

The Corporation of the City of Kawartha Lakes

AGENDA

REGULAR COUNCIL MEETING

CC2017-27

Tuesday, October 10, 2017

Closed Session Commencing at 1:00 p.m. Open Session Commencing at 2:00 p.m.

Council Chambers

City Hall

26 Francis Street, Lindsay, Ontario K9V 5R8

MEMBERS:

Mayor Andy Letham
Councillor Isaac Breadner
Councillor Pat Dunn
Councillor Doug Elmslie
Councillor Gord James
Councillor Gerard Jilesen
Councillor Brian S. Junkin
Councillor Rob Macklem
Councillor Mary Ann Martin
Councillor Gord Miller
Councillor Patrick O'Reilly
Councillor John Pollard
Councillor Kathleen Seymour-Fagan
Councillor Heather Stauble
Councillor Stephen Strangway
Councillor Andrew Veale
Councillor Emmett Yeo

Accessible formats and communication supports are available upon request.

1. CALL TO ORDER
2. ADOPTION OF CLOSED SESSION AGENDA
3. DISCLOSURE OF PECUNIARY INTEREST IN CLOSED SESSION ITEMS
4. CLOSED SESSION
 - 4.1 CC2017-27.4.1

Closed Session Minutes including Privileged and Confidential Minutes,
Regular Council Meeting
September 26, 2017
Municipal Act, 2001 s.239(2)(c)(d)
 - 4.2 CC2017-27.4.2

Closed Session Minutes, Special Council Information Meeting
September 20, 2017
Municipal Act, 2001 s.239(2)(b)(d)
 - 4.3 LEGAL2017-006

Robyn Carlson, City Solicitor
2074161 Ontario Inc. – Court File Number CV-11-00421210-0000
Litigation or Potential Litigation
Advice that is Subject to Solicitor-Client Privilege
Municipal Act, 2001 s.239(2)(e)(f)
 - 4.4 ED2017-017

Bob Minhas, Economic Development Officer
Downtown Revitalization Advisory Committee - Citizen Appointments
Personal Matters About Identifiable Individuals
Municipal Act, 2001 s.239(2)(b)
5. OPENING CEREMONIES
 - 5.1 Call Open Session to Order
 - 5.2 O Canada
 - 5.3 Moment of Silent Reflection
 - 5.4 Adoption of Open Session Agenda

6. **DISCLOSURE OF PECUNIARY INTEREST**

7. **MATTERS FROM CLOSED SESSION**

8. **PUBLIC INFORMATION**

8.1 Presentations

8.2 Invited Guests (Quarterly Basis)

8.3 Notices and Information by Members of Council and Staff

8.3.1 Council

8.3.2 Staff

8.4 Notice of Motion

9. **DEPUTATIONS**

10. **CONSENT MATTERS**

RESOLVED THAT all of the proposed resolutions shown in Section 10.1, 10.2 and 10.3 of the Agenda be approved and adopted by Council in the order that they appear on the agenda and sequentially numbered.

10.1 Correspondence

10.1.1 CC2017-27.10.1.1

10 - 11

Mike Farquhar, Supervisor Technical Services – Engineering and Corporate Assets
Petition for Municipal Drainage - Waite Petition

RESOLVED THAT the October 10, 2017 memorandum from Mike Farquhar, Supervisor Technical Services, regarding the Petition for Municipal Drainage - Waite Petition, be received.

10.1.2 CC2017-27.10.1.2

12 - 13

Stephanie Nickerson
Licensing of Short Term Residential Rentals
(Report LIC2017-001, Item 10.3.1 on the Agenda)

RESOLVED THAT the September 26, 2017 e-mail correspondence from Stephanie Nickerson, regarding Licensing of Short Term Residential Rentals, Report LIC2017-001, Item 10.3.1 on the Agenda, be received.

10.1.3	CC2017-27.10.1.3	14 - 15
	Victoria Condominium Corporation No. 9 Request for Barrier to Prevent Trespassers	
	RESOLVED THAT the September 25, 2017 correspondence from Victoria Condominium Corporation No. 9, regarding their Request for Barrier to Prevent Trespassing, be received and referred to staff.	
10.1.4	CC2017-27.10.1.4	16 - 18
	Andy Letham, Mayor Township of Selwyn Resolution Regarding Harvesting of Wild Rice - Williams Treaty	
	RESOLVED THAT the September 27, 2017 correspondence from Township of Selwyn, regarding their Council Resolution on Harvesting of Wild Rice - Williams Treaty, be received and supported; and THAT a copy of the original resolution and Council's supporting resolution be circulated to MP Jamie Schmale and MP Maryam Monsef.	
10.2	Minutes from:	
10.2.1	Council	
10.2.1.1	CC2017-27.10.2.1	19 - 23
	Minutes, Special Council Information Meeting September 19, 2017	
	RESOLVED THAT the Minutes of the September 19, 2017 Special Council Information Meeting, be received and adopted.	
10.2.1.2	CC2017-27.10.2.1.2	24 - 28
	Minutes, Special Council Information Meeting September 20, 2017	
	RESOLVED THAT the Minutes of the September 20, 2017 Special Council Information Meeting, be received and adopted.	
10.2.1.3	CC2017-27.10.2.1.3	29 - 55
	Minutes, Regular Council Meeting September 26, 2017	

RESOLVED THAT the Minutes of the September 26, 2017 Regular Council Meeting, be received and adopted.

10.2.2 Committees of Council, Advisory Boards and Task Forces

10.2.2.1 CC2017-27.10.2.2.1 56 - 59

Draft Minutes, Drainage Board Meeting
September 25, 2017

RESOLVED THAT the Draft Minutes of the September 25, 2017 Drainage Board Meeting, be received.

10.3 Reports

10.3.1 LIC2017-001 60 - 72

Alix Hick, Senior Licensing Officer
Licensing of Short Term Residential Rentals
(Deferred from the September 26, 2017 Regular Council Meeting)

RESOLVED THAT Report LIC2017-001, **Licensing of Short Term Residential Rentals**, be received; and
THAT no further action be taken to regulate Short Term Residential Rentals in the City of Kawartha Lakes.

10.3.2 CAO2017-005 73 - 75

Ron Taylor, CAO
Evergreen Power Limited – Allocation of Donation

RESOLVED THAT Report CAO2017-005, **Evergreen Power Limited – Allocation of Donation**, be received; and
THAT Council directs the voluntary \$10,000.00 donation to the City of Kawartha Lakes from Evergreen Power Limited to the community funding component of the Fenelon Falls Splash Pad project.

10.3.3 CORP2017-026 76 - 87

Angela Vickery, Manager of Revenue and Procurement
High Water Bill Adjustment Appeals Committee

RESOLVED THAT Report CORP2017-026, **High Water Bill Adjustment Appeals Committee**, be received; and
THAT no action be taken to implement a High Water Bill Adjustment Appeals Committee.

10.3.4	<p>PUR2017-055</p> <p>Marielle van Engelen, Buyer Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites</p> <p>RESOLVED THAT Report PUR2017-055, Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites, be received; and THAT the option to renew Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites for up to four (4) additional, one (1) year terms, pending budget approval, vendor performance, operational requirements, and contractual need, in accordance with the Table of Authority, be approved.</p>	88 - 94
10.3.5	<p>PUR2017-056</p> <p>Angela Vickery, Manager of Revenue and Procurement Tender Awards Q3 2017</p> <p>RESOLVED THAT Report PUR2017-056, Tender Awards Q3 2017, be received for information purposes.</p>	95 - 99
10.3.6	<p>PLAN2017-059</p> <p>Janet Wong, Planner II A By-law to Deem Lot 20, Registered Plan 260, Geographic Township of Ops, being 89 Loon Street (Betts and Wanyura)</p> <p>RESOLVED THAT Report PLAN2017-059, Betts and Wanyura – D30-17-006, be received; THAT a Deeming By-law respecting Lot 20, Registered Plan 260, substantially in the form attached as Appendix C to Report PLAN2017-059, be approved and adopted by Council; and THAT the Mayor and Clerk be authorized to execute any documents required by the approval of this application.</p>	100 - 105
10.3.7	<p>PLAN2017-060</p> <p>Sherry L. Rea, Development Planning Supervisor An application to amend the Village of Bobcaygeon Zoning By-law 16-78 to remove the Holding (H) symbol to permit 2 semi-detached dwellings on Part of Lot 10, Plan 70, being Parts 1 and 2 on Reference Plan 57R-10004, former Village of Bobcaygeon, now City of Kawartha Lakes and identified as 60 to 62 and 64 to 66 Helen Street, Savic/Milosevic and Tom Grimes Construction Ltd.</p>	106 - 115

RESOLVED THAT Report PLAN2017-060, **Savic/Milosevic and Tom Grimes Construction Ltd. - D06-17-027**, be received;
THAT a Zoning By-law Amendment respecting Application D06-17-027, substantially in the form attached as Appendix C to Report PLAN2017-060, be approved and adopted by Council; and
THAT the Mayor and Clerk be authorized to execute any documents required by the approval of this application.

10.3.8

ENG2017-023

116 - 128

Michael Farquhar, Supervisor, Technical Services
 Petition for Drainage Works By Owner - Webster

RESOLVED THAT Report ENG2017-023, **Petition for Drainage Works by Owner – Webster**, be received;
THAT Council proceeds with the petition submitted by Alan Webster (Victor Webster Farms Ltd.) for drainage works by owners for Concession 5, Part Lot 11, Geographic Township of Eldon and instruct the City Clerk to proceed with the notices required under Section 5 of the Drainage Act;
THAT Council appoints and retains, R. Dobbin Engineering Inc. in accordance with the Drainage Act, as the Engineer of Record, and to proceed with the requirements of a petition drain; and
THAT should, R. Dobbin Engineering Inc. not be available, that Council instructs staff to retain an alternate qualified Engineer from the standing list.

10.3.9

WWW2017-007

129 - 224

Rob MacPherson, Water and Wastewater Technician
 Coagulant Selection for the Lindsay Water Treatment Plant

RESOLVED THAT Report WWW2017-007, **Coagulant Selection for the Lindsay Water Treatment Plant**, be received;
THAT Staff be directed to negotiate a contract in accordance with the Purchasing Policy, between the City and Kemira, the sole supplier of SternPAC, for continued supply and delivery of SternPAC to the Lindsay Water Treatment Plant; and
THAT Staff continue to review new technology, products and pricing to ensure the most cost effective delivery of services.

10.4

Items Extracted from Consent

11.

COMMITTEE OF THE WHOLE

12. **COMMITTEE OF THE WHOLE AND PLANNING COMMITTEE MINUTES**

13. **CORRESPONDENCE AND PETITIONS**

14. **OTHER OR NEW BUSINESS**

15. **BY-LAWS**

RESOLVED THAT the By-Laws shown in Section 15.1 of the Agenda, namely: Items 15.1.1 to and including 15.1.6 be read a first, second and third time, passed, numbered, signed and the corporate seal attached.

15.1 By-Laws by Consent

15.1.1 CC2017-27.15.1.1 225 - 228

A By-law to Amend By-law 2016-206, the Consolidated Fees By-law in the City of Kawartha Lakes

15.1.2 CC2017-27.15.1.2 229 - 229

A By-law to Amend By-law 2016-144, being A By-Law for Collection and Management of Waste and Recyclables Within The City of Kawartha Lakes

15.1.3 CC2017-27.15.1.3 230 - 231

A By-Law to Authorize the Sale Of Municipally Owned Property Legally Described as Lot 3 Registered Plan 508, in the Geographic Township of Eldon, City of Kawartha Lakes Described as Part 1 on Plan 57R-10503 Being All of PIN: 63170-0227 (LT)

15.1.4 CC2017-27.15.1.4 232 - 232

A By-Law To Deem Part of a Plan of Subdivision, Previously Registered For Lands Within Kawartha Lakes, Not To Be A Registered Plan Of Subdivision In Accordance With The Planning Act PIN: 63200-0583(LT), Described As Lot 20, Plan 260, Geographic Township Of Ops, Now City Of Kawartha Lakes

15.1.5 CC2017-27.15.1.5 233 - 234

A By-law to Amend the Village of Bobcaygeon Zoning By-law 16-78 to Remove the Holding (H) Symbol from a Zone Category on Property within the City of Kawartha Lakes (Savic/Milosevic and Tom Grimes Constructions Ltd.)

A By-law to Amend By-law 2016-206, being A By-Law to Establish and Require Payment of Fees for Information, Services, Activities and Use of City Property in The City of Kawartha Lakes

By-Laws Extracted from Consent

CLOSED SESSION (IF NOT COMPLETED PRIOR TO OPEN SESSION)

MATTERS FROM CLOSED SESSION

CONFIRMING BY-LAW

ADJOURNMENT



**THE CORPORATION OF THE
CITY OF KAWARTHA LAKES**
12 Peel Street P.O. Box 9000
Lindsay, ON K9V 5R8
Phone: 705-324-9411, Ext. 1156
Fax: 705-324-2982

MEMO

Date: October 10, 2017

To: Council

From: Mike Farquhar, Supervisor Technical Services – Engineering & Corporate Assets

Re: Petition for Municipal Drainage - Waite Petition

CC: Juan Rojas Director of Engineering and Corporate Assets

Paul Herlihey, Municipal Drain Superintendent, Kawartha Lakes Drainage Board

Recommendation:

RESOLVED THAT Memo from Mike Farquhar (Engineering), regarding **Municipal Drain - Waite Petition**, be received

Background:

At the September 12, 2017 Council meeting Report ENG2017-017 was before Council recommending Council proceed with the Waite drainage petition as well as appointing an engineer for the proposed Municipal Drain. The following resolution was adopted.

CR2017-760

Moved By Councillor Junkin

Seconded By Councillor Strangway

RESOLVED THAT Report ENG2017-017, **Petition for Drainage Works by Owner – Waite**, be received;

THAT Council proceeds with the petition submitted by Joseph and Carol Waite for drainage works by owners for Part Lt. 10 West Half of Concession 6, Fenelon, and instruct the City Clerk to proceed with the notices required under Section 5 of the Drainage Act; and

THAT Council appoints and retains, R.J Burnside & Associates in accordance with the Drainage Act, as the Engineer of Record and for the petition and to proceed with the requirements of a petition drain; and

THAT should, R.J Burnside & Associates not be available, that Council instructs staff to retain an alternate qualified Engineer from its standing list.

CARRIED

Rationale:

Council choose to approve the petition and appoint Burnside Engineers as the firm of record for performing an engineers report under Section 8(1) of the Ontario Drainage Act.

As per Section 8(2) of the Ontario Drainage Act, Council is required to be informed of the individual engineer who will be writing the report.

This memo is to inform Council that **R.J Burnside & Associates Limited** has assigned these duties within their corporate firm to **Edward Delay P.Eng** who will be the engineer of record for this petition drain.

Yours truly,

Mike Farquhar, Supervisor Technical Services
Engineering & Corporate Assets

Ann Rooth

From: Stephanie Nickerson [REDACTED]
Sent: Tuesday, September 26, 2017 9:46 AM
To: Ann Rooth
Subject: Fwd: CKL Short Term Rental Concerns.docx
Attachments: CKL Short Term Rental Concerns.docx; ATT00001.htm

Please find attached a comprehensive list of concerns voiced by the residents on Summer Dr/Ballpoint regarding short term rentals in the area. Mr. Pollard has copies of the full emails for council today but I did summarize them in one document for ease of reading.

Regards,

Stephanie

Sent from my iPad

Begin forwarded message:

From: Stephanie Nickerson [REDACTED]
Date: September 26, 2017 at 9:26:42 AM EDT
To: johnpollard johnpollard [REDACTED]
Subject: CKL Short Term Rental Concerns.docx

Summary of Concerns re: Short Term Rentals in Little Britain (Summer Drive/Ballpoint)

- The homeowners of these rentals **do not** reside in City of Kawartha Lakes (CKL)
- These homeowners generate income from these rentals, therefore should be considered a business
- 2 of the 4 known short term rentals in the area advertise on kijiji (6 Summer Drive) and Canada Stays (107 Ballpoint Rd)
- Because of that, the zoning, taxation and associated fees and the meeting of the building and fire codes need to be revisited
- At times there are a large number of occupants at these short term rentals and concerns about the ability of the septic systems to accommodate those numbers needs to be addressed as the septic systems are on the water side of the properties and may pose environmental concerns- (the septic at 6 Summer Drive had been “repaired” prior to its sale in Spring 2016)
- Noise complaints (partying, loud music and voices carrying over the water when large numbers of people present)- the OPP have been called but not good use of Emergency Service and costly to CKL
- Fire complaints (leaving large fires unattended, smoke blowing into neighbouring home requiring the homeowners to shut their window/doors)- Fire services have been called but again, not a good use of Emergency Service and costly to CKL
- Unkept property- tall, sometimes noxious weeds in gardens and grass not cut- health issues to those in close proximity to the rentals with allergies, depreciates the value of neighbouring homes and makes resale difficult, not good use of CKL Bylaw time and there is a cost to CKL and residents of CKL associated with bringing in services to ensure these properties follow CKL bylaws and safety standards set out for CKL residents
- According to the advertisements, pets are welcome but excessive barking is noted as well as the need to pick up dog feces on the neighbouring properties
- The people who do rent these short term rentals are strangers to our quiet, tight knit community. There has been property that has been stolen in the area and recently there was a drug overdose at 6 Summer Drive in which the young lady died (requiring investigation and 2.5 full days of 24h police service- very costly to CKL)
- Water safety- reckless driving of water vehicles is often noted close to shore in which no lifejackets are worn by the drivers and this writer would question whether they possessed a boat license (last week one drove a rented wave runner onto a large rock on shore smashing its hull)
- Other concerns voiced by community members about their experience with short term rentals- witnessing public drunkenness and urination, finding used baby diapers on their lawns and general garbage that has not been picked up

We understand for documentation purposes that calling the Police, Fire and Bylaw to address our concerns is emphasized, however not all concerns experienced by the neighbours of these short term rentals require those service interventions and as mentioned it takes away from the ability of Emergency Services to attend the Emergency calls and becomes costly to CKL which is reflective on our taxes.

VICTORIA CONDOMINIUM CORPORATION NO. 9
1 Heritage Way, Lindsay, ON K9V 5P9

September 25, 2017

RECEIVED

SEP 29 2017

OFFICE OF THE CITY CLERK
KAWARTHA LAKES

City of Kawartha Lakes
Judy Currins
26 Francis Street
Lindsay, Ontario K9V 5R8

RE: VCC 9 – 1 Heritage Way, Lindsay, ON

We are writing to you for and on behalf of the board of directors and the 44 homeowners at 1 Heritage Way, Victoria Condominium Corporation No. 9.

