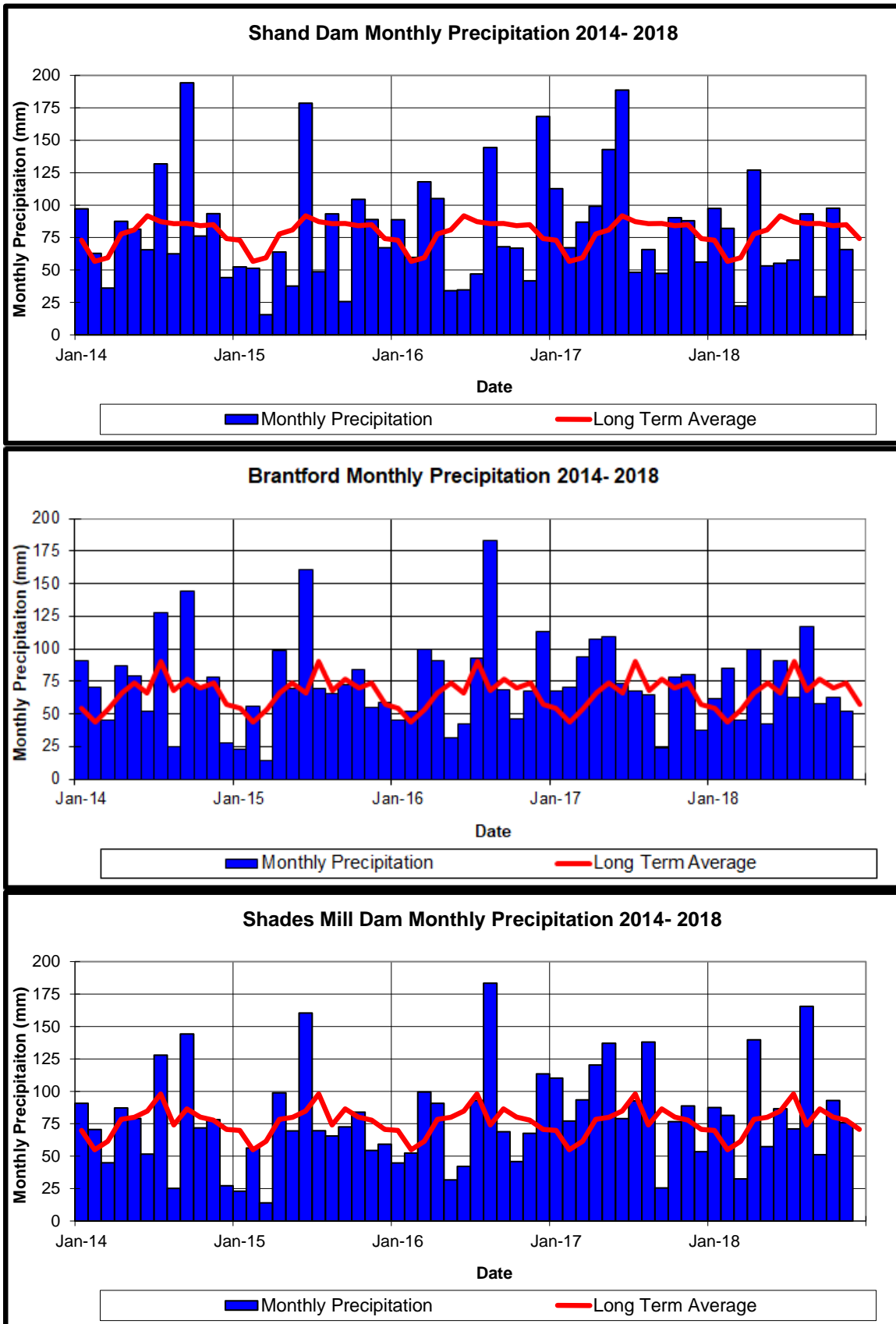


Figure 2: Departures from Average Air Temperatures

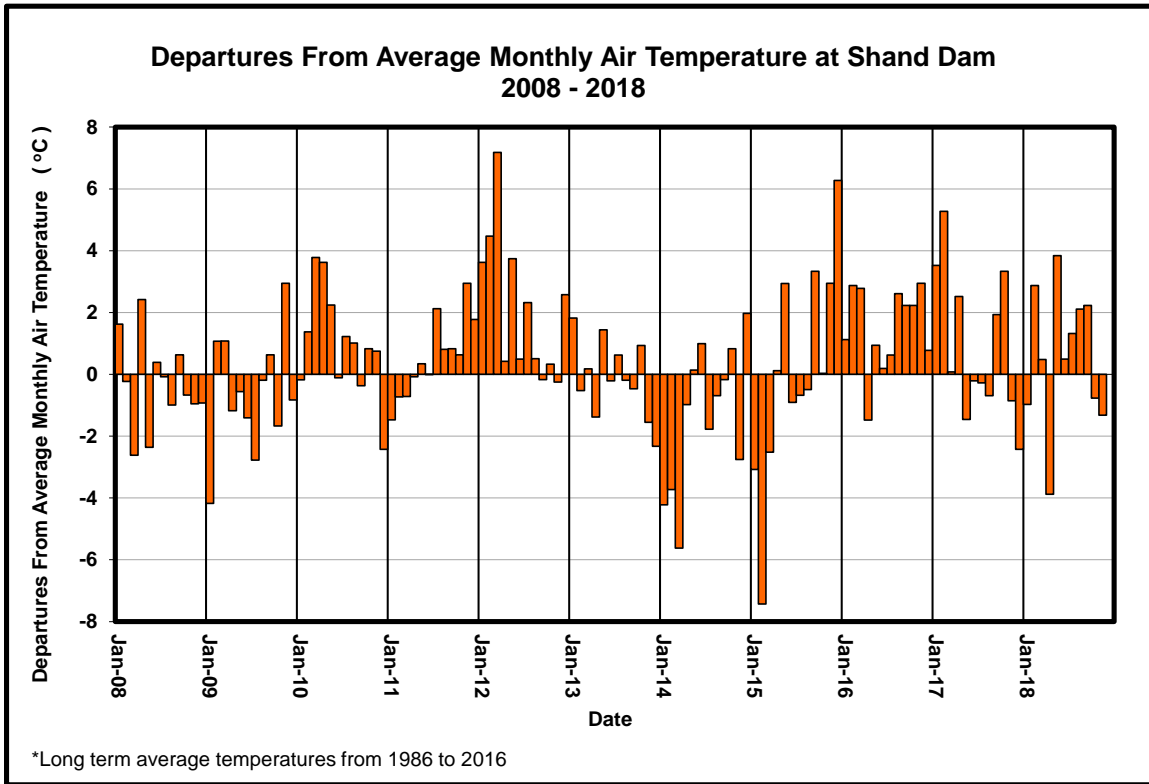