In 1988, when the building was originally constructed, there was nothing but a field behind the site. The City then created public soccer fields. Since that time, there has been an increase in the number of persons who cut across the property at 1 Heritage Way. This is a great concern to the unit owners as trespassers pose a safety threat. Owners are concerned not only for their safety but also the increased exposure to liability with the increased traffic.

The corporation has taken steps to rectify this by way of posting signs clearly stating that the property is private. Further, the corporation has installed bushes to reduce the traffic. The bushes were trampled however, and there continues to be a barrage of persons cutting from the fields across the property.

A suggestion was put forward that the City should in some respects be fully responsible, to assist the corporation in forcing those who use the fields to use City property for access and egress. This could be done either by way of the installation of a fence or the installation of prickly bushes on the perimeter between the fields and the property at #1 Heritage Way. The City should be responsible for the initial installation expense and the on-going maintenance of same.

In November 2009, the City asked the unit owners at #1 Heritage Way to confirm their desire for a barrier to be installed. A petition was signed and sent to the City as confirmation but no barrier was ever installed.

We respectfully request that, on behalf of 44 tax paying members of the City, the City of Kawartha Lakes consider this matter at their next meeting of City Council.

Should you have any questions regarding the above noted matter, please do not hesitate to contact me at 705-957-0246.

You may also confirm the contents of this letter with the president of the Board, Margaret Kirton, and (705)344-6814

Yours truly,
McBain Property Management Inc.
Agent for and on behalf of VCC 9

Marnie McBain, BA, RCM
Condominium Manager

September 27, 2017

Via Email: ec.ministre-minister.ec@canada.ca

Parks Canada
Environment and Climate Change Canada
200 Sacré-Coeur Boulevard
Gatineau QC K1A 0H3

Attention: Honourable Catherine McKenna MP

Dear MP McKenna:

Re: Harvesting of Wild Rice – Williams Treaty

Please be advised that at its meeting held the 26th day of September 2017, the Council of the Township of Selwyn passed the following resolution:

Resolution No. 2017 - 192 – Wild Rice Harvesting

Deputy Mayor Sherry Senis – Councillor Donna Ballantyne –

Whereas the Federal Government through Parks Canada and the seven First Nations of the Williams Treaty came together to form a wild rice harvesting working group in late 2015; and

Whereas the working group established a Terms of Reference to cover various matters related to wild rice that includes the management and harvesting of wild rice, public education of indigenous history and culture along Trent Severn Waterway, and related consultation; and

Whereas the development of a strategy to manage wild rice has proved to be complex and time consuming resulting in another year with no management plan; and

Whereas waterfront property owners on Pigeon, Chemong and Buckhorn Lakes are expressing extreme frustration over the lack of progress to address the mechanical harvesting of wild rice that is severely impacting access to the waterway and the enjoyment of their properties;

Mailing Address
PO Box 270
Bridgenorth
Ontario K0L 1H0

Now therefore the Township of Selwyn strongly urges the Federal Government through Parks Canada to bring forward the specific issue of mechanical harvesting of wild rice on Pigeon, Chemong and Buckhorn Lakes to the working group as an immediate item for resolution, specifically:

- To establish a method for harvesting the wild rice that considers the needs of adjacent waterfront property owners as the current mechanical method of using an air boat generates excessive noise that is disturbing to waterfront property owners and is affecting the enjoyment of their property, and
- To establish time limits on mechanical harvesting by limiting the hours per day for harvesting and establishing no harvesting on Sundays; and

Further that Parks Canada continue to consider applications for aquatic vegetation removal in this area to allow waterfront property owners to make use of the waterway; and

That a copy of this Resolution be provided to M.P. Maryam Monsef with a request that she advance an immediate resolution through the working group to address this very specific circumstance and ensure that another season does not pass without a plan that addresses the mechanical harvesting of rice on Pigeon, Chemong and Buckhorn Lakes; and that a copy of this Resolution be sent to the Councils of the City of Kawartha Lakes and Municipality of Trent Lakes whose municipal boundaries border Pigeon, Chemong and Buckhorn Lakes.

Councillor Anita Locke - yes

Deputy Mayor Sherry Senis – yes

Mayor Mary Smith – yes

Councillor Donna Ballantyne - yes

Carried.

Council received 27 emails as well as a petition signed by 89 area residents related to the mechanical harvesting of wild rice. The petition, along with a few samples of the emails sent to Council, are included in this correspondence to provide an understanding of the frustration residents are expressing as a result of the noise and the impact to the waterway from the mechanical harvesting of wild rice. The progress of the working group preparing the management plan for wild rice has been slow. Residents are growing more impatient. An action plan is critical and residents need the Federal government to devote time and resources to address wild rice management and more immediately the mechanical harvesting of wild rice on Pigeon, Chemong and Buckhorn Lakes.

Thank you for your consideration of this matter and all stakeholders look forward to an action plan prior to the commencement of the 2018 wild rice harvesting season.

Sincerely,



Angela Chittick
Clerk

Encl: Petition from Residents
Various Email Received

c.c. Maryam Monsef, MP
City of Kawartha Lakes Council
Municipality of Trent Lakes Council
Parks Canada - Executive Director of Waterways Darlene Upton
Trent Severn Waterway – Director, Ontario Waterways Unit – Jewel Cunningham
Larry Wood - Save Pigeon Lake

The Corporation of the City of Kawartha Lakes
MINUTES
SPECIAL COUNCIL INFORMATION MEETING

CC2017-24
Tuesday, September 19, 2017
Open Session Commencing at 1:00 p.m.
Council Chambers
City Hall
26 Francis Street, Lindsay, Ontario K9V 5R8

MEMBERS:
Mayor Andy Letham
Councillor Isaac Breadner
Councillor Pat Dunn
Councillor Doug Elmslie
Councillor Gord James
Councillor Gerard Jilesen
Councillor Brian S. Junkin
Councillor Rob Macklem
Councillor Mary Ann Martin
Councillor Gord Miller
Councillor Patrick O'Reilly
Councillor John Pollard
Councillor Kathleen Seymour-Fagan
Councillor Heather Stauble
Councillor Stephen Strangway
Councillor Andrew Veale
Councillor Emmett Yeo

Accessible formats and communication supports are available upon request.

1. CALL TO ORDER

Mayor Letham called the meeting to order at 1:00 p.m. Councillors I. Breadner, P. Dunn, D. Elmslie, G. James, G. Jilesen, B. Junkin, R. Macklem, M.A. Martin, P. O'Reilly, J. Pollard, K. Seymour-Fagan, H. Stauble, S. Strangway, A. Veale and E. Yeo were in attendance.

CAO and Acting City Clerk R. Taylor, Administrative Assistant S. O'Connell and various other staff were also in attendance.

2. ADOPTION OF AGENDA

CR2017-778

Moved By Councillor Strangway

Seconded By Councillor Pollard

RESOLVED THAT the Agenda for the Open Session of the Special Council Information Meeting of Tuesday, September 19, 2017, be adopted as circulated.

CARRIED

3. DISCLOSURE OF PECUNIARY INTEREST

There were no declarations of pecuniary interest noted.

4. PUBLIC INFORMATION

Chief Kirkpatrick announced that Gene Pugliese, Paramedic Superintendent, will be receiving the Governor General's Award for Exemplary Service. Chief Kirkpatrick congratulated Gene on receiving the award.

4.1 Presentations

4.1.1 CC2017-24.4.1.1

Craig Shanks, Director of Community Services

2018 Community Services Department Operating and Capital Budget Overview

Director of Community Services C. Shanks provided an overview of the 2018 Operating and Capital Budgets for the Community Services Department. He identified 2017 highlights and 2018 direction for the Community Services Department. A copy of the presentation is available in the Clerk's Office.

CR2017-779

Moved By Councillor Elmslie

Seconded By Councillor Martin

RESOLVED THAT the presentation by Director Shanks, regarding the 2018 Community Services Department Operating and Capital Budget Overview, be received.

CARRIED

4.1.2 CC2017-24.4.1.2

Chris Marshall, Director of Development Services
2018 Development Services Department Operating and Capital Budget Overview

Director of Development Services C. Marshall provided an overview of the 2018 Operating and Capital Budgets for the Development Services Department. He identified 2017 highlights and 2018 direction for the Development Services Department and outlined vacant departmental positions to be filled. Director Marshall responded to questions from Council. A copy of the presentation is available in the Clerk's Office.

CR2017-780

Moved By Councillor James

Seconded By Councillor Veale

RESOLVED THAT the presentation by Director Marshall, regarding the 2018 Development Services Department Operating and Capital Budgets, be received.

CARRIED

4.1.3 CC2017-24.4.1.3

Mark Pankhurst, Fire Chief
2018 Fire Department Operating and Capital Budget Overview

Fire Chief M. Pankhurst provided an overview of the 2018 Operating and Capital Budgets for Fire Services. He identified 2017 highlights and 2018 direction for Fire Services. Chief Pankhurst outlined that the City's existing Master Fire Plan will expire at the end of this year and a new Master Plan will be presented to Council for consideration. Chief Pankhurst responded to questions from Council. A copy of the presentation is available in the Clerk's Office.

CR2017-781

Moved By Councillor Yeo

Seconded By Councillor Veale

RESOLVED THAT the presentation by Chief Pankhurst, regarding the 2018 Fire Department Operating and Capital Budgets, be received.

CARRIED

4.1.4 2017-24.4.1.4

Keith Kirkpatrick, Paramedic Chief

2018 Paramedic Department Operating and Capital Budget Overview

Chief of Paramedic Services K. Kirkpatrick provided an overview of the 2018 Operating and Capital Budgets for Paramedic Services. He identified 2017 highlights and 2018 direction for Paramedic Services. He also identified staffing challenges that will need to be addressed in future years. Chief Kirkpatrick responded to questions from Council. A copy of the presentation is available in the Clerk's Office.

CR2017-782

Moved By Councillor Pollard

Seconded By Councillor Junkin

RESOLVED THAT the presentation by Chief Kirkpatrick regarding the 2018 Operating and Capital Budgets for Paramedic Services, be received.

CARRIED

5. REPORTS

6. CLOSED SESSION

7. MATTERS FROM CLOSED SESSION

8. CONFIRMING BY-LAW

CR2017-783

Moved By Councillor O'Reilly

Seconded By Councillor Dunn

RESOLVED THAT a by-law to confirm the proceedings of a Special Council Information Meeting held Tuesday, September 19, 2017 be read a first, second and third time, passed, numbered, signed and the corporate seal attached.

CARRIED

9. **ADJOURNMENT**

CR2017-784

Moved By Councillor Pollard

Seconded By Councillor Stauble

RESOLVED THAT the Council Meeting adjourn at 2:45 p.m.

CARRIED

Read and adopted this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

The Corporation of the City of Kawartha Lakes
MINUTES
SPECIAL COUNCIL INFORMATION MEETING

CC2017-25
Wednesday, September 20, 2017
Open Session Commencing at 1:00 p.m.
Council Chambers
City Hall
26 Francis Street, Lindsay, Ontario K9V 5R8

MEMBERS:
Mayor Andy Letham
Councillor Isaac Breadner
Councillor Pat Dunn
Councillor Doug Elmslie
Councillor Gord James
Councillor Gerard Jilesen
Councillor Brian S. Junkin
Councillor Rob Macklem
Councillor Mary Ann Martin
Councillor Gord Miller
Councillor Patrick O'Reilly
Councillor John Pollard
Councillor Kathleen Seymour-Fagan
Councillor Heather Stauble
Councillor Stephen Strangway
Councillor Andrew Veale
Councillor Emmett Yeo

Accessible formats and communication supports are available upon request.

1. CALL TO ORDER

Mayor Letham called the meeting to order at 1:00 p.m. Councillors I. Breadner, P. Dunn, D. Elmslie, G. James, G. Jilesen, B. Junkin, R. Macklem, M.A. Martin, G. Miller, P. O'Reilly, J. Pollard, K. Seymour-Fagan, H. Stauble, S. Strangway, and A. Veale were in attendance.

CAO and Acting City Clerk R. Taylor, Administrative Assistant S. O'Connell and various other staff were also in attendance.

Early Departure: Councillor G. James left Council Chambers at 2:21 p.m. and did not return. Councillor I Breadner left Council Chambers at 2:22 p.m. and did not return. Councillor P. O'Reilly left the Victoria Room at 4:23 p.m. and did not return.

2. ADOPTION OF AGENDA

CR2017-785

Moved By Councillor Martin

Seconded By Councillor Junkin

RESOLVED THAT the Agenda for the Open Session of the Special Council Information Meeting of Wednesday, September 20, 2017, be adopted as circulated.

CARRIED

3. DISCLOSURE OF PECUNIARY INTEREST

There were no declarations of pecuniary interest noted.

4. PUBLIC INFORMATION

4.1 Presentations

4.1.1 CC2017-25.4.1.1

Bryan Robinson, Director of Public Works

2018 Public Works Department Operating and Capital Budget Overview

Director of Public Works B. Robinson provided two separate presentations; one pertaining to Public Works and one pertaining to Water and Wastewater.

Director Robinson identified 2017 highlights and 2018 directions for Public Works. He highlighted the success of the newly implemented Clear Bag Program within Solid Waste and also noted the challenge that unpredictable weather

patterns create for our Roads Division. Director Robinson responded to questions from Council.

Director Robinson identified 2017 highlights and 2018 directions for the Water and Wastewater Division. Director of Engineering and Corporate Assets J. Rojas provided an overview of the capital project portion of the presentation and provided an overview of how the budgets are outlined for those projects. Director Robinson and Director Rojas responded to questions from Council.

A copy of each presentation is available in the Clerk's Office.

CR2017-786

Moved By Councillor Macklem

Seconded By Councillor Dunn

RESOLVED THAT the presentations by Director Robinson and Director Rojas, regarding the 2018 Public Works Department Operating and Capital Budget and the 2018 Water and Wastewater Operating and Capital Budget, be received.

CARRIED

4.1.2 CC2017-25.4.1.2

Juan Rojas, Director and Engineering and Corporate Assets
2018 Engineering and Corporate Assets Department Operating and Capital
Budget Overview

Director of Engineering and Corporate Assets J. Rojas provided an overview of the 2018 Operating and Capital Budgets for Engineering and Corporate Assets. Director Rojas identified 2017 highlights and 2018 directions for Engineering and Corporate Assets. He reviewed the highlights from the Asset Management Division and outlined the coordinated effort that is put forward by Engineering, Development Services and Kawartha Conservation. Director Rojas responded to questions from Council.

Council recessed at 2:43 p.m. and reconvened at 2:49 p.m.

CR2017-787

Moved By Councillor Strangway

Seconded By Councillor Miller

RESOLVED THAT the presentation by Director Rojas, regarding the 2018 Engineering and Corporate Assets Department Operating and Capital Budget, be received.

CARRIED

4.1.3 CC2017-25.4.1.3

Joseph Kelly, Senior Engineering Technician
Traffic Calming Presentation

Joseph Kelly, Senior Engineering Technician, provided an overview of traffic calming measures and the criteria that is used to determine whether or not a travelled roadway qualifies for the implementation of those measures. He reviewed the measures that have been implemented within the City of Kawartha Lakes and the success rates that were seen for those measures. Mr. Kelly responded to questions from Council.

CR2017-788

Moved By Councillor Martin

Seconded By Councillor Seymour-Fagan

RESOLVED THAT the presentation by Joseph Kelly, Senior Engineering Technician, regarding Traffic Calming Measures, be received.

CARRIED

5. REPORTS

6. CLOSED SESSION

Council recessed at 3:38 p.m. and reconvened at 3:40 p.m. in the Victoria Room at City Hall.

CR2017-789

Moved By Councillor Pollard

Seconded By Councillor Dunn

RESOLVED THAT Council convene into closed session at 3:41 p.m. in order to consider matters on the Wednesday, September 20, 2017 Closed Session Agenda and that are permitted to be discussed in a session closed to the public pursuant to Section 239(2) of the Municipal Act, S.O. 2001. S.25.

CARRIED

7. MATTERS FROM CLOSED SESSION

8. CONFIRMING BY-LAW

CR2017-792

Moved By Councillor Dunn

Seconded By Councillor Veale

RESOLVED THAT a by-law to confirm the proceedings of a Special Council Information Meeting held Wednesday, September 20, 2017 be read a first, second and third time, passed, numbered, signed and the corporate seal attached.

CARRIED

9. ADJOURNMENT

CR2017-793

Moved By Councillor Macklem

Seconded By Councillor Jilesen

RESOLVED THAT the Council Meeting adjourn at 4:29 p.m.

CARRIED

Read and adopted this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

The Corporation of the City of Kawartha Lakes
MINUTES
REGULAR COUNCIL MEETING

CC2017-26

Tuesday, September 26, 2017

Closed Session Commencing at 1:00 p.m. Open Session Commencing at 2:00 p.m.

Council Chambers

City Hall

26 Francis Street, Lindsay, Ontario K9V 5R8

MEMBERS:

Mayor Andy Letham
Councillor Isaac Breadner
Councillor Pat Dunn
Councillor Doug Elmslie
Councillor Gord James
Councillor Gerard Jilesen
Councillor Brian S. Junkin
Councillor Rob Macklem
Councillor Mary Ann Martin
Councillor Gord Miller
Councillor Patrick O'Reilly
Councillor John Pollard
Councillor Kathleen Seymour-Fagan
Councillor Heather Stauble
Councillor Stephen Strangway
Councillor Andrew Veale
Councillor Emmett Yeo

Accessible formats and communication supports are available upon request.

1. CALL TO ORDER

Mayor Letham called the Meeting to order at 1:00 p.m. Councillors I. Breadner, P. Dunn, D. Elmslie, G. James, G. Jilesen, B. Junkin, M.A. Martin, G. Miller, P. O'Reilly, J. Pollard, H. Stauble, S. Strangway, A. Veale and E. Yeo were in attendance.

CAO and Acting City Clerk R. Taylor, Deputy Clerk A. Rooth and various other staff members were also in attendance.

2. ADOPTION OF CLOSED SESSION AGENDA

CR2017-794

Moved By Councillor Strangway

Seconded By Councillor Elmslie

RESOLVED THAT the Closed Session agenda be adopted as circulated.

CARRIED

3. DISCLOSURE OF PECUNIARY INTEREST IN CLOSED SESSION ITEMS

There were no declarations of pecuniary interest noted.

4. CLOSED SESSION

CR2017-795

Moved By Councillor Veale

Seconded By Councillor Breadner

RESOLVED THAT Council convene into closed session at 1:00 p.m. in order to consider matters on the Tuesday, September 26, 2017 Closed Session Agenda and that are permitted to be discussed in a session closed to the public pursuant to Section 239(2) of the Municipal Act, S.O. 2001. S.25.

CARRIED

5. OPENING CEREMONIES

5.1 Call Open Session to Order

Mayor Letham called the Open Session of the Meeting to order at 2:00 p.m. Councillors I. Breadner, P. Dunn, D. Elmslie, G. James, G. Jilesen, B. Junkin, R. Macklem, M.A. Martin, G. Miller, P. O'Reilly, J. Pollard, H. Stauble, S. Strangway, A. Veale and E. Yeo were in attendance.

CAO and Acting City Clerk R. Taylor, Deputy Clerk A. Rooth, Administrative Assistant K. Lewis and various other staff members were also in attendance.

Early Departures:

Councillor Miller 5:00 p.m.

Councillor James 5:06 p.m.

Councillor Breadner 5:10 p.m.

5.2 O Canada

The Meeting was opened with the singing of 'O Canada'.

5.3 Moment of Silent Reflection

The Mayor asked those in attendance to observe a Moment of Silent Reflection.

5.4 Adoption of Open Session Agenda

CR2017-801

Moved By Councillor Elmslie

Seconded By Councillor Stauble

RESOLVED THAT the Procedural By-law be waived to allow an additional by-law under section 15.1 titled, A By-law to Provide for the Erection of Stop Signs in the City of Kawartha Lakes (Hillhead Road and River Road, Geographic Township of Ops), to be added to the Open Session Agenda.

CARRIED

CR2017-802

Moved By Councillor Breadner

Seconded By Councillor Dunn

RESOLVED THAT the Agenda for the Open Session of the Regular Council Meeting of Tuesday, September 26, 2017, be adopted as circulated and with the following amendments:

Additions – Deputations:

9.3

Chris Appleton

Seasonal Residential Clean-Up Waste Drop Off

(Item 10.1.1 on the Agenda)

9.4

Chris Appleton

Landfill Gas Generator Status

(Report WM2017-004, Item 10.3.10 on the Agenda)

Addition – Consent Correspondence:

10.1.3

Rolling Hills Estates Homeowners Association

Licensing of Short Term Residential Rentals

(Report LIC2017-001, Item 10.3.1 on the Agenda)

RESOLVED THAT the September 24, 2017 correspondence from Rolling Hills Estates Homeowners Association regarding Licensing of Short Term Residential Rentals, Report LIC2017-001, Item 10.3.1 on the Agenda, be received.

Addition – By-laws by Consent:

15.1.17

A By-law to Provide for the Erection of Stop Signs in the City of Kawartha Lakes (Hillhead Road and River Road, Geographic Township of Ops)

CARRIED

6. DISCLOSURE OF PECUNIARY INTEREST

There were no declarations of pecuniary interest noted.

7. MATTERS FROM CLOSED SESSION

Items 4.3 and 4.4

Council reviewed an appraisal report in Closed Session for the property located on Slalom Drive, Bethany and Legally Described as Block B Plan 152, in the Geographic Township of Manvers, City of Kawartha Lakes (the “Property”), which report itself was prepared and provided to the City as a confidential document and which appraised the Property at \$90,000.00 and valid between May 1, 2017 and November 1, 2017;

Council reviewed an appraisal report in Closed Session for the property located on Christie Road, Bethany and Legally Described as Block A Plan 152, in the Geographic Township of Manvers, City of Kawartha Lakes (the “Property”), which report itself was prepared and provided to the City as a confidential document

and which appraised the Property at \$70,000.00 and valid between May 1, 2017 and November 1, 2017;

Council was advised that the City is required by Policy No. C-204-DEV-001 Disposal of Real Property Policy and By-law 2010-118, as amended, to sell surplus city land at no less than the full appraised value plus all costs of the transfer (which limited exceptions);

Council was advised that the City is required by Policy No. C-204-DEV-001 Disposal of Real Property Policy and By-law 2010-118, as amended, to advertise the City's pending disposal of surplus land by newspaper circulation and listing on the City website;

Council was informed that, as of August 2017, the Realty Services Division of the City has been holding all offers to purchase surplus City-owned property for a 10-day period following the initial release of a property listing for sale;

Council was informed that, commencing the end of September 2017, the Realty Services Division of the City will be providing enhanced notice of the City's pending decision to declare property surplus by posting notice on the property;

Council was informed that, commencing the end of September 2017, the Realty Services Division of the City will be providing enhanced notice of the City's pending decision to sell surplus land by posting notice on the property; and

Council was informed that, commencing the end of September 2017, the Realty Services Division of the City will be providing enhanced marketing of City property for sale by listing properties on the website www.Realtor.ca (formerly known as "MLS").

8. PUBLIC INFORMATION

8.1 Presentations

8.1.1 CC2017-26.8.1.1

Wayne Hutchinson

Beverley Jeeves

Fenelon Falls Museum Board Presentation and Financial Update

Wayne Hutchinson and Beverley Jeeves, on behalf of Maryboro Lodge - Fenelon Falls Museum, provided Council with an overview of events and programs held by the Museum over the past year as well as upcoming events. They noted that the facility is becoming a community hub and tourist attraction and runs on limited secure funding. They requested that Council consider adding the cost of Maryboro Lodge's water, propane and electricity, currently totaling approximately

\$7,500.00 annually, into the Community Services 2018 budget. Mr. Hutchinson and Ms. Jeeves responded to questions from Council members.

CR2017-803

Moved By Councillor Elmslie

Seconded By Councillor Strangway

RESOLVED THAT the presentation by Wayne Hutchinson and Beverley Jeeves, regarding the Fenelon Falls Museum Board Presentation and Financial Update and the correspondence from The Fenelon Falls Museum, be received and referred to the 2018 operating budget process for consideration.

CARRIED

8.1.2 CC2017-26.8.1.1

Bryan Robinson, Director of Public Works

James Makaruk, Director, Stirling Rothesay Consulting Inc.

Roads Depot Master Plan Presentation

Director Robinson introduced James Makaruk, Director of Stirling Rothesay Consulting Inc. Mr. Makaruk presented the Road Depot Master Plan including background, opportunities and alternative solutions. He provided a summary comparison of the alternatives , identified the preferred solution and recommended phasing. Mr. Makaruk and Director Robinson responded to questions from Council members. A copy of the presentation is available in the Clerk's Office.

CR2017-804

Moved By Councillor Breadner

Seconded By Councillor Yeo

RESOLVED THAT the presentation by Bryan Robinson, Director of Public Works and James Makaruk, Director, Stirling Rothesay Consulting Inc., regarding the Roads Depot Master Plan, be received.

CARRIED

8.2 Invited Guests (Quarterly Basis)

8.3 Notices and Information by Members of Council and Staff

8.3.1 Council

Councillor Martin advised that on September 23rd, Neil Young was inducted into the Canadian Songwriters Hall of Fame and on September 24th he made an appearance in his hometown of Omemee.

Councillor Strangway congratulated current and former staff and students of Fenelon Township Public School who are celebrating the school's 50th anniversary on September 30th.

Councillor Junkin invited everyone to the Bobcaygeon Fall Fair running September 29th to October 1st with events for the entire family.

Councillor O'Reilly made the following announcements:

- The 15th Annual Kawartha FarmFest is September 30th from 10:00 a.m. to 4:00 p.m.
- The Victoria County Studio Tour continues September 30th and October 1st with studios open from 10:00 a.m. to 5:00 p.m.
- City of Kawartha Lakes Quarter Century and Retiree Banquet is September 28th at the Ops Community Centre at 7:30 p.m.
- Sir Sandford Fleming College is celebrating its 50th anniversary on September 29th at the Frost Campus with events, activities and the Moveable Feast.
- Kawartha/Haliburton Victim Services fashion show fundraiser is September 28th at Celebrations in Lindsay. Funds raised will help fund local services programs to support MPP Laurie Scott's Human Trafficking initiative.
- TVO is filming two segments of The Agenda to highlight Lindsay's basic income pilot project at the Pie Eyed Monk Brewery in Lindsay.
- Kawartha Lakes Police Service Chief John Hagarty has announced his retirement after 12 years of service.
- Thousands of people came out to enjoy this year's Lindsay Fall Fair.

8.3.2 Staff

CAO Taylor congratulated By-law Enforcement Officer Mary Hansen on receiving the Ontario Municipal Law Enforcement Long Service Medal from the Municipal Law Enforcement Officers' Association of Ontario for her 16 years of service in municipal law enforcement.

8.4 Notice of Motion

9. DEPUTATIONS

9.1 CC2017-26.9.1

David Marsh

By-laws to Authorize the Sale of Surplus Municipal Properties - Properties located on Slalom Drive and Christie Road
(Items 15.1.10 and 15.1.11 on the Agenda)

David Marsh expressed concern regarding the process relating to the sale of the municipal properties and low appraisal values. He stated that the sale of the properties did not get the exposure it should have. Local residents, who assumed this land was parkland, were not aware of the land being for sale as there were no signs posted on the properties. Mr. Marsh expressed concern that in the current market, more exposure may have achieved higher values. He stated that until the By-laws have passed, Council has the option to reconsider the sale of the lands and asked that they do so. Mr. Marsh responded to questions from Council members.

CR2017-805

Moved By Councillor Stauble

Seconded By Councillor Pollard

RESOLVED THAT the deputation of David Marsh, regarding By-laws to Authorize the Sale of Surplus Municipal Properties - Properties located on Slalom Drive and Christie Road, Items 15.1.10 and 15.1.11 on the Agenda, be received.

CARRIED

9.2 CC2017-26.9.2

Tim Cafik

Jodi Windsor

By-laws to Authorize the Sale of Surplus Municipal Properties - Properties located on Slalom Drive and Christie Road
(Items 15.1.10 and 15.1.11 on the Agenda)

Tim Cafik and Jodi Windsor, local residents, advised that they had always understood that the municipal properties on Slalom Drive and Christie Road were parkland. They expressed a desire to have the lands remain as greenspace or developed as parkland as the community has seen significant increases in the number of children living there with the closest park being 7 km away and across a major highway. Ms. Windsor stated that they were, until recently, unaware of the City's plans to sell the properties as there were no signs posted on them. She stated that a petition has been submitted by the community requesting Council to retain the lots to be preserved as parkland as was the original intent of these lots, noting that every household on Slalom Drive and

Christie Road had signed it. Ms. Windsor advised that local residents are willing to donate time and raise funds to assist with building a park. She requested that Council take the properties off the market. Mr. Cafik and Ms. Windsor responded to questions from Council members.

CR2017-806

Moved By Councillor Martin

Seconded By Councillor Stauble

RESOLVED THAT the deputation of Tim Cafik and Jodi Windsor, regarding By-laws to Authorize the Sale of Surplus Municipal Properties - Properties located on Slalom Drive and Christie Road, Items 15.1.10 and 15.1.11 on the Agenda, be received.

CARRIED

9.3 CC2017-26.9.3

Chris Appleton

Seasonal Residential Clean-Up Waste Drop Off
(Item 10.1.1 on the Agenda)

Chris Appleton expressed concern that the recommendation regarding Seasonal Residential Clean Up Waste Drop Off had a significant financial impact, noting that there was no related staff report and that the memorandum had not gone to the Lindsay Ops Landfill Public Review Committee, Fenelon Landfill Public Review Committee and Waste Strategy Task Force for review and comment. He requested that the matter be deferred to a later date to allow for staff input and review and comments by the aforementioned Committees. Mr. Appleton responded to questions from Council members.

CR2017-807

Moved By Councillor James

Seconded By Councillor Miller

RESOLVED THAT the deputation of Chris Appleton, regarding Seasonal Residential Clean-Up Waste Drop Off, Item 10.1.1 on the Agenda, be received.

CARRIED

9.4 CC2017-26.9.4

Chris Appleton
Landfill Gas Generator Status
(Report WM2017-004, Item 10.3.10 on the Agenda)

Mr. Appleton provided some background on the Landfill Gas Generator, noting that it has not been producing as originally forecast. He expressed concern that, as the Lindsay Water Treatment Plant uses significantly more of the electricity generated than the Lindsay Ops Landfill, the recommendation in Report WM2017-004 in effect constitutes a subsidy to the Water and Wastewater operating budget. He further noted that, by allocating future capital works to the tax levy capital program, rural taxpayers will be bearing the financial burden for a service that benefits only water and wastewater users. Mr. Appleton requested that the matter be further reviewed or that cost for electricity usage at water and wastewater facilities be allocated based on usage. Mr. Appleton responded to questions from Council members.

CR2017-808

Moved By Councillor O'Reilly

Seconded By Councillor Dunn

RESOLVED THAT the deputation of Chris Appleton, regarding Landfill Gas Generator Status, Report WM2017-004, Item 10.3.10 on the Agenda, be received.

CARRIED

The meeting recessed at 3:45 p.m. and reconvened at 3:55 p.m.

10. CONSENT MATTERS

The following items were requested to be extracted from the Consent Agenda:

Councillor Elmslie 10.1.1

Councillor James 10.1.2

Mayor Letham Item 10.3.1

Councillor Junkin Items 10.3.8, 10.3.9 and 10.3.10

Moved By Councillor Dunn

Seconded By Councillor Breadner

RESOLVED THAT all of the proposed resolutions shown in Section 10.1, 10.2 and 10.3 of the Agenda be approved and adopted by Council in the order that they appear on the agenda and sequentially numbered, save and except Items 10.1.1, 10.1.2, 10.3.1, 10.3.8, 10.3.9 and 10.3.10, namely:

CARRIED

10.1 Correspondence

10.1.3 CC2017-26.10.1.3

Rolling Hills Estates Homeowners Association
Licensing of Short Term Residential Rentals
(Report LIC2017-001, Item 10.3.1 on the Agenda)

CR2017-809

RESOLVED THAT the September 24, 2017 correspondence from Rolling Hills Estates Homeowners Association regarding Licensing of Short Term Residential Rentals, Report LIC2017-001, Item 10.3.1 on the Agenda, be received.

CARRIED

10.2 Minutes from:

10.2.1 Council

10.2.1.1 CC2017-26.10.2.1.1

Minutes, Regular Council Meeting
September 12, 2017

CR2017-810

RESOLVED THAT the Minutes of the September 12, 2017 Regular Council Meeting, be received and adopted.

CARRIED

10.2.1.2 CC2017-26.10.2.1.2

Minutes, Special Council Information Meeting
September 14, 2017

CR2017-811

RESOLVED THAT the Minutes of the September 14, 2017 Special Council Information Meeting, be received and adopted.

CARRIED

10.2.2 Committees of Council, Advisory Boards and Task Forces

10.2.2.1 CC2017-26.10.2.2.1

Draft Minutes, Executive Committee Meeting
September 8, 2017

CR2017-812

RESOLVED THAT the Draft Minutes of the September 8, 2017 Executive Committee Meeting, be received.

CARRIED

10.3 Reports

10.3.2 CORP2017-025

Angela Vickery, Manager, Revenue and Procurement
Consolidated Fees and Charges By-Law - Update to Schedule F

CR2017-813

RESOLVED THAT Report CORP2017-025, **Consolidated Fees and Charges By-Law – Update to Schedule F**, be received;

THAT the following fee be established and inserted into By-Law 2016-206;

F – 1 Waste Management Fees			
Service Description	Unit	Fees Effective January 1, 2018	Reference
Vac Trucks	per load	\$200.00	New Flat Fee

And;

THAT the fees contained in Appendix A to Report CORP2017-025, be approved.

CARRIED

10.3.3 CORP2017-027

Jessica Hood, Junior Accountant
2017 Q2 Capital Close

CR2017-814

RESOLVED THAT Report CORP2017-027, **2017 Q2 Capital Close**, be received;

THAT the capital projects identified in Attachment A be approved to be closed

due to completion;

THAT the balances in the table below be transferred to or from the corresponding reserves;

Reserve	Report Closing Balance
Capital Projects Reserve	\$377,275
Public Works Fleet Reserve	\$(21,651)
Water Infrastructure Reserve	\$3,577
Sewer Infrastructure Reserve	\$49,357

THAT an additional \$3,260.56 of City Development Charges be allocated to project 9831503, Dranoel Road Culvert to fund the project deficit and bring the project balance to zero upon project closure;

THAT project 9531502, Upgrade City Building Systems be reopened and \$118,000 from the Capital Projects Reserve be used to fund the project;

THAT the following projects be extended to December 31, 2017:

928160101 - Server Hardware
928160501 - Cabling Syst Lindsay Firehall
928160601 - Client Hardware
928161601 - Replace Public Access Systems
950160401 - Picnic Table and Bench Replace
950160700 - Ice Plant/System Equip Replace
994162401 - Cement Pad at Bus Stops
994165501 - LIMO Specialized Transit Bus

THAT the following projects be extended to December 31, 2018:

9971460 – Fenelon Landfill-Admin Building
9971463 – Laxton Landfill Site

CARRIED

10.3.4 PUR2017-049

Launa Lewis, Buyer
2017-46-CP Engineering Services for Downtown Reconstruction in Lindsay

CR2017-815

RESOLVED THAT Report PUR2017-049, **2017-46-CP Engineering Services for Downtown Reconstruction in Lindsay**, be received;

THAT Cima Canada Inc., of Bowmanville, be awarded 2017-46-CP Engineering Services for Downtown Reconstruction in Lindsay, as the highest scoring Proponent;

THAT subject to receipt of the required documents, the Mayor and Clerk be authorized to execute the agreements to award the contract; and

THAT the Purchasing Division be authorized to issue a Purchase Order.

CARRIED

10.3.5 PUR2017-054

Marielle van Engelen, Buyer
Todd Bryant, Manager of Fleet and Transit Services
2017-84-CP Request for Proposal Remove and Replace Transit Hub

CR2017-816

RESOLVED THAT Report PUR2017-054, **2017-84-CP Request for Proposal Remove and Replace Transit Hub**, be received;

THAT Daytech Limited of Toronto, ON, being the only compliant proponent, be selected for the award for Request for Proposal 2017-84-CP Remove and Replace Transit Hub; and

THAT subject to receipt of required documents, that Purchasing Division be authorized to issue a purchase order.

CARRIED

10.3.6 PLAN2017-057

David Harding, Planner I

A By-law to Deem Lot 11, Registered Plan 395, Geographic Township of Mariposa, being 26 Rosie's Road (Mastin and Button)

CR2017-817

RESOLVED THAT Report PLAN2017-057, **Mastin and Button – D30-17-007**, be received;

THAT a Deeming By-law respecting Lot 11, Registered Plan 395, substantially in the form attached as Appendix D to Report PLAN2017-057, be approved and adopted by Council; and

THAT the Mayor and Clerk be authorized to execute and documents required by the approval of this application.

CARRIED

10.3.7 PLAN2017-058

Sherry L. Rea, Development Planning Supervisor

An application for Part-Lot Control Exemption under Section 50(5) of the Planning Act (D05-17-003) for Part of Lot 10, Plan 70, 60 and 62 Helen Street, former Village of Bobcaygeon, now City of Kawartha Lakes, Jasmina Savic and Dragutin Milosevic

CR2017-818

RESOLVED THAT Report PLAN2017-058, **Jasmina Savic and Dragutin Milosevic - D05-17-003**, be received;

THAT a By-law to exempt Part Lot 10, Plan 70, Helen Street, former Village of Bobcaygeon from Part-Lot Control, substantially in the form attached as Appendix C to Report PLAN2017-058, be approved and adopted by Council; and

THAT the Mayor and City Clerk be authorized to execute any documents and agreements required by the approval of this application and decision.

CARRIED

10.4 Items Extracted from Consent

10.1.1 CC2017-26.10.1.1

Andy Letham, Mayor

Seasonal Residential Clean-Up Waste Drop Off

Moved By Councillor Elmslie

Seconded By Councillor Junkin

RESOLVED THAT the memorandum from Mayor Letham regarding **Seasonal Residential Clean Up Waste Drop Off**, dated September 26, 2017, be received and referred to the Lindsay Ops Landfill Public, Review Committee, Fenelon Landfill PRC and Waste Management Task Force for review and comment.

MOTION FAILED

CR2017-819

Moved By Councillor Yeo

Seconded By Councillor Breadner

RESOLVED THAT the memorandum from Mayor Letham regarding **Seasonal Residential Clean Up Waste Drop Off**, dated September 26, 2017, be received; **THAT** Staff implement for the 2018 season a 1 year pilot project to exempt all City of Kawartha Lakes residents from tipping fees identified within by-law 2015-123, as amended, related to bringing compliant clear bag residential waste and compliant leaf and yard residential waste to City Landfills for a period of 2 weeks in spring and 2 weeks in fall;

THAT Staff report back to Council by the end of July 2018 on the results of the Spring 2018 pilot project;

THAT all other current programs regarding waste drop off, leaf and yard material drop off, remain in place;

THAT the necessary by-laws for the above recommendations be forwarded to Council for adoption; and

THAT the Mayor and Clerk be authorized to execute any documents and agreements required by the approval of this decision.

CARRIED

10.1.2 CC2017-26.10.1.2

Andy Letham, Mayor
Speed Reduction Hillhead Road

CR2017-820

Moved By Councillor James

Seconded By Councillor Dunn

RESOLVED THAT the memorandum from Mayor Letham regarding **Speed Reduction Hillhead Road**, dated September 26, 2017, be received;

THAT the speed limit on Hillhead road be posted at 60 km/h from River Road to Mount Horeb Road (CKL 31);

THAT the necessary by-laws for the above recommendations be forwarded to Council for adoption; and

THAT the Mayor and Clerk be authorized to execute any documents and agreements required by the approval of this application/agreement/decision.

CARRIED

CR2017-821

Moved By Councillor James

Seconded By Councillor Breadner

RESOLVED THAT an all-way stop be installed at the intersection of Hillhead Road and River Road in the Geographic Township of Ops;

THAT the necessary by-laws for the above recommendation be forwarded to Council for adoption; and

THAT the Mayor and Clerk be authorized to execute any documents and agreements required by the approval of this application/agreement/decision.

CARRIED

Moved By Councillor Martin

Seconded By Councillor James

RESOLVED THAT the speed limit on the portion of Mount Horeb Road on the detour route for the construction at Stoney Creek Culvert be reduced temporarily from the posted 80 km/hr to 70 km/hr for the duration of the construction period.

MOTION FAILED

10.3.1 LIC2017-001

Alix Hick, Senior Licensing Officer
Licensing of Short Term Residential Rentals

CR2017-822

Moved By Councillor James

Seconded By Councillor O'Reilly

RESOLVED THAT Report LIC2017-001, **Licensing of Short Term Residential Rentals**, be deferred to the October 10, 2017 Regular Council Meeting.

CARRIED

10.3.8 ENG2017-011

Michael Farquhar, Supervisor, Technical Services
Electronic Speed Signs

CR2017-823

Moved By Councillor Junkin

Seconded By Councillor James

RESOLVED THAT Report ENG2017-011, **Electronic Speed Signs**, be received.

CARRIED

CR2017-824

Moved By Councillor Dunn

Seconded By Councillor James

RESOLVED THAT staff purchase a portable pole mounted electronic speed sign with remaining Funds in project 983161400.

CARRIED

10.3.9 VM2017-002

Rod Sutherland, Director of Human Services
Victoria Manor Redevelopment Application Approval

CR2017-825

Moved By Councillor Junkin

Seconded By Councillor Elmslie

RESOLVED THAT Report VM2017-002, **Victoria Manor Redevelopment Application Approval**, be received;

THAT an application for the Redevelopment of Victoria Manor under the Enhanced Long Term Care Home Renewal Strategy be submitted to the Ministry of Health and Long Term Care;

THAT the application for Redevelopment be based on a total home size of 160 beds; and

THAT the application for Redevelopment be based on the construction of a new facility.

CARRIED

10.3.10 WM2017-004

Heather Dzurko, Supervisor, Waste Management Operations
Landfill Gas Generator Status

Councillor Miller left Council Chambers at 5:00 p.m. and did not return.
Councillor James left Council Chambers at 5:06 p.m. and did not return.
Councillor Breadner left Council Chambers at 5:10 p.m. and did not return.

CR2017-826

Moved By Councillor Junkin

Seconded By Councillor Elmslie

RESOLVED THAT Report WM2017-004, **Landfill Gas Generator Status**, be received;

THAT the Waste Management and Water and Wastewater Divisions of Public Works share the future capital and operating costs for the landfill gas generator proportionate to usage and benefit of electricity produced; and

THAT any financial benefits above the future capital and operating costs be allocated to the Waste Management Division budget.

Recorded	For	Against	Absent
Mayor Letham		X	
Councillor Breadner			X
Councillor Dunn		X	
Councillor Elmslie	X		
Councillor James			X
Councillor Jilesen	X		
Councillor Junkin	X		
Councillor Macklem	X		
Councillor Martin		X	
Councillor Miller			X
Councillor O'Reilly		X	
Councillor Pollard		X	

Councillor Seymour-Fagan			X
Councillor Stauble	X		
Councillor Strangway	X		
Councillor Veale		X	
Councillor Yeo	X		
Results	7	6	4
			CARRIED

11. COMMITTEE OF THE WHOLE

12. COMMITTEE OF THE WHOLE AND PLANNING COMMITTEE MINUTES

12.1 CC2017-26.12.1

Minutes, Planning Committee Meeting
September 13, 2017

CR2017-827

Moved By Councillor O'Reilly

Seconded By Councillor Elmslie

RESOLVED THAT the Minutes of the September 13, 2017 Planning Advisory Committee Meeting be received and the recommendations be adopted.

CARRIED

13. CORRESPONDENCE AND PETITIONS

13.1 CC2017-26.13.1

Margaret McLean

Philip Yates

Petition Regarding Traffic on St. David Street between Queen Street and Colborne Street

CR2017-828

Moved By Councillor Dunn

Seconded By Councillor Jilesen

RESOLVED THAT the petition received from Margaret McLean and Philip Yates regarding Traffic on St. David Street between Queen Street and Colborne Street, be received and referred to staff with a report back by end of Q2 2018.

CARRIED

14. OTHER OR NEW BUSINESS

15. BY-LAWS

Councillor Stauble requested that Items 15.1.10 and 15.1.11 be extracted.

The mover requested the consent of Council to read the by-laws by number only.

Moved By Councillor Strangway

Seconded By Councillor Elmslie

RESOLVED THAT the By-Laws shown in Section 15.1 of the Agenda, namely: Items 15.1.1 to and including 15.1.17 be read a first, second and third time, passed, numbered, signed and the corporate seal attached, save and except Items 15.1.10 and 15.1.11, namely:

CARRIED

15.1 By-Laws by Consent

15.1.1 CR2017-829

A By-law to Amend By-law Number 2005-328, being a By-law to Establish Speed Limits in the City of Kawartha Lakes (Amendment No. 33)(North Bay Drive)

15.1.2 CR2017-830

A By-law to Repeal By-law 2017-093, being A By-law to Appoint a Municipal Law Enforcement Officer for the City of Kawartha Lakes (T. Stewart)

15.1.3 CR2017-831

A By-law to Repeal By-law 2017-094, being A By-law to Appoint a Weed Inspector for the City of Kawartha Lakes (T. Stewart)

15.1.4 CR2017-832

A By-law to Repeal By-law 2017-095, being a By-law to Appoint a Municipal Law Enforcement Officer for the City of Kawartha Lakes (A. Rafton)

15.1.5 CR2017-833

A By-law to Repeal By-law 2017-096, being a By-law to Appoint a Weed Inspector for the City of Kawartha Lakes (A. Rafton)

15.1.6 CR2017-834

A By-law to Appoint a Municipal Law Enforcement Officer for the City of Kawartha Lakes (C. Tassone)

15.1.7 CR2017-835

A By-law to Appoint a Weed Inspector for the City of Kawartha Lakes (C. Tassone)

15.1.8 CR2017-836

A By-Law to Amend Bylaw 2016-072 and to Provide for the Levying of Costs Resulting from the Construction of the Gingrich Petition Municipal Drain

15.1.9 CR2017-837

A By-Law to Amend Bylaw 2016-073 and to Provide for the Levying of Costs Resulting from the Construction of the Sandringham Municipal Drain

15.1.12 CR2017-838

A By-Law to Authorize the Sale of Municipally Owned Property Legally Described as Lot 6 Registered Plan 405, in the Geographic Township of Eldon, City of Kawartha Lakes Described as Part 1 on Plan 57R-10609 Being PIN: 63168-0169 (LT)

15.1.13 CR2017-839

A By-Law To Deem Part of a Plan of Subdivision, Previously Registered For Lands Within Kawartha Lakes, Not To Be A Registered Plan Of Subdivision In Accordance With The Planning Act PIN: 63198-0688(LT), Described As Lot 11, Plan 395, Geographic Township of Mariposa, Now City of Kawartha Lakes (26 Rosie's Road – Mastin and Button)

15.1.14 CR2017-840

A Bylaw to Temporarily Suspend the Application of Subsection 50(5) of the Planning Act for a certain property within Kawartha Lakes PIN: 63130-0330 (LT) (D05-17-003 for Part of Lot 10, Plan 70, 60 and 62 Helen Street)

15.1.15 CR2017-841

A By-Law To Amend The Village of Bobcaygeon Zoning By-Law No. 16-78 To Rezone Land Within The City Of Kawartha Lakes (25 Prince Street West – SWEENEY)

15.1.16 CR2017-842

A By-law to Amend By-law Number 2005-328, being a By-law to Establish Speed Limits in the City of Kawartha Lakes (Amendment No. 34)(Hillhead Road)

15.1.17 CR2017-843

A By-law to Provide for the Erection of Stop Signs in the City of Kawartha Lakes (Hillhead Road and River Road, Geographic Township of Ops)

15.2 By-Laws Extracted from Consent

15.1.10 CC2017-26.15.1.10

A By-Law to Authorize the Sale of Municipally Owned Property Legally Described as Block A Plan 152, in The Geographic Township of Manvers, City of Kawartha Lakes Described as Parts 1 and 2 on Plan 57R-10596 being Part of PIN: 63260-0203 (LT) and to Authorize a Grant of Easement in favour of Hydro One Networks Inc. over Part 2 on Plan 57R-10596

Note to Minutes: No action was taken on Item 15.1.10 due to the resolution under Item 15.1.11.

15.1.11 CC2017-26.15.1.11

A By-Law to Authorize the Sale Of Municipally Owned Property Legally Described as Block B Plan 152, in the Geographic Township of Manvers, City of Kawartha Lakes Described as Parts 3 and 4 on Plan 57R-10596 Being Part of PIN: 63260-0203 (LT) and to Authorize a Grant of Easement in Favour of Hydro One Networks Inc. Over Part 3 on Plan 57R-10596

Note to Minutes: No action was taken on Item 15.1.11 due to the following resolution.

CR2017-844

Moved By Councillor Stauble

Seconded By Councillor Martin

RESOLVED THAT the matter of the sale of Municipally Owned Property Legally Described as Block A Plan 152, in The Geographic Township of Manvers, City of Kawartha Lakes Described as Parts 1 and 2 on Plan 57R-10596 being Part of PIN: 63260-0203 (LT) and to Authorize a Grant of Easement in favour of Hydro

One Networks Inc. over Part 2 on Plan 57R-10596 and Municipally Owned Property Legally Described as Block B Plan 152, in the Geographic Township of Manvers, City of Kawartha Lakes Described as Parts 3 and 4 on Plan 57R-10596 Being Part of PIN: 63260-0203 (LT) and to Authorize a Grant of Easement in Favour of Hydro One Networks Inc. Over Part 3 on Plan 57R-10596, be referred to staff in the Community Service Department for Report Back to Council by the end of Q2 2018 with options for the development of the lands as parkland and the associated budget implications.

Recorded	For	Against	Absent
Mayor Letham		X	
Councillor Breadner			X
Councillor Dunn	X		
Councillor Elmslie	X		
Councillor James			X
Councillor Jilesen		X	
Councillor Junkin	X		
Councillor Macklem	X		
Councillor Martin	X		
Councillor Miller			X
Councillor O'Reilly		X	
Councillor Pollard	X		
Councillor Seymour-Fagan			X
Councillor Stauble	X		
Councillor Strangway	X		
Councillor Veale		X	
Councillor Yeo		X	
Results	8	5	4
CARRIED			

16. CLOSED SESSION (IF NOT COMPLETED PRIOR TO OPEN SESSION)

17. **MATTERS FROM CLOSED SESSION**

18. **CONFIRMING BY-LAW**

CR2017-845

Moved By Councillor Junkin

Seconded By Councillor Jilesen

RESOLVED THAT a by-law to confirm the proceedings of a Regular Council Meeting held Tuesday, September 26, 2017 be read a first, second and third time, passed, numbered, signed and the corporate seal attached.

CARRIED

19. **ADJOURNMENT**

CR2017-846

Moved By Councillor Veale

Seconded By Councillor Dunn

RESOLVED THAT the Council Meeting adjourn at 5:44 p.m.

CARRIED

Read and adopted this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

Recommendations made at the September 13, 2017 Planning Advisory Committee:

PC2017-038

Moved By Mayor Letham

Seconded By Councillor Miller

RECOMMEND THAT Report PLAN2017-052, **Plan 551 Lot 63, Concession 2 Part of Lot 13, Geographic Township of Verulam, Boehm – Application D06-17-024**, be received; and

THAT Report PLAN2017-052 respecting Application D06-17-024 be referred back to staff to address any issues raised through the public consultation process and for further review and processing until such time that all comments have been received from all circulated agencies and City departments and that any comments and concerns have been addressed.

CARRIED

PC2017-039

Moved By Councillor Veale

Seconded By M. Barkwell

RECOMMEND THAT Report PLAN2017-053, **Plan 8P, Part of Park Lot K, 57R-7336, Part of Part 1, Former Town of Lindsay, Lindsay Retirement Home GP Ltd. – Application D06-17-025**, be received; and

THAT Report PLAN2017-053 respecting Application D06-17-025 be referred back to staff to address any issues raised through the public consultation process and for further review and processing until such time that all comments have been received from all circulated agencies and City departments and that any comments and concerns have been addressed.

CARRIED

PC2017-040

Moved By Councillor Junkin

Seconded By Councillor Stauble

RECOMMEND THAT Report PLAN2016-056, respecting Lot 8 and Part Lot 9, Plan 70, being Part 1, Plan 57R-4111, identified as 25 Prince Street West, former Village of Bobcaygeon, Sweeney – Application D06-17-026, be received;

THAT Zoning By-Law Amendment application D06-17-026 identified as 25 Prince Street West, City of Kawartha Lakes, as generally outlined in Appendix D to Report PLAN2017-056, be approved and adopted by Council; and

THAT the Mayor and Clerk be authorized to execute any documents and agreements required by the approval of this application.

CARRIED

PC2017-041

Moved By Mayor Letham

Seconded By Councillor Miller

RECOMMEND THAT the September 13, 2017 memorandum from Sherry L. Rea, regarding OMB Correspondence regarding O.Reg 549/06 Part Lots 4 and 5, Concession 2, geographic Township of Emily, City of Kawartha Lakes, being vacant land on Ski Hill Road Sobrian/Kiezebrink/Chamberlain (Omeme Country Inn), be received; and

THAT the OMB Correspondence regarding O.Reg 549/06 Part Lots 4 and 5, Concession 2, geographic Township of Emily, City of Kawartha Lakes, being vacant land on Ski Hill Road Sobrian/Kiezebrink/Chamberlain (Omeme Country Inn) be received for information purposes.

CARRIED

The Corporation of the City of Kawartha Lakes
MINUTES
DRAINAGE BOARD

DB2017-03
Monday, September 25, 2017
7:30 P.M.
Victoria Room
City Hall
26 Francis Street, Lindsay, Ontario K9V 5R8

MEMBERS:
Councillor Brian Junkin
Councillor Heather Stauble
Ed Bagshaw
Jim Bedard
Robert Bonis
Matt Hollinger
Jim Oriotis

Accessible formats and communication supports are available upon request.

1. CALL TO ORDER

Chair R. Bonis called the meeting to order at 7:32 p.m. Drainage Board members J. Bedard, J. Oriotis, and Councillors Junkin were in attendance.

Deputy Clerk and Recording Secretary J. Watts, Drainage Superintendent P. Herlihey, and Supervisor Technical Services M. Farquhar were also in attendance.

Late Arrival: E. Bagshaw at 7:39 p.m.

2. ADMINISTRATIVE BUSINESS

2.1 Adoption of Agenda

Moved By Councillor Junkin

Seconded By J. Oriotis

RESOLVED THAT the agenda be adopted as circulated.

CARRIED

2.2 Declaration of Pecuniary Interest

There were no declarations of pecuniary interest noted.

2.3 Adoption of Minutes from Previous Meeting

2.3.1 Minutes of the August 28, 2017 Drainage Board Meeting

Moved By Councillor Junkin

Seconded By J. Oriotis

RESOLVED THAT the minutes of the Drainage Board meeting held on August 28, 2017, be adopted as circulated.

CARRIED

Copies of maps requested at the previous meeting were circulated by M. Farquhar and P. Herlihey

3. DEPUTATIONS

3.1 Alan Webster (Relating to Item 4.1 on the Agenda)

Mr. Webster introduced his reasoning for submitting a petition noting that he purchased the land last summer, and identified the need for tile drainage on portions of the land. He stated that he received approval to connect an outlet for

the tile drainage system to a watercourse known as White's Creek from the Lake Simcoe Region Conservation Authority. He stated that a neighbouring property owner was not favourable to additional water entering their property via the watercourse. He determined from advice he received that the best course of action was to petition for a municipal drain and designate the watercourse as a municipal drain. Mr. Webster responded to questions from the members of the Board.