Figure 3: Forecasted Lake Erie Levels

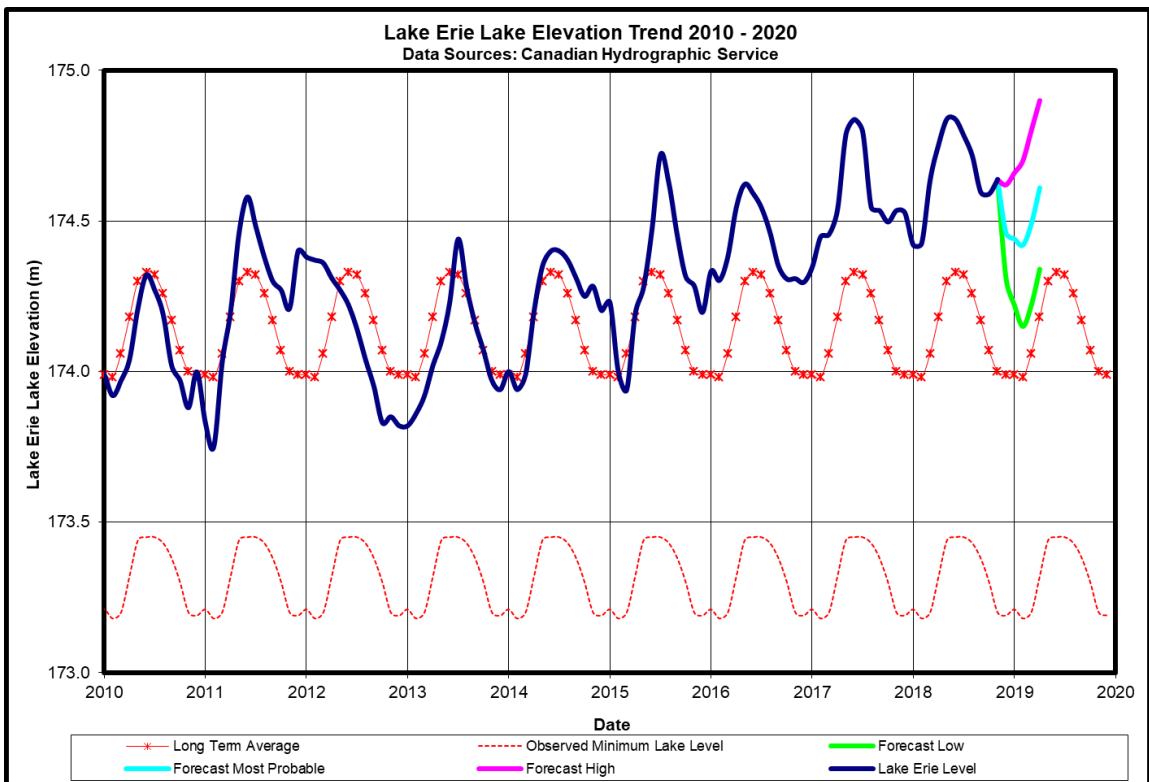


Figure 4: Shand and Conestogo Reservoir