Moved By Councillor Junkin

Seconded By J. Bedard

RESOLVED THAT the deputation of Alan Webster, regarding the Petition for Drainage Works by Owner(s), be received.

CARRIED

4. NEW BUSINESS

4.1 Petition for Drainage Works by Owner(s) - Alan Webster (Victor Webster Farms Ltd.)

Memorandum, Mike Farquhar Supervisor Technical Services – Engineering & Corporate Assets

Drainage Superintendent P. Herlihey and Supervisor of Technical Services M. Farquhar provided an overview of the petition for drainage works on the subject land. They answered question put forth by the members of the Board.

Moved By Councillor Junkin

Seconded By J. Bedard

RECOMMEND THAT the memorandum by Supervisor of Technical Services – Engineering and Corporate Assets, Mike Farquhar, dated September 19, 2017, regarding the petition for drainage works by Alan Webster (Victor Webster Farms Ltd.) on Concession 5 Part Lot 11, Geographic Township of Eldon, be received, **THAT** Council proceed with the petition submitted from Alan Webster (Victor Webster Farms Ltd.) for drainage works for Concession 5 Part Lot 11, Geographic Township of Eldon to be known as the “Webster Drain” and instruct the City Clerk to proceed with the notices required under Section 5 of the *Drainage Act*; and

THAT Staff concurrently continue to pursue with the petitioner options for a mutual drain agreement as per the City's Agricultural Tile Drain Discharge to Roadside Ditches Policy 114 EPW 007.

CARRIED

Moved By J. Bedard
Seconded By J. Oriotis

RECOMMEND THAT pursuant to Section 8(1) of the *Drainage Act, R.S.O. 1990, Chapter D. 17*, that staff recommend to Council a Drainage Engineer for the examination of the area requiring drainage and proceed with the requirements of a petition drain for Concession 5, Part Lot 11, Geographic Township of Eldon.

CARRIED

5. **OTHER BUSINESS**

6. **ADJOURNMENT**

Moved By E. Bagshaw
Seconded By J. Bedard

RESOLVED THAT the Drainage Board Meeting adjourn at 8:43 p.m.

CARRIED

The Corporation of the City of Kawartha Lakes

Council Report

Report Number LIC2017-001

Date: September 26, 2017
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier: All

Subject: Licensing of Short Term Residential Rentals

Author Name and Title: Alix Hick, Senior Licensing Officer

Recommendation(s):

RESOLVED THAT Report LIC2017-001, **Licensing of Short Term Residential Rentals**, be received; and

THAT no further action be taken to regulate Short Term Residential Rentals in the City of Kawartha Lakes.

Department Head: _____

Corporate Services Director / Other: _____

Chief Administrative Officer: _____

Background:

At the Council Meeting of July 11, 2017 Council adopted the following resolution:

RESOLVED THAT the June 15, 2017 correspondence from Rolling Hills Estates Homeowners Association, regarding short term property rentals, be received; and
THAT the Rolling Hills Estates Homeowners Association correspondence be referred to staff for review and report back on alternatives and implications by the end of Q1, 2018.

CR2017-636

At the Council Meeting of August 22, 2018, Council adopted the following resolution:

RESOLVED THAT the petition submitted by Carol Aird, Sandy Clayton, Jean Paton regarding the Regulation of Short Term Property Rentals in the City of Kawartha Lakes including View Lake, be received and forwarded to staff for inclusion in the report on this issue requested by a previous Council direction.

CR2017-706

This report addresses those directions.

Rationale:

In response to the above noted resolutions, staff researched the issue of short term residential rentals, being rentals of 30 days or less, and reviewed the regulatory frameworks implemented by other municipalities. This report will outline the responses from other municipalities, provide an overview of the situation locally, and make recommendations on how to proceed.

Municipalities across the country are taking steps to regulate short term residential rentals. In large urban centres, such as Toronto and Vancouver, short term residential rentals are being regulated as a means to ensure adequate and affordable housing in inflated and understocked rental markets. In municipalities that enjoy a large tourism industry, such as Blue Mountains and Whistler, BC, short term residential rentals are regulated from more of a nuisance prevention and consumer protection standpoint.

Both rationales for regulation are valid, however it is staffs opinion that the issues are not pervasive enough in the City of Kawartha Lakes to warrant the implementation of a costly regulatory framework.

Documentation provided to the City from Airbnb indicates there are 130 active Airbnb short term residential rental listings City of Kawartha Lakes. This is

compared to more than 300 listings in the municipality of Blue Mountains which has a regulatory by-law.

Although the City is currently experiencing a less than 1% vacancy rate for rental housing, the properties being offered as short term residential rentals are not suited or desirable for individuals seeking long term housing options as they are either seasonal properties or too costly. Therefore, regulating short term residential rentals would not assist in increasing the number of year-round residential rental units that are available in the City.

As the issue of regulating residential short term rentals is relatively new, Municipal Law Enforcement has not been actively tracking nuisance calls caused specifically by individuals using short term residential rentals. In the current year, Enforcement has received a total of 6 inquiry calls specifically regarding short term residential rentals and approximately 1 call per week regarding by-law violations at rental cottages. The complaints resulting from activities at short term residential rentals are valid and investigated as per department policy however the call volume is not significant when compared to call volume for other activities regulated through municipal by-laws.

From a zoning perspective, the regulation of short term residential rentals creates numerous and complex challenges. First, if the municipality were to elect to regulate short term residential rentals through zoning, amendments would be required to all the zoning by-laws within the City. Second, there would either have to be a distinction between short term rentals and long term residential rentals or a blanket regulation for all rentals as there are no regulations under licensing or zoning by-laws for long term residential rentals.

The two requests that prompted this report request that by-laws regulating short term residential rentals be implemented in “certain areas of the city”. From a policy and enforcement perspective, this is not recommended as regulating activities in one area may open up the City to requests to specifically regulate other areas which would result in irregular or inconsistent regulation. Such a patchwork of regulatory areas that would lead to inefficiencies in monitoring and enforcement and could also be perceived as targeting certain areas as being deserving or undeserving of regulation over others.

Short term residential rentals areas are not new. For as long as people have been travelling, particularly to cottage areas, short term rentals of residential and recreational properties have been occurring. Access to short term residential rentals has increased as technological platforms such as Airbnb have been developed to facilitate the rental process. Many owners rent their properties as a means of generating income to maintain the properties and keep them in their families for generations, strengthening ties to Kawartha Lakes.

In areas such as the City of Kawartha Lakes, short term residential rentals are a vital part of our tourism economy. The existence of short term residential rentals

is a clear indication that there are not enough traditional traveler accommodations, such as motels, hotels, and bed and breakfasts, to meet the growing demands of the tourism industry and they therefore play a vital role in encouraging tourism and economic development in our area.

Other Alternatives Considered:

Any regulatory by-law would need to be applied to the entire City, not just specific areas. If Council were to elect to regulate short term residential rentals through a licensing by-law, they would have the option of a strict regulatory by-law or a registry system. Examples of provisions that could be built-in to a regulatory by-law include minimum distance separations between short term residential rental units and minimum length of stay regulations. Other municipalities who have implemented short term residential licensing by-laws are using complex point and demerit point system to determine eligibility for initial and renewal licences where demerit points are given for infractions and/or complaints.

The type of by-law would depend on the amount of funds Council wishes to allocate to increased staff time to effectively enforce a by-law. The implementation of a pro-active, regulatory by-law for only short term rentals would require an additional seasonal, full time enforcement staff member to be hired.

If a by-law were to be implemented, there would need to be considerable consultation with stakeholders including cottage associations, individual owners, and tourism industry stakeholders to ensure all parties are able to provide input on any legislation. Additionally, considerable consultation would have to be undertaken with the City's Planning department to make the necessary amendments to the zoning by-laws.

Financial/ Operation Impacts:

In order for a by-law and regulatory framework to be effective, the legislation must be enforceable. If a by-law were to be passed regulating short term residential rentals, there would be a need for additional staff resources in order to properly implement and enforce the by-law. Licensing fees are based on a cost recovery model and given that more staff would be needed for enforcement, the licensing fees have the potential to be prohibitively costly for most short term residential rental property owners.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

N/A

Review of Accessibility Implications of Any Development or Policy:

N/A

Servicing Implications:

N/A

Consultations:

Manager Municipal Law Enforcement
Manager Policy Planning
Manager Economic Development
Housing Manager

Attachments:

Appendix A – Airbnb Statistics



Appendix B – Rolling Hills Appeal Letter



Appendix C – View Lake Petition



Department Head E-Mail: rtaylor@kawarthalakes.ca

Department Head: Ron Taylor

City Of Kawartha Lakes

Airbnb hosts in City Of Kawartha Lakes have been welcoming guests into their homes since 2011. Here is a snapshot of the Airbnb community between July 1, 2016 and July 1, 2017.

Hosts

130	\$5,300	46	24
Active Hosts	Annual earnings for a typical host	Average host age	Nights hosted annually for a typical listing

Guests

5,600	2.6
Inbound guest arrivals in the past 12 months	Average length of stay per guest

Guest Origins

Airbnb guests come from all over the world. Below is a list of the top origin cities for Airbnb guests in City Of Kawartha Lakes.

TOP CITIES

Toronto - 51% | Mississauga - 5% | Markham - 3% |
Brampton - 3% | Oshawa - 2%

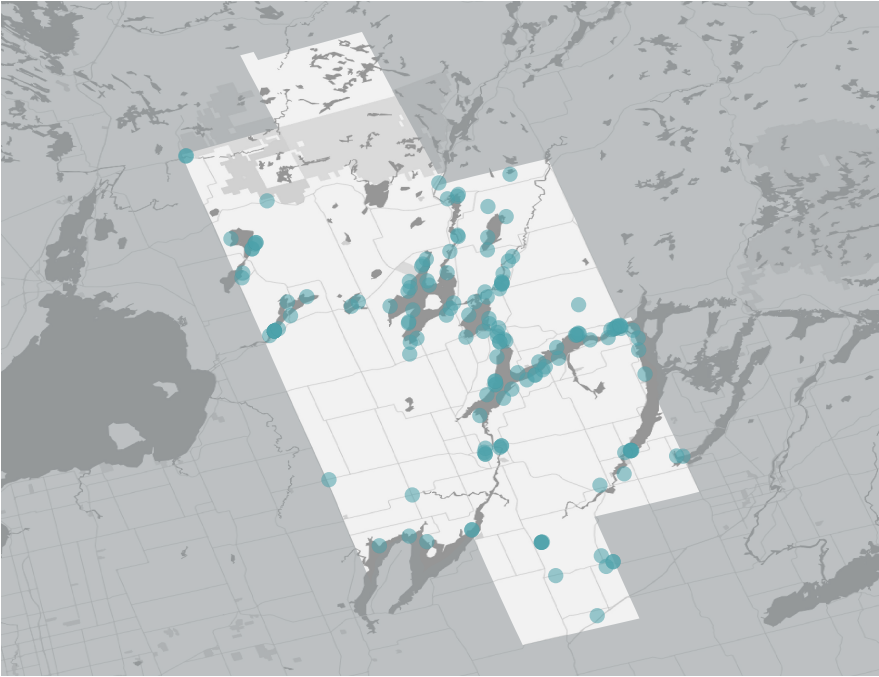
Guidebook Locations

Airbnb hosts often recommend local restaurants, bars, and other attractions. Below is a list of the top ranked Guidebook locations in the community.

TOP LOCATIONS

Not Available

AIRBNB LISTINGS



In City Of Kawartha Lakes, 87% of active listings are entire home listings.

**Rolling Hills Estates Homeowners Association – 1570194 Ontario Inc.
130 Peller Court, Bobcaygeon, Ontario, K0M 1A0**

June 15, 2017

**Mayor Letham and Members of Council
City of Kawartha Lakes
P.O. Box 9000
26 Francis Street
Lindsay, Ontario, K9V 5R8**

**Attn: City Clerk
jcurrins@city.kawarthalakes.on.ca**

**Subject: Short Term Property Rentals, Rolling Hills Subdivision, Registered Plan 57M-759,
Township of Verulam now City of Kawartha Lakes**

Your Worship and Members of Council,

At the annual general meeting of the Rolling Hills Estates Homeowners Association held on June 4th, 2017, the Association unanimously passed the following resolution dealing with short term property rentals in the City of Kawartha Lakes and, more specifically, the Rolling Hills Subdivision:

**“That the Rolling Hills Estates Homeowners Association request that the City of Kawartha Lakes enact a by-law to govern short term property rentals in defined areas of the City, including the Rolling Hills Subdivision, Plan 57M-759, similar to by-laws passed by other Ontario municipalities; and,
That the City of Kawartha Lakes, as an intermediate measure, be requested to pass an interim control by-law to prohibit short term property rentals of thirty days or less in the Rolling Hills Subdivision.”**

The Rolling Hills Estates Homeowners Association is a legal entity composed of the shareholders of 1570194 Ontario Inc.. The purpose of the Association is to maintain the common areas within the subdivision (i.e. Blocks 18, 19, 22 and 23, Plan 57M-759) and to represent the common interests and concerns of the Association members in relation to the Rolling Hills Subdivision. Rolling Hills Estates is a high-end estate residential community consisting of seventeen estate residential lots located on the western shore of Pigeon Lake in the former Township of Verulam, now the City of Kawartha Lakes.

Short term property rentals, which are typically less than thirty days, became an issue for the Rolling Hills homeowners last year when the property municipally known as 151 Peller Court (Lot 9, Plan 57M-759) was purchased for use as a short term rental property. Almost immediately, the Association began receiving complaints from neighboring homeowners regarding noise issues, public disturbances, garbage, property trespass, disrespect for fire bans, animals running at large, and traffic safety. The peace and quiet that our Association members had become accustomed to was immediately and abruptly ended.

In response, and at the request of the Rolling Hills Estates Homeowners Association, His Worship Mayor Letham, Councillor Seymour-Fagan and appropriate City staff met with representatives of the Association to discuss what actions could be taken by the City and the Association to minimize disruption to neighboring residents caused by the constant shuffling of people in and out. To the Association's surprise and amazement we were informed that the City of Kawartha Lakes has no rules or regulations governing short term rentals. By-law enforcement is substantially ineffective as the majority of problems occur outside of normal working hours. The police will not respond to noise complaints and appear to consider the problems associated with short term renters to be of a low priority.

In a last ditch effort to restore some civility to our community the Homeowners Association approached the owner of 151 Peller Court, Mr. Bashir Somani, and implored him to remove his property from the short term rental market. To our pleasant surprise, Mr. Somani ultimately agreed to the Association's request.

Unfortunately, as of today, the residence at 151 Peller Court continues to be offered for short term rentals on Airbnb (<https://www.airbnb.ca/rooms/14111780?>). The booking calendar indicates that the property is rented out for the majority of weekends in June, July and August, 2017. Once again the Rolling Hills homeowners are preparing for a summer of discontent! The disruption to the community created by the renters has already caused one of our homeowners to sell his residence!

There is clear and convincing evidence that short term property rentals in low density residential neighborhoods such as Rolling Hills Estates undermine the integrity and character of the community in which they are situated. The continued use of 151 Peller Court as a short term rental property gives cause to instability and significant land use compatibility issues. A major concern is the lack of appropriate supervision by an absentee landlord.

In light of recent developments in the short term property rental phenomena, a number of Ontario municipalities have taken legislative steps to safeguard and protect the well being of their residential communities. The Rolling Hills Estates Homeowners Association requests that the City of Kawartha Lakes follow the progressive and positive lead taken by these municipalities and enact a by-law (or by-laws) to govern short term property rentals in defined areas of the City, including the Rolling Hills Subdivision. As an intermediate measure, the Association requests that the City pass an interim control by-law to take effect

immediately to prohibit short term property rentals of thirty days or less in the Rolling Hills Subdivision.

Thank you for your time and consideration.

Respectfully Submitted,

***Harold Bartlett
President
Rolling Hills Estates Homeowners Association***


c.c. Mayor Andy Letham
aletham@city.kawarthalakes.on.ca

Councillor Kathleen Seymour-Fagan
kseymourfagan@city.kawarthalakes.on.ca

Ron Taylor, Chief Administrative Officer
ipyle@city.kawarthalakes.on.ca

Chris Marshall, Director of Development Services
cmarshall@city.kawarthalakes.on.ca

Bryan Robinson, Director of Public Works
brobinson@city.kawarthalakes.on.ca

Juan Rojas, Director of Engineering and Assets
jrojas@city.kawarthalakes.on.ca

Aaron Sloan, Manager of Municipal Law Enforcement
esloan@city.kawarthalakes.on.ca

Richard Holy, Planning Coordinator
rholy@city.kawarthalakes.on.ca

Bashir Somani


Person Submitting the Petition

Name:	CAROL AIRD Sandy Clayton JEAN PATON
Address:	11 MCGILL DR. 12 MCGILL DR. 7 MCGILL DR VIEW LAKE JANETVILLE
Phone:	(705) 324-9606 705-324-8262 705-324-4191

Petition

To: the Council of the City of Kawartha Lakes, 26 Francis Street, Lindsay, ON K9V 5R8.

I/We the undersigned, petition the Council of the City of Kawartha Lakes as follows:

We are requesting a bylaw to regulate short term property rentals in certain areas of the City, including our View Lake neighbourhood. We believe a minimum rental term (we are suggesting 30 days) would help prevent further complaints about ongoing concerns such as recurrent excessive noise / disturbances, overflow parking, litter, fire pit safety etc. Please help restore our previously peaceful neighbourhood.

#	Name	Contact Information	Signature
1	JEAN PATON	7 MCGILL DR. 705-324-4191	Jean P. Paton
2	SANDY CLAYTON	12 MCGILL DR 705-324-8262	Sandy Clayton
3	CAROL AIRD	11 McGill Drive (705) 324-9606	Carol Aird
4	JEFF SINCLAIR	6 MCGILL DR 705-328-0069	Jeff Sinclair
5	Cassie Elmy	1 McGill Dr. 289-9872950	Cassie Elmy
6	Sonyq Sooley	4 MCGILL DR 705-874-6827	Sonyq Sooley
7	BRUCE SOOLEY	4 MCGILL DR. 705-874-6827	Bruce Sooley
8	Patricia Sooley	4 MCGILL DR. 705-324-8916	Patricia Sooley
9	BRADYS KING	15 MCGILL DR	Bradys King
10	Annette Collins	9 McGill Dr 416-560-6067	Annette Collins
11	CHRISTINE DAVIS	13 MCGILL DRIVE 705-878-0044	Christine Davis
12	SADIE CLAYTON	14 MCGILL DR 705-324-0632	Sadie Clayton
13	GLEN CLAYTON	14 MCGILL DR 705-324-0632	Glen H. Clayton
14	MICHAEL COLLINS	9 MCGILL DR. 905 626 4572	M. Collins

Person Submitting the Petition

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#	Name	Contact Information	Signature
15	TRAVIS WHITE	16 MCGILL DR 705 878 8692	Travis White
16	CINDY WHITE	16 MCGILL DR 705 878 8690	Cindy White
17	DAVE CLAYTON	12 MCGILL DR 705-324-8262	Dave Clayton
18	ROSS JIBB	24 MCGILL DR 705 324 3819	Ross Jibb
19	Gazel Chamberlain	24 MCGILL DR.	Gazel Chamberlain
20	B. Krause	19 McGill Dr. 705-878-3532	Brigitte Krause
21	P. KRAUSE	19 McGill Dr. 705-878-3532	P. Krause
22	Donna Dorgan	26 McGill Dr 705-324-7988	Donna Dorgan
23	BARRY HAWK	11 MCGILL DR 705-324-9606	Barry Hawk
24	BRUCE ALLEN	3 MCGILL DR 647-408 3820	Bruce Allen
25	Annette Shortt	168 Coleman Crescent 705 Viewlake ON 324-2575	A. Shortt
26	Kathy Reinert	168 Coleman Cres. Janetville 705-324-2575	Kathy Reinert
27	CAROL RILEY RILEY	172 COLEMAN CRES 705 328-9778	Carol Riley
28	PATRICIA MARTIN	180 Coleman Cres 905 213-0598	Patricia Martin

Person Submitting the Petition

Name:	CAROL AIRD Sandy Clayton JEAN PATON
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#	Name	Contact Information	Signature
29	TREBOR A. WEBER	167 COLEMAN JANETVILLE 705-878-9719 416-318-2301	
30	Jeanette G. Weber	167 COLEMAN JANETVILLE 905-718-7665	
31	TERTU OSONO	167 COLEMAN JANETVILLE 416-560-8112	
32	TYLER PATRICKSON	37 MCGILL JANETVILLE 416-573-0214	
33	Roger Schoonbroodt	33 MCGILL JANETVILLE 705-878-9112	
34	LINDA MCPHAIL	705-878-9112 33 MCGILL JANETVILLE	
35	Tinie Evans	705-878-9112 55 MCGILL JANETVILLE	
36	MONICA BYRNE	116 COLEMAN CRES. 647-881-8724	
37	MIKE BYRNE	176 COLEMAN CRES. 647-308-0611	
38	Jan Howse	156 COLEMAN JANETVILLE 416-819-4965	
39	W. Marsi	156 COLEMAN JANETVILLE 905-244-4165	
40	Stephanie Ross	156 COLEMAN JANETVILLE 905-244-4676	
41	NORM HAYMAN	144 COLEMAN JANETVILLE 705-324-7572	
42	ELAINE HAYMAN	144 COLEMAN JANETVILLE 705-324-7572	
43	BETTY HAYMAN	144 COLEMAN JANETVILLE 705-324-7572	

Page 3 of 4

Signatories to a Petition are deemed to have waived any expectation of privacy as a result of the record being created for review by the general public. Questions about the collection and disclosure of personal information contained in this petition should be directed to the City Clerk at 705.324.9411 ext. 1295.

Person Submitting the Petition

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#	Name	Contact Information	Signature
44	Scott Elmy	289423533 McGill Rd JANETVILLE	[Signature]
45	RANDY McLELLAN	705 328 3608 38 MCGILL RD. JANETVILLE	[Signature]
46	Susan McEllan	705 328 3608 38 MCGILL RD. JANETVILLE	[Signature]
47	PERRY FEOR	705 878 4797 R.R.1 JANETVILLE	[Signature]
48	Charlee Feor	705-878-4797 R.R.1 JANETVILLE	[Signature]
49	Rita Demant	705-324-7963 3101 Main Cres.	[Signature]
50	Ron Beitle	705-878-9236 59 McGill	[Signature]
51	PETER TAYLOR	647 225-3854 61 McGill	[Signature]
52	EDDY K. HANSEN	705-812-0763 184 COLEMAN	[Signature]

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The Corporation of the City of Kawartha Lakes

Council Report

Report Number CAO2017-005

Date: **October 10, 2017**
Time: **2:00 p.m.**
Place: **Council Chambers**

Ward Community Identifier:

Subject: **Evergreen Power Limited – Allocation of Donation**

Author Name and Title: **Ron Taylor, CAO**

Recommendation(s):

RESOLVED THAT Report CAO2017-005, **Evergreen Power Limited – Allocation of Donation**, be received; and

THAT Council directs the voluntary \$10,000 donation to the City of Kawartha Lakes from Evergreen Power Limited to the community funding component of the Fenelon Falls Splash Pad project.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

At the Council Meeting of June 6, 2017, Tim Burke and Alex Palkovsky from Evergreen Power Limited made a deputation to Council to request a resolution of support for the proposed Small FIT Solar Project at 390 Northline Road.

Mr. Burke noted in his presentation that Evergreen Power Limited wished to provide a voluntary \$10,000.00 donation to the City of Kawartha Lakes for use at Council's discretion.

The following resolution was adopted by Council at the June 6, 2017 meeting:

CR2017-474

RESOLVED THAT the deputation of Time Burke, of Evergreen Power, regarding the proposed solar project at 390 Northline Road, Fenelon Falls, be received.

CARRIED

At the September 12, 2017 Council meeting, Mayor Letham advised that the referenced donation in the amount of \$10,000.00 had been received by the City, and that a report would come forward in the future regarding potential funding options.

Rationale:

The City is in receipt of a \$10,000 donation, and Council must determine how to allocate these funds.

The City is concluding construction/installation of a splash pad in Fenelon Falls. A component of the project funding is from community donations. Allocating this voluntary donation will assist that project in meeting its funding requirements without possible reliance on additional tax-support funding if fundraising targets are not reached.

Other Alternatives Considered:

Council could choose to allocate this donation to another City capital project, or allocate it to an established City funding program (Community 50/50 fund, for example). Alternatively, Council has full discretion to allocate this donation to external projects and/or fundraising campaigns not led by the City.

Financial/Operation Impacts:

The Fenelon Falls Splash Pad project is being constructed as a community led project. The Fenelon Falls Rotary Club is managing the project, which includes the financial component.

The City contributed \$82,500 to the project through the CKL 50/50 Capital Partnership Fund, Fenelon Falls Powerlinks Fund and the Fenelon Falls C.H.E.S.T. Fund. The balance of the funds were generated through community fundraising efforts.

Table 1 (original estimate)

Revenues	Amount
Powerlinks	\$50,000
CHEST	\$25,000
Rotary Club	\$50,000
EODP	\$20,000
Lions Club	\$10,000
Legion	\$3,000
Chamber of Commerce	\$1,000
Local Businesses	\$40,000
Public Donation	\$36,500
Corporate Donations	\$7,500
Total	\$243,000

Table 2

Expenses	Amount
Splash Pad	\$160,054
Site works	\$82,387
Total	\$242,441

The \$10,000 donation from Evergreen will provide the additional funding required to cover the total cost of the project, as well as any shortfall in the community fundraising efforts.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

Applying this donation to a Council-approved capital project contributes to Council's objectives of responsible fiscal resource management and the provision of efficient infrastructure and asset management.

Department Head E-Mail: rtaylor@kawarthalakes.ca

Department Head: Ron Taylor

The Corporation of the City of Kawartha Lakes

Council Report

Report Number CORP2017-026

Date: October 10, 2017
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier:

Subject: CORP2017-026 High Water Bill Adjustment Appeals Committee

Author Name and Title: Angela Vickery, Manager of Revenue and Procurement

Recommendation(s):

RESOLVED THAT Report CORP2017-026, **High Water Bill Adjustment Appeals Committee**, be received; and

THAT no action be taken to implement a High Water Bill Adjustment Appeals Committee.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

At the Council Meeting of June 6, 2017, Council adopted the following resolution:

10.3.4 CORP2017-017

Christine Norris, Manager, Revenue and Procurement
High Water Bill Appeals

CR2017-497

Moved By Councillor Breadner

Seconded By Councillor Yeo

RESOLVED THAT Report CORP2017-017, **High Water Bill Appeals**, be received;

THAT an Appeal Body for High Water Bills be established to hear and adjudicate applications relating to high water bill appeals with the same decision making powers as the Property Standards Committee; and

THAT staff provide an establishing by-law by the end of Q3, 2017 for consideration.

CARRIED

This report addresses that direction.

Rationale:

By-Law 2011-260, a By-Law to Govern Water and Wastewater Services in the City of Kawartha Lakes, defines the responsibility of the home owner for water and wastewater services, including maintenance and use of water/sewer systems and associated utility billing fees. Where there is an unexpected high consumption of water, the High Bill Adjustment Policy, Policy Number CP2017-006, provides property owners a platform to appeal and seek relief, pending certain criteria are met. The policy provides for only one leak adjustment per property during the term of the applicant's ownership. Most municipalities do not have these programs as once the water has travelled through the meter, the responsibility becomes that of the home owner.

Council Report CORP2017-017 is attached and provides background information on why staff does not recommend a High Water Bill Adjustment Appeals Committee. Reasons as noted in the report include:

- increase administrative costs as staff would have to be reassigned from normal work duties to prepare and defend decisions made based upon a Council approved Policy
- potential for increased number of frivolous appeals

- recommendation for any adjustment outside of the Policy would have to be presented to Council for final approval, which will create duplication of effort for both staff and Council
- potential for inconsistent application of policy creating negative precedents for future application of policy.

To date, issues have been resolved in accordance with the Policy without having to bring the matter to an appeal.

In order to satisfy Council's request, staff developed for consideration terms of reference for a High Water Bill Adjustment Appeals Committee with the same decision making powers as the Property Standards Committee. The Property Standards Committees' terms of reference are included within By-Law 2016-112, a By-Law to Regulate and Govern the Standards for Maintaining and Occupying Property within Kawartha Lakes. The Committee is comprised of three members of Council, appointed by Council, for the duration of the term of Council. As the regulations for Water and Wastewater services are already defined in By-Law 2011-260, Council could choose to amend this By-Law to include terms of reference for an appeals body instead of creating a new by-law.

Other Alternatives Considered:

If Council chooses to move forward with an appeals body, Staff recommend the Council resolution in this report be amended to the following:

REMOVE

THAT no action be taken to implement a High Water Bill Adjustment Appeals Committee.

REPLACE WITH:

THAT By-Law 2011-260 be amended to include terms of reference for a High Water Bill Adjustment Appeals Committee as per the following:

- 1.01 **High Water Bill Adjustment Appeals Committee:** A High Water Bill Adjustment Appeals Committee is established to hear and rule on appeals against High Water Bill Adjustment decisions.
- 1.02 **Authority:** The High Water Bill Adjustment Appeals Committee may recommend to Council approval of high water bill adjustments without prejudice or precedent to any other similar matter.
- 1.03 **Composition and Appointment:** The High Water Bill Adjustment Appeals Committee shall be comprised of three members of Council appointed by Council.
- 1.04 **Term:** The Term of the Appointment of the High Water Bill Adjustment Appeals Committee shall be the same as the term of Council.

- 1.05 **Administration:** The High Water Bill Adjustment Appeals Committee shall ensure that a member of City staff is assigned the role of secretary to the Committee with duties and obligations required in accordance with the Municipal Act.
- 1.06 **Governance:** The High Water Bill Adjustment Committee shall be governed by the City's Procedural Water and Wastewater By-Law as amended from time to time by Council.

Staff is currently reviewing By-Law 2011-260 and intends to bring forward to Council proposed changes in Q4 2017. If Council chooses to implement a High Bill Adjustment Appeals Committee, the terms will be brought forward with the other proposed changes before the end of Q4 2017.

Financial/Operation Impacts:

Creating another option for customers to bring their concerns has the potential to result in unnecessary financial burden to the tax/ratepayer through costs associated with additional meetings, reallocation of staff resources; the potential for inconsistent application of the policy and increases in the user rates associated with water and wastewater services.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

Strategic Enabler – Responsible Fiscal Resource Management

Consultations:

N/A

Attachments:



CORP2017-017 High Water Bill Appeals.pdf

Department Head E-Mail: avickery@kawarthalakes.ca

Department Head: Ron Taylor

Department File:

The Corporation of the City of Kawartha Lakes

Council Report

Report Number CORP2017-017

Date: June 6, 2017

Time: 2:00 p.m.

Place: Council Chambers

Ward Community Identifier: All

Subject: High Water Bill Appeals

Author/Title: Christine Norris , Manager, Revenue & Procurement

Recommendation(s):

RESOLVED THAT Report CORP2017-017, High Water Bill Appeals, be received.

Department Head: _____

Mary Guletsky

Financial/Legal/HR/Other: _____

Chief Administrative Officer: _____

R. J. G.

Background:

The City of Kawartha Lakes provides water and sewer services to approximately 13,500 properties annually, resulting in approximately 55,000 water and sewer bills being produced. Below is a summary of high bill adjustments from 2004 to 2016:

Year	Number of Adjustments	Credits Provided
2004	40	\$ (10,012)
2005	66	\$ (24,874)
2006	50	\$ (19,138)
2007	36	\$ (11,696)
2008	21	\$ (9,988)
2009	15	\$ (9,390)
2010	14	\$ (5,292)
2011	13	\$ (8,885)
2012	30	\$ (35,152)
2013	28	\$ (23,000)
2014	19	\$ (13,138)
2015	28	\$ (13,234)
2016	31	\$ (14,555)
Total	391	\$ (198,354)

The newly adopted High Bill Adjustment Policy outlines reasons why a customer may receive a water and/or wastewater bill indicating consumption that is higher than normal and when an adjustment may be available to the customer. Schedule "A" provides a summary of reasons why property owners would receive a bill that indicates higher than normal consumption, along with details whether the reason would qualify for an adjustment and how the adjustment would be calculated. The new policy provides clarity to staff and the public as to the parameters of the program on a go forward basis with a focus on customer service, with the policy extending to address unexplained increases in water consumption with a process to potentially provide relief to the property owner if in fact the sudden increase (and return to normal consumption) is truly unexplained. Since 2013 the City has received one request that was presented to Council, one request that resulted in meetings with the property owner, the CAO and staff, and a few where property owners have contacted their Councillor expressing their concerns.

At the Council Meeting of April 18, 2017, Council adopted the following resolution:

Council Resolution Number 2017-341

Moved By: Isaac Breadner
Seconded by: Gord James

RESOLVED THAT staff report on options available to the City to provide an appeal body for high bill adjustment if there is no successful solution by following the High Bill Adjustment Policy.

This report addresses that direction.

Rationale:

From an administrative perspective Council is the appropriate body to review appeals from property owners not satisfied with the result of a request for a high bill adjustment based upon the following:

- Variance from the Council approved Policy would have to be authorized by Council as a whole;
- Reductions not authorized by the Policy would set precedent for future requests;
- Reductions outside of the approved policy cannot be anticipated and therefore has the potential to have a negative impact on the annual Water and Sewer Budget; and
- Unlike property standards issues where a decision made by the Property Standards Committee only impacts one property, a decision outside the Council approved policy impacts all ratepayers.

Council has been elected by residents and property owners of the City to act on their behalf. As Council is already established and hears delegations and receives written correspondence from the public on matters of concern; the informal right of appeal is already available to the public where they are not satisfied with the application of a Council policy. If a property owner is not comfortable with making a delegation to Council, a written appeal is an option.

Staff works closely with property owners and Council members to assist wherever possible with a high bill inquiry. There are occasions where requests have been denied (e.g. applied successfully previously or the program criteria were not met). There have also been occasions where it was determined the calculation of the adjustment was incorrect and subsequently corrected. Working with a Council member directly when there are concerns raised by a member of their ward allows staff to help Council understand the process and how it relates

to an individual's circumstances. Issues have been resolved in accordance with Policy without having to bring the matter to an appeal.

It should be noted that many municipalities do not have programs as the water has travelled through the meter and therefore is the responsibility of the property owner. The City established a program to provide property owners with the opportunity for financial relief from higher than normal water and sewer bills where specific criteria are met.

Other Alternatives Considered:

Property Standards Committee

The concept of having the Property Standards Committee act as the appeals body for appeals relating to the High Bill Adjustment Policy is not in compliance with the purpose of the Property Standards Committee as set out in By-law 2016-112, the Consolidated Property Standards By-law as outlined below:

- A Property Standards Committee is established to hear and rule on appeals against the Orders of the Property Standards Officer; and
- The Property Standards Committee shall function as set out in Section 15.6 of the Building Code Act, 1992, S.O. 1992, c.23 and shall have the powers and duties prescribed by Section 15.1 through 15.8 of the Building Code Act, 1992, S.O. 1992, c.23.
- Dealing with a high bill adjustment appeal is outside the scope of the Building Code Act
- The Policy has been established by Council and Council is the sole authority to make decisions outside of the Policy.

Appeal Body for High Water Bills

Creating a separate committee to deal with complaints from property owners not qualifying for an adjustment, or not satisfied with the amount of the adjustment would:

- increase administrative costs as staff would have to be reassigned from normal work duties to prepare and defend decisions made based upon Council approved Policy
- potential for increased number of frivolous appeals
- recommendation for any adjustment outside of the Policy would have to be presented to Council for final approval, which will create duplication of effort
- potential for inconsistent application of policy creating negative precedents for future application of the Policy.

Financial Considerations:

Creating another option for customers to bring their concerns has the potential to result in an unnecessary financial burden to the tax/ratepayer through costs associated with additional meetings, reallocation of staff resources; the potential

for inconsistent application of the policy and increases in the user rates associated with water and sewer services.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

Strategic Enabler - Responsible Fiscal Resource Management

Consultations:

City Clerk

Attachments:

Appendix A – Summary of High Bill Reasons and Potential Adjustment



Appendix A -
CORP2017-017.docx

E-Mail: mdempster@city.kawarthalakes.on.ca

Department Head: Mary-Anne Dempster

Department File:

Appendix A – Summary of High Bill Reasons and Potential Adjustment

Reason	Qualifies for Program	Type of Adjustment Available	Appealable
Reading error	No	Actual reading will be corrected and bill adjusted	No
Period of increase consumption includes but not limited to:			
Watering of sod, lawn, gardening	No		No
Filling of swimming pools or whirlpools	No		No
Washing vehicles	No		No
Use of irrigation systems	No		No
Building of ice rinks	No		No
Visitors	No		No
Increase in number of days in a billing cycle	No		No
Neglect of private property	No		No
Estimated Bill Higher than Actual Consumption	No		No
Estimated Readings	No	When actual reading received bill will be adjusted; adjustment will be made to historical average if estimates are not comparable	No
Catch Up Bill	No	Possible extended period to pay to maximum 6 months	No
Final Meter Reading when Water Meter Replaced	No	Where difference is more than 2 x the average daily consumption for the previous 5 years an adjustment based upon Section 8 of the Policy will be applied	No
Obvious or hidden leaks			

Reason	Qualifies for Program	Type of Adjustment Available	Appealable
Commercial, Industrial, Multi-Residential Properties, income producing residential properties, irrigation systems	No		No
Dripping taps, water softeners continually cycling, toilet tanks, icemakers, water powered sump pumps	Yes	Where difference is more than 2x the average daily consumption for the similar period for the previous 5 years; application deadlines; maximum adjustment timeframe; maximum amount of adjustment (not-for-profits and institutional)	No
Malfunctioning Water Meter	No	If it has been determined the water meter has been measuring incorrectly after a test the bill will be adjusted based upon the over registering or if not possible will be based upon the flat rate charges in effect	No
Installation of a New Water Meter	No		No
Mismatching of Registers & Water Meters	No	Adjustments will be made based upon correct register/water meter size	No
Unexplained Sudden Large Increase	Possible <ul style="list-style-type: none"> - Has the water meter been tested - Has there been city activity that may have caused the meter to fluctuate (e.g. Toronto has indicated the potential of watermain re-pressurizing may lead to a sudden unexplained increase) - The increase cannot be 	If criteria met then adjustment made if more than 2x the normal consumption	No

Reason	Qualifies for Program	Type of Adjustment Available	Appealable
	<p>reasonably attributed to the customer in the opinion of the Director of Public Works, etc.</p> <ul style="list-style-type: none"> - Has a plumber verified there are no leaks and no defective equipment? - Has the consumption returned to normal immediately after the high consumption was noted? - 		

The Corporation of the City of Kawartha Lakes

Council Report

Report Number PUR2017-055

Date: October 10, 2017

Time: 2:00 p.m.

Place: Council Chambers

Ward Community Identifier: All

Subject: Tender 2016-68-OT Environmental Monitoring and Reporting
for Specified Landfill Sites

Author Name and Title: Marielle van Engelen, Buyer

Recommendation(s):

RESOLVED THAT Report PUR2017-055, **Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites**, be received; and

THAT Council approve the option to renew **Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites** for up to four (4) additional, one year terms, pending budget approval, vendor performance, operational requirements, and contractual need, in accordance with the Table of Authority.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

At the Council Meeting of November 8, 2016, Council adopted the following resolution:

PUR2016-050

Karen Buckley, Buyer

David Kerr, Manager, Environmental Services

Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites

CR2016-945

RESOLVED THAT Report PUR2016-050, **Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites**, be received;

THAT Azimuth Environmental Consulting Inc. of Barrie be selected for the award of Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites for the tender price of \$149,966.00, plus HST;

THAT subject to the receipt of the required documents, the Mayor and City Clerk be authorized to execute the agreement to award Tender 2016-68-OT; and

THAT the Purchasing division be authorized to issue a purchase order.

CARRIED

This report addresses the options to renew **Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites** for an additional four, one year terms as per the original tender document.

Rationale:

Staff recommend that Council approve the option to renew **Tender 2016-68-OT Environmental Monitoring and Reporting for Specified Landfill Sites** for up to four (4) additional, one year terms, pending budget approval, vendor performance, operational requirements, and contractual need, in accordance with the Table of Authority.

Other Alternatives Considered:

No other alternatives are being considered as the recommendation to award was achieved through an open, fair and transparent competitive procurement process in accordance with the Purchasing Policy.

Financial/Operation Impacts:

Environmental monitoring and annual reporting are expensed through the Department's operational budget on an annual basis for each individual landfill site.

Work contained within the operating budget line includes contracted services for environmental monitoring, annual reporting, lab services and installation of monitoring wells in addition to the day to day operations performed by City staff. The total 2017 budget for all above operations is \$542,261.00. The expected budget for 2018 is \$552,585.00.

In 2016, costs associated with environmental monitoring and annual reporting totaled \$193,117.20, for the year. So far in 2017, approximately \$142,988.94 has been expensed to date.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

Tender 2016-68-OT, Environmental Monitoring and Reporting at Specified Landfill Sites aligns with the Corporate Strategic Goals – A Vibrant and Growing Economy; An Exceptional Quality of Life; and A Healthy Environment by ensuring the health of our closed and open landfill sites.

Attachments:



PUR2017-050Tender
2016-68-OTEnvironn

Department Head E-Mail: brobinson@kawarthalakes.ca

Department Head: Bryan Robinson, Director of Public Works

Department File: 2016-68-OT

The Corporation of the City of Kawartha Lakes

Council Report

Report Number PUR2016-050

Date: November 8, 2016

Time: 2:00 p.m.

Place: Council Chambers

Ward Community Identifier: All

Subject: Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites

Author: Karen Buckley
Buyer

Signature:

Co-Author: David Kerr
Manager, Environmental Services

Signature:

Recommendation(s):

RESOLVED THAT Report PUR2016-050, **Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites**, be received;

THAT Azimuth Environmental Consulting Inc. of Barrie be selected for the award of Tender 2016-68-OT Environmental Monitoring and Reporting at specified Landfill Sites for the tender price of \$149,966.00, plus HST;

THAT subject to the receipt of the required documents, the Mayor and City Clerk be authorized to execute the agreement to award Tender 2016-68-OT; and

THAT the Purchasing division be authorized to issue a purchase order.

Department Head:

Corporate Services Director / Other:

Chief Administrative Officer:

Background:

The City of Kawartha Lakes owns five operating and twelve closed landfill sites. These sites are regulated under the Environmental Protection Act.

Each landfill site has an Environmental Compliance Approval (ECA) that prescribes the rules and conditions under which the site must be operated in order to protect the environment and human health.

ECA's require ongoing environmental monitoring of groundwater, surface water, landfill gas and water levels and the information collected from each site must be reported to the Ministry of Environment Climate and Change (MOECC). This information is used by the MOECC to assess the impact the site has on the surrounding environment and whether the site requires more work or monitoring in order to be compliant to the ECA.

Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites was released for advertising in accordance with the Purchasing Policy to provide all labour, fuel, equipment and materials necessary to complete environmental monitoring and annual reporting for specified landfill sites within the City of Kawartha Lakes.

The tender closed on September 29, 2016 and was opened in a public meeting by Andy Letham, Mayor and Karen Buckley, Buyer with the following results:

Company Name	Total Tender Amount Read at Opening (including HST)	Corrected Amount
Azimuth Environmental Consulting Inc. Barrie	\$169,461.00	\$169,461.58
Cambium Inc. Peterborough	\$176,771.55	
WSP Canada Inc. Peterborough	\$180,800.00	

A notice to decline to bid was received by XCG Consulting Limited of Hamilton stating their schedule would not permit them to provide a bid at this time.

Bids were checked for mathematical errors and compliance to the tender call. The bid received from Azimuth Environmental Consulting Inc. was adjusted to the correct amount shown in the chart above.

Rationale:

Staff recommends that Azimuth Environmental Consulting Inc. of Barrie, be selected for the award of Tender 2016-68-OT Environmental Monitoring and Reporting at Specified Landfill Sites for the tender price of \$149,966.00, plus HST.

Other Alternatives Considered:

No other alternatives are being considered as the recommendation to award was achieved through an open, fair and transparent competitive procurement process in accordance with the Purchasing Policy.

Financial Considerations:

Environmental monitoring and annual reporting is expensed to various SRN's and G/L's through the department's operational budget on an annual basis for each individual landfill site.

Work contained within the operating budget line includes contracted services for environmental monitoring, annual reporting, lab services and installation of monitoring wells in addition to the day to day operations performed by City staff. The total 2016 budget for all above operations is \$426,500.00.

In 2015, costs associated with environmental monitoring and annual reporting totaled \$193,777.33, for the year. So far in 2016, approximately \$165,921.33 has been expensed to date.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

The recommendation(s), within the Report contributes to the Council Adopted Strategic Plan, Goal 3 – A Healthy Environment. More specifically the firm, Azimuth Environmental, retained to provide the reporting and monitoring will ensure that good advice is provided to the City with respect to environmental compliance and recommendations will be appropriately made to ensure that the City will be able to take actions as required to ensure any potential environmental impact is mitigated. This ensures that the health of the environment in the around our closed and open landfill sites will be prioritized.

Review of Accessibility Implications of Any Development or Policy:

Not applicable

Servicing Comments:

Not applicable

Consultations:

Katelyn Brown, Waste Management Technician
Angela Porteous, Regulatory Compliance Officer

Attachments:

Not applicable

Phone: (705) 324-9411

E-Mail: brobinson@city.kawarthalakes.on.ca

Department Head: Bryan Robinson, Director of Public Works

Department File: 2016-68-OT

The Corporation of the City of Kawartha Lakes

Council Report

Report Number PUR2017-056

Date: October 10, 2017

Time: 2:00 p.m.

Place: Council Chambers

Ward Community Identifier:

Subject: PUR2017-056 Tender Awards Q3 2017

Author/Title: Angela Vickery, Manager, Revenue and Procurement

Recommendation(s):

RESOLVED THAT Report PUR2017-056, **Tender Awards Q3 2017**, be received for information purposes.

Department Head:

Financial/Legal/HR/Other:

Chief Administrative Officer:

Background:

In accordance with Section 3.2 of the Purchasing Policy, staff shall provide to Council a quarterly summary of all tender awards greater than \$100,000 where the award was within budget and within scope.

This report addresses that direction.

Rationale:

This report provides the results of tenders awarded during the period of June 1, 2017 to September 30, 2017. The summary report shall provide: the project number, successful vendor, total budget and amount of award. Any irregular results will be identified separately as to the irregularity.

Other Alternatives Considered:

None as a competitive process was issued in accordance with the Purchasing Policy.

Financial/Operation Impacts:

All awards had available funding or were within the \$10,000 allowable overage in accordance with the Capital Close Policy. Any surplus or shortage for the final payment of the goods and services has or is being reported in the Capital Close Report by the Treasurer.

Consultations:

Junior Accountant
Director of Engineering and Corporate Assets
Manager – Revenue and Procurement
Supervisor, Technical Services
Senior Engineering Technician
Supervisor/Infrastructure, Design, Construction

Attachments:



Awarded Tenders
June 1 to September

Phone: 705-324-9411 X 1311
E-Mail: avickery@kawarthalakes.ca
Department Head: Ron Taylor
Department File: Various

Tenders awarded: June 1, 2017 to September 30, 2017

Account Number	Project Description	Project Balance at Time of Award	Tender Amount (Including HST)	HST Rebate	Contingency	Total Cost	Remaining Project Balance	Awarded To
998151701	PAR2017-020 Tender 2017-42-CT Construction of Rivera Park Sewage Pumping Station. The City of Kawartha Lakes requested tenders, including all labour, equipment, fuel and materials for construction of the new Rivera Park Sewage Pumping Station in the Town of Lindsay. Work includes but is not limited to, all civil, site, tunnelling, infrastructure, structural, process, mechanical, electrical and control requirements.	\$10,413,371	\$8,943,668	(\$889,612)	\$500,000	\$8,554,056	\$1,859,315	Maple Reinders Constructors
Operating	PAR2017-017 Tender 2017-45-OT - High Pressure Sanitary and Storm Sewer Flushing and Cleaning in Various Locations in the City of Kawartha Lakes for services over a two year time period. This annual operation and maintenance program is a preventive maintenance tool used to protect the asset and prevent sewer overflows and backups.	Operating	\$252,577	(\$25,133)	0	\$277,710	Operating	2414002 Ontario Limited o/w Onsite Sewer Services
998170302	PAR2017-018 Tender 2017-47-CT Sylvan Crescent Reconstruction Sylvan Screscent Rescronstruction identified in 2016 Capital budget for design of new watermains and sanitary sewer. The scope of work includes replacement of approximately 170m of watermain and sanitary sewer, services to property line, asphalt and curbs.	\$ 527,966	\$ 378,888	(\$6,668)	\$ 30,097	\$ 415,653	\$ 112,313	Amos Excavation

Account Number	Project Description	Project Balance at Time of Award	Tender Amount (Including HST)	HST Rebate	Contingency	Total Cost	Remaining Project Balance	Awarded To
9831702	PAR2017-024 Tender 2017-77-CT Replacement of the Louisa Street Culvert. The culvert is located on Louisa Street between John Street and Colbourne Street (Highway 121) in the town of Fenelon Falls.	\$ 257,805	\$ 290,729	(\$28,918)	\$ -	\$ 261,811	\$ (4,006)	Young's Construction
983171201	PAR2017-023 Tender 2017-78-CT Resurfacing of the Lindsay Street South Parking Lot This work is consistent with City's asset management plan and renewal of its assets. This particular parking lot surface is 25 plus years old and has gone beyond its life cycle. At this stage there are no methods for rehabilitation, the surface must be replaced.	\$ 143,811	\$ 82,662	(\$8,222)	\$ 7,315	\$ 81,755	\$ 62,056	Rosedale Paving
950163801	As part of the tender and for efficiencies, the Carden Community Centre Parking Lot was included as a provisional. As the pricing is within budget, the Department has agreed to move forward with this award also.	\$ 58,046.00	\$ 70,173.00	(\$6,980)	\$ 2,024.00	\$ 65,217.00	\$ (7,171.00)	Rosedale Paving
Total		\$ 201,857.00	\$152,835.00	\$(15,202.00)	\$ 9,339.00	\$ 146,972.00	\$ 54,885.00	
953150801	PAR2017-025 Tender 2017-85-CT City Hall Building Envelope Repairs Phase II. The City of Kawartha Lakes invited Pre-qualified General Contractors for City Hall Building Envelope Repair Phase II. Phase II of City Hall Building Envelope Repairs involved the following: Rebuild East Entrance Stair; Skylights and Associated Components; Curtain Walls; Windows and Entrance Doors; Insulation at spandrel glass panels.	\$ 767,943	\$ 643,173	\$ (63,975)	\$ -	\$ 579,198	\$ 188,745	Heritage Restoration

The Corporation of the City of Kawartha Lakes

Council Report

Report Number PLAN2017-059

Date: October 10, 2017
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier: Ward 12

Subject: A By-law to Deem Lot 20, Registered Plan 260, geographic Township of Ops, being 89 Loon Street (Betts and Wanyura)

Author: Janet Wong, Planner II

Recommendations:

RESOLVED THAT Report PLAN2017-059, "Betts and Wanyura – D30-17-006", be received;

THAT a Deeming By-law respecting Lot 20, Registered Plan 260, substantially in the form attached as Appendix "C" to Report PLAN2017-059, be approved and adopted by Council; and

THAT the Mayor and Clerk be authorized to execute any documents required by the approval of this application.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

Proposal:	To deem Lot 20, Registered Plan 260 not to be a lot within a registered plan of subdivision. See Appendices “A” and “B” attached.
Owners:	Juliette Betts and Grace Wanyura
Applicant:	Juliette Betts
Official Plan:	“Waterfront” – City of Kawartha Lakes Official Plan
Zone:	“Shoreline Residential (RS) Zone” – Township of Ops Zoning By-law Number 93-30
Site Servicing:	Private individual on-site sewage system and well.
Existing Use:	Shoreline Residential
Adjacent Uses:	North and South: shoreline residential East: rural residential West: Lake Scugog

Rationale:

The owners are proposing to add a second floor to the existing dwelling on Lot 20, Registered Plan 260 for which a minor variance was granted approval by the Committee of Adjustment July 20, 2017. The minor variance was reviewed in the context of the two parcels (Lot 20, Registered Plan 260 and Part 1, 57R-8835) to be one lot, where in fact they exist as two separate parcels. Please refer to Appendices “A” and “B”. The owners have requested that Council pass a Deeming By-law to effect the consolidation of Lot 20, Plan 260 with Part 1, 57R-8835, being the balance of the lands in their ownership outside the Registered Plan.

Adoption and subsequent registration of this Deeming By-law (Appendix “C”) will fulfill a condition of minor variance file D20-17-024, thus providing frontage on Loon Street and allowing a building permit to be issued. The effect of this Deeming By-law is that Lot 20 and Part 1 will consolidate into one lot, which cannot be sold as two separate lots. However, the legal description will remain the same – Lot 20, Plan 260 and Part 1, 57R-8835. There is an easement in favour of Consumer’s Gas over Part 1, 57R-8835. The Deeming By-law will not alter the easement. All agency comments have been addressed through minor variance file D20-17-024.

Other Alternatives Considered:

There are no other alternatives considered to be appropriate or represent good planning. The Deeming By-law is the appropriate method to legally consolidate the applicant’s lands.

Financial/Operation Impacts:

The cost of registering the By-law is included in the application fee. There are no financial implications for the City.

Relationship of Recommendation(s) to the 2016-2019 Strategic Plan:

The City's Strategic Plan outlines Council's vision for the municipality. The vision consists of three main Strategic Goals: that of a vibrant and growing economy, an exceptional quality of life, and a healthy environment.

This application aligns with the quality of life and healthy environment priorities by creating a shoreline property with frontage on a street and by reducing the total number of undersized residential lots.

Conclusion:

The consolidation of the lands will create one larger lot with frontage on Loon Street. Planning staff do not anticipate any negative impacts as a result of the consolidation.

Attachments:

Appendix "A" – Location Map

Appendix "B" – Survey

Appendix "C" – Draft Deeming By-law



Appendix A to
PLAN2017-059.pdf



Appendix B to
PLAN2017-059.pdf



Appendix C to
PLAN2017-059.pdf

Phone: 705-324-9411 extension 1330

E-Mail: jwong@kawarthalakes.ca

Department Head: Chris Marshall

Department File: D30-17-006

Geographic Township of Ops

APPENDIX " A "

to

REPORT PLAN2017-059

FILE NO: D30-17-006

LAND SUBJECT TO
DEEMING BY-LAW
(Lot 20, Plan 260)

Con. 2, Lot 2

Lake Scugog



Loon Street

Songbird Cres.

Meadow Dr.

Con. 1
Lot 1

The Corporation of the City of Kawartha Lakes

By-Law 2017-_____

A By-Law To Deem Part of a Plan of Subdivision, Previously Registered For Lands Within Kawartha Lakes, Not To Be A Registered Plan Of Subdivision In Accordance With The Planning Act PIN # 63200-0583(LT), Described As Lot 20, Plan 260, Geographic Township Of Ops, Now City Of Kawartha Lakes

APPENDIX " C "

to

REPORT PLAN2017-059

FILE NO: D30-17-006

File D30-17-006, Report PLAN2017-059, respecting 89 Loon Street – Betts and Wanyura.

Recitals:

1. Section 50(4) of the Planning Act, R.S.O. 1990, c.P.13 authorizes Council to deem any plan of subdivision, or part of a plan of subdivision, that has been registered for eight years or more, not to be a registered plan of subdivision for the purposes of Subsection 50(3) of the Planning Act, R.S.O. 1990, c.P.13.
2. The Committee of Adjustment has required, as a condition of minor variance approval that the land described in Section 1 of this By-law be the subject of a deeming by-law.
3. A duplicate of this By-law shall be registered in the Land Registry Office in accordance with the Planning Act, R.S.O. 1990, c.P.13.
4. Notice of the passing of this By-law shall be mailed to the owner(s) of the land described in Section 1 of this By-law.
5. Council considers it appropriate to enact the requested By-law.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017-_____.

Section 1:00 Details

- 1.01 **Property Affected:** PIN # 63200-0583(LT). The Property affected by this By-law is described as Lot 20, Registered Plan 260 geographic Township Of Ops, City of Kawartha Lakes.
- 1.02 **Deeming Provision:** The Property is deemed not to be part of a Registered Plan of Subdivision of the purposes of Subsection 50(3) of the Planning Act, R.S.O. 1990, c.P.13.

Section 2:00 General Terms

- 2.01 **Force and Effect:** This By-law shall come into force on the date it is finally passed, subject to the provisions of Sections 50(26), 50(28), and 50(29) of the Planning Act, R.S.O. 1990, c.P.13.

By-law read a first, second and third time, and finally passed, this ____ day of _____, 2017.

Andy Letham, Mayor

Ron Taylor, Acting Clerk

The Corporation of the City of Kawartha Lakes

Council Report

Report Number PLAN2017-060

Date: October 10, 2017

Time: 2:00 p.m.

Place: Council Chambers

Ward Community Identifier: 13

Subject: An application to amend the Village of Bobcaygeon Zoning By-law 16-78 to remove the Holding (H) symbol to permit 2 semi-detached dwellings on Part of Lot 10, Plan 70, being Parts 1 and 2 on Reference Plan 57R-10004, former Village of Bobcaygeon, now City of Kawartha Lakes and identified as 60 to 62 and 64 to 66 Helen Street, Savic/Milosevic & Tom Grimes Construction Ltd.

Author Name and Title: Sherry L. Rea, Development Planning Supervisor

Recommendation(s):

RESOLVED THAT Report PLAN2017-060, entitled "Savic/Milosevic & Tom Grimes Construction Ltd. - D06-17-027" be received for information;

THAT a Zoning By-law Amendment respecting Application D06-17-027, substantially in the form attached as Appendix "C" to Report PLAN2017-060, be approved and adopted by Council; and

THAT the Mayor and Clerk be authorized to execute any documents required by the approval of this application.

Department Head: _____

Corporate Services Director / Other: _____

Chief Administrative Officer: _____

Background:

The application proposes to remove the Holding (H) symbol from Schedule “A” of the Village of Bobcaygeon Zoning By-law 16-78, which regulates development and the use of land on Part of Lot 10, Plan 70, being Parts 1 and 2 on Reference Plan 57R-10004. The removal of the Holding (H) symbol would permit the construction of 1 semi-detached dwelling on each of the lots. See Appendix “A” and “B” attached.

Owners:	Jasmina Savic/Dragutin Milosevic and Tom Grimes Construction Ltd.
Applicant:	Tom Grimes of Tom Grimes Construction Ltd.
Legal Description:	Part Lot 10, Plan 70, being Parts 1 and 2, Plan 57R-10004, former Village of Bobcaygeon, now City of Kawartha Lakes
Designation:	Designated Urban Settlement Area on Schedule “A-5” on the City of Kawartha Lakes Official Plan.
Zone:	Urban Residential Type Two Special Ten Holding (R2-S10)(H) Zone, Village of Bobcaygeon Comprehensive Zoning By-law 16-78, as amended
Lot Area:	999.75 sq.m. (60 to 62 Helen Street) 997 sq.m. (64 to 66 Helen Street)
Site Servicing:	Proposed full urban services – water, sanitary sewer and storm sewer
Existing Uses:	Semi-detached dwellings under construction
Adjacent Uses:	North and South: Residential East: Helen Street West: Commercial

Rationale:

The subject land contains 2 separate lots with areas of 997 sq.m. and 999.75 sq.m. and each lot fronting onto Helen Street. The lots are to be developed with a semi-detached dwelling on each lot. See Appendix “A” and “B” attached.

On August 19, 2008, Council passed Zoning By-law 2008-141, being a Zoning By-law for the proposed development. By-law 2008-141 contained a Holding (H) provision stating that provisions, satisfactory to the Public Works Department, have been made to deal with stormwater servicing including drainage and outlet. The application for the removal of the Holding provision was circulated to the City’s Engineering & Corporate Assets Department who confirm through the City’s capital project and serviceability that storm servicing including drainage and outlet have been installed on Helen Street. Engineering & Corporate Assets

Department has also approved individual lot grading and drainage plans for each lot. See Appendix “B” attached.

Provincial Policies:

The application conforms to the 2017 Growth Plan for the Greater Golden Horseshoe (Growth Plan) and is consistent with the 2014 Provincial Policy Statement.

Official Plan Conformity:

The land is designated Urban Settlement Area on Schedule “A-5” of the City of Kawartha Lakes Official Plan. The proposed use on the property conforms to the applicable policies of the official plan designation.

Zoning By-law Compliance:

The property is zoned Urban Residential Type Two Special Ten Holding (R2-S10)(H) Zone which permits the semi-detached dwelling use.

Other Alternatives Considered:

No other alternatives have been considered.

Financial Considerations:

There are no financial considerations unless Council’s decision is appealed by the owner to the Ontario Municipal Board. In the event of an appeal there could be costs for legal representation and planning staff.

Relationship of Recommendations To The 2016-2019 Strategic Plan:

The Council Adopted Strategic Plan identifies these Strategic Goals:

- A Vibrant and Growing Economy
- An Exceptional Quality of Life
- A Healthy Environment

This application aligns with the exceptional quality of life goal as it permits residential development with access to municipal parks and the adjoining Village of Bobcaygeon commercial core.

Review of Accessibility Implications of Any Development or Policy:

The accessibility standards established in the Building Code will be shown on the subsequent construction drawings, which must be approved by the City prior to the issuance of a building permit.

Servicing Comments:

The property will be developed on full municipal services. The City's Engineering & Corporate Assets and the Building Division were circulated the Notice to Remove the Holding provision. The City's Building Division will continue to be involved through the construction phase.

Development Services – Planning Division Comments:

Staff supports the application based on the information contained in this report and as such, respectfully recommend that the proposed Zoning By-law application to remove the Holding (H) symbol be approved and adopted by Council.

Attachments:

The following attached documents may include scanned images of Appendices, maps, and photographs. If you require an alternative format, please contact Sherry Rea, Development Planning Supervisor 705.324.9411 x 1331.

Appendix 'A' – Location Map



Appendix 'A' -
Location Map.pdf

Appendix 'B' – Draft M-Plan



Appendix 'B' -
Approved Lot Grading

Appendix 'C' – Draft Zoning By-law Amendment

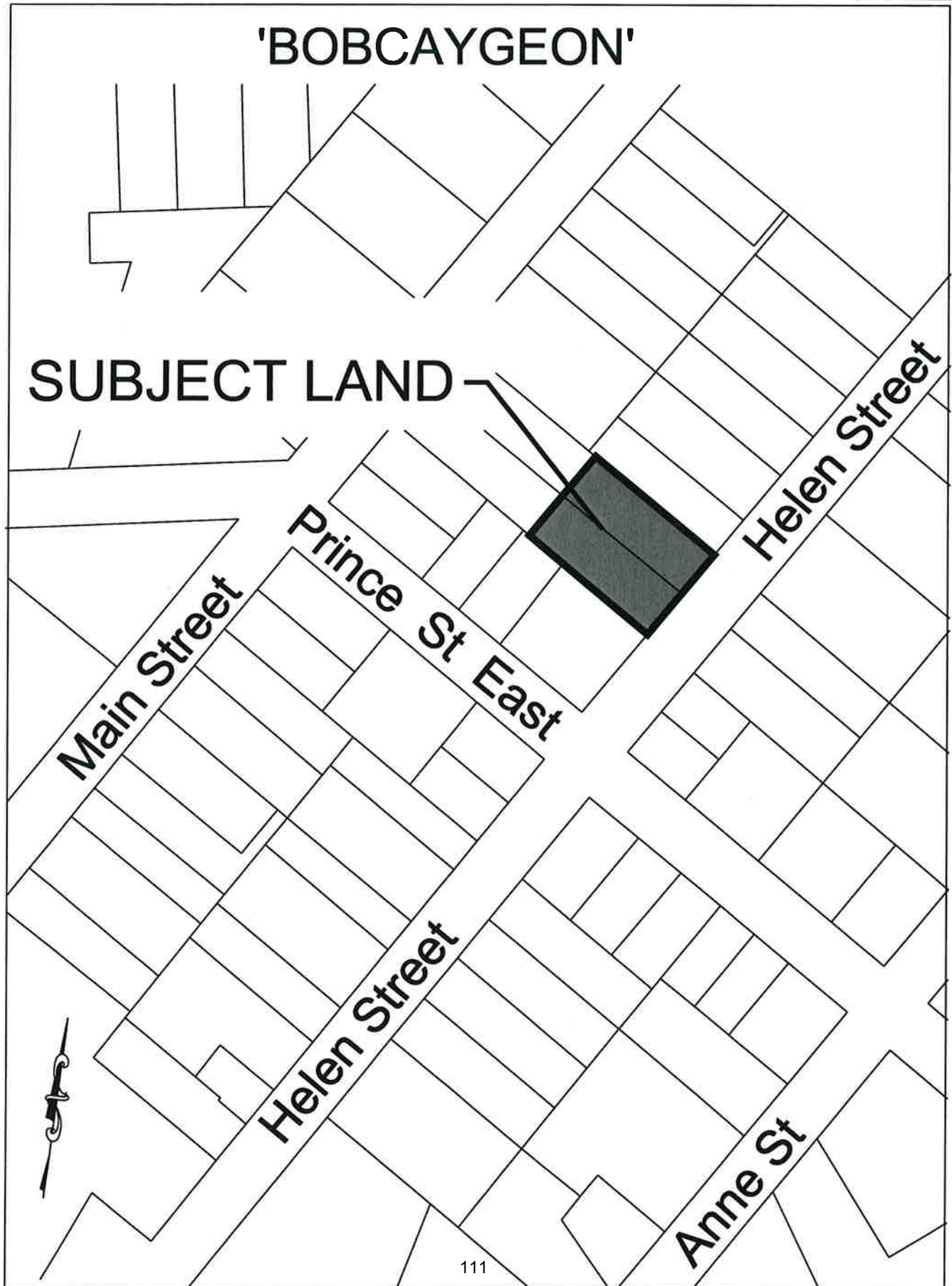


Appendix 'C' - Draft
Zoning By-law.pdf

Department Head E-Mail: cmarshall@city.kawarthalakes.on.ca

Department Head: Chris Marshall

Department File: D06-17-027



FOR CONSTRUCTION PURPOSES ONLY

SITE PLAN 1 & 2 HELEN STREET 1

1 PART 1 PLAN 570 1000

ON PART OF LOT 10, WEST OF HELEN STREET,

VILLAGE OF BOCHTICUM,

CITY OF KAWARTHA LAKES

SCALE 1 : 250 METRES

STATION 0010101006 - ELEVATION 240.20 METRES

IN VILLAGE, TABLE ON TOP OF SOUTH SIDEWALK

CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTES

- TOTAL LOT AREA = 597.50 M²

- PROPOSED TOTAL LOT COVERAGE = 28.5%

- UNIT (1) - PROPOSED BUILDING AREA = 144.3 SQM

- UNIT (R) - PROPOSED BUILDING AREA = 144.3 SQM

- LOT FRONTAGE = 6.83 M (22' 5")

- LOT DEPTH = 8.63 M (28' 4")

- BEACON MARK - STATION 0010101006 - ELEVATION 240.20 METRES

IN VILLAGE, TABLE ON TOP OF SOUTH SIDEWALK

CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

NOTES

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- LOT DEPTH = 8.63 M (28' 4")

- BEACON MARK - STATION 0010101006 - ELEVATION 240.20 METRES

GENERAL NOTES:

1. THE SITE PLAN SHALL BE SELF-CONTAINED ON SITE BY THE

OWNER AND SHALL NOT BE SUBJECT TO ANY OTHER

REQUIREMENTS OR CONDITIONS. THE SITE PLAN SHALL

BE A TRUE AND CORRECT COPY OF THE ORIGINAL

AS SUBMITTED TO THE CITY OF KAWARTHA LAKES

AND SHALL BE KEPT ON THE SITE AT ALL TIMES

UNTIL THE PROJECT IS COMPLETED. THE SITE

PLAN SHALL BE SUBJECT TO THE APPROVAL OF THE

CITY OF KAWARTHA LAKES AND SHALL BE

REVIEWED BY THE CITY ENGINEER. THE SITE

PLAN SHALL BE SUBJECT TO THE APPROVAL OF THE

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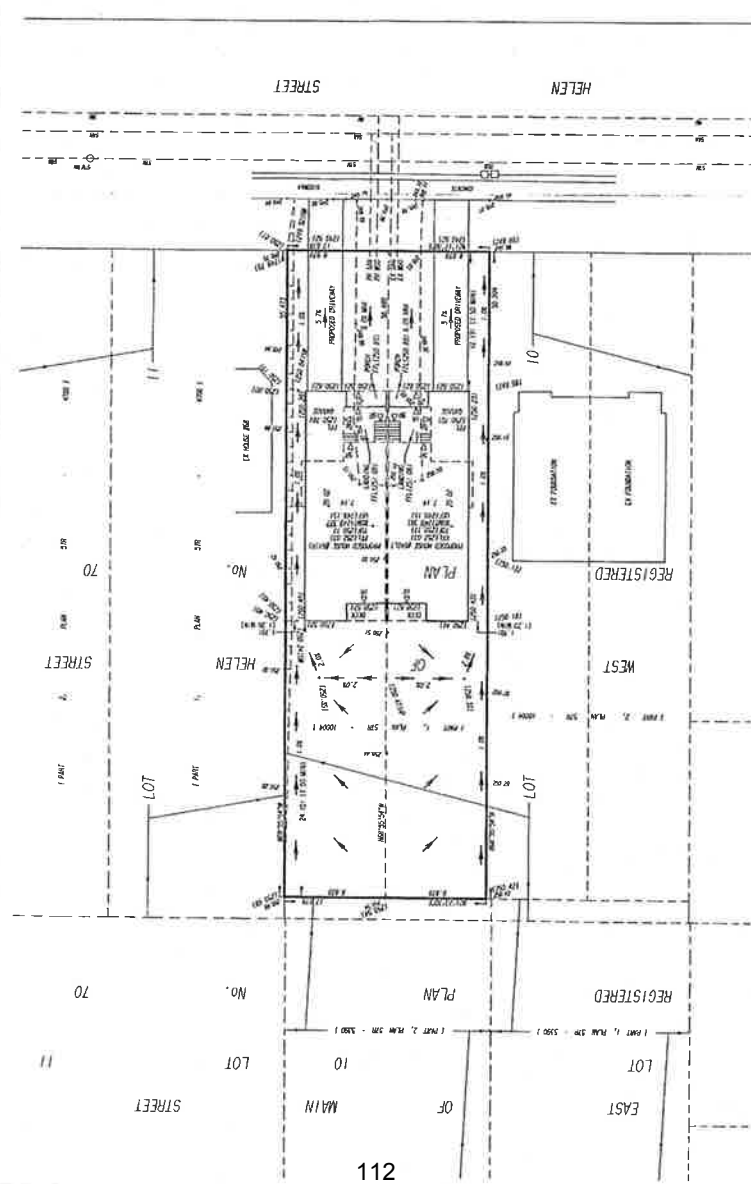
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CITY OF KAWARTHA LAKES AND SHALL BE

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REGISTERED BY
Engineering
MAY 26, 2017
REVISED AUGUST 2, 2017

KAWARTHA LAKES
ENGINEERING

SURVEYOR'S CERTIFICATE:
1) THIS PROPOSAL CONFORMS TO THE LOT GRADING DESIGN GUIDELINES
2) THE CITY OF KAWARTHA LAKES HAS REVIEWED THE PROPOSAL FOR THE
3) THE SITING OF THE PROPOSED BUILDING AS SHOWN ON THE SITE AND
ON THE PLANS AND DRAWINGS DATED APRIL 2017 FOR WHICH A
BUILDING PERMIT HAS BEEN APPLIED

MAY 26, 2017
REVISED AUGUST 2, 2017
OWNER: TOM GRAMES CONSTRUCTION
ZONING: URBAN RESIDENTIAL TYPE
TWO EXEMPTION S-10 102-5101
CODE FILE: 1728-SP-2-090
PROJECT NO. 1728-SP-1

APPENDIX "B"
to
REPORT PLAN 2017-060
FILE NO. D66-17-027.

മുഹമ്മദ് റിസാലി
പി. ജി. റിസാലി

**SITE GRADING PLAN OF
PART OF LOT 10
REGISTERED PLAN No. 70
VILLAGE OF BOBCAYGEON
CITY OF KAWARTHA LAKES
SCALE 1 : 200**

COE, FISHER, CAMERON
© COPYRIGHT 2017

METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

LEGEND:

* - FOUND SURVEY MONUMENT
 SIB - STANDARD IRON BAR
 IIB - IRON BAR
 CC - CUT CROSS
 750.50 PROPOSED ELEVATION
 24.25 DECEMBER 2010

SLOPE 

SWALE 

GENERAL NOTES:
1. DRAINAGE SHALL BE SELF-CONTAINED ON SITE BY THE CONSTRUCTION OF SWALES OR DRAIN TO A PROTECTED OUTLET. DRAINAGE SHALL NOT IMPACT ADJACENT PROPERTIES

2. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE IMPLEMENTED TO PREVENT MIGRATION OF SILT AND SEDIMENT FROM THE SUBJECT LOT TO ANY ADJACENT LOT, INCLUDING MUNICIPAL RIGHT-OF-WAY. SPECIAL CARE SHALL BE TAKEN TO ENSURE THAT SILT AND SEDIMENT LAUGH SURFACE WATER DOES NOT ENTER ANY WATERCOURSES OR ENVIRONMENTALLY SENSITIVE AREA, EITHER PUBLIC OR PRIVATE, AND THAT NO POLLUTANTS ARE DISCHARGED INTO ANY WATER BODY WITH ALL DIRECTIVES