Elevation Plots

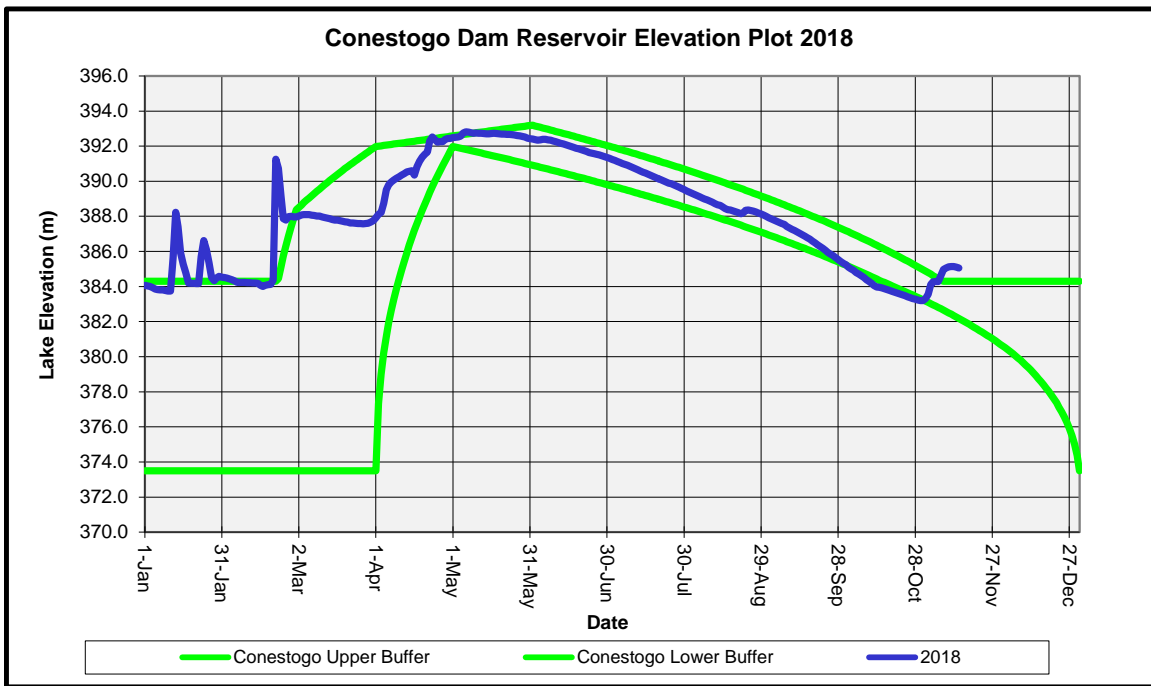
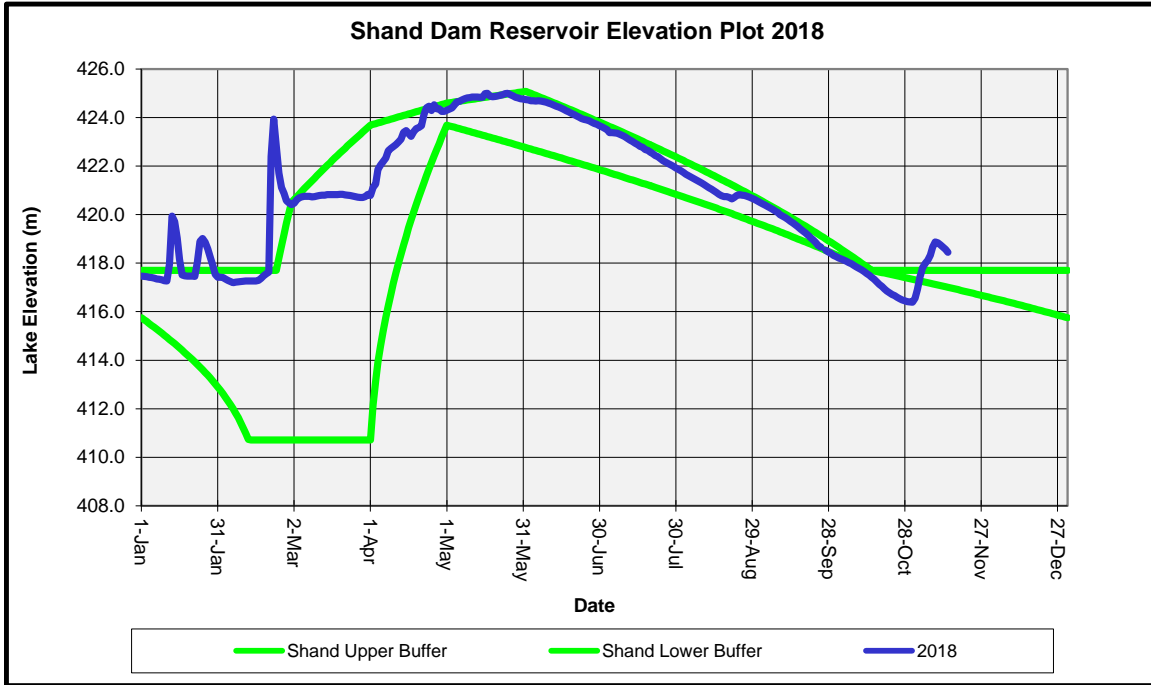
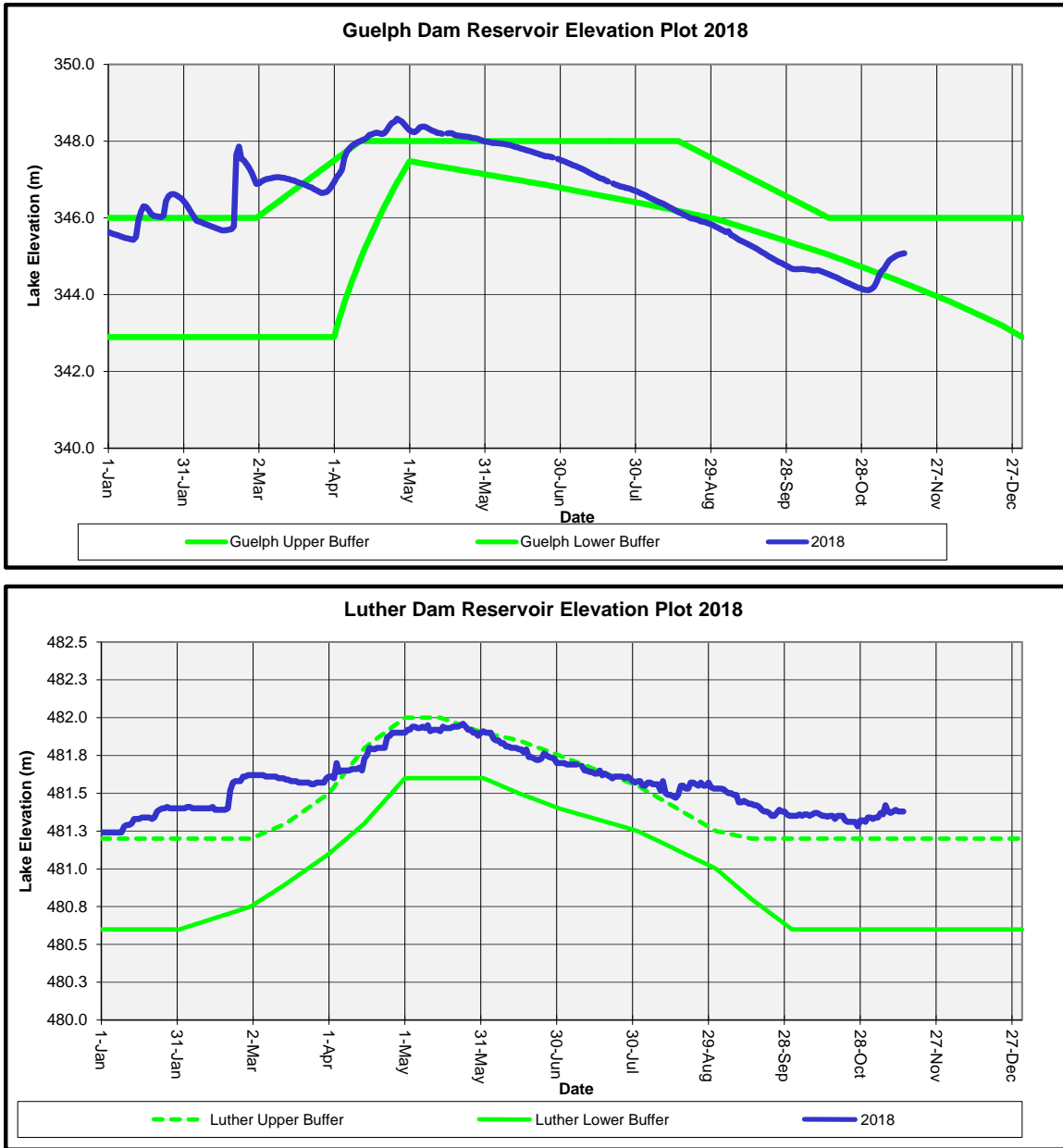


Figure 5: Guelph and Luther Reservoir Elevation Plots



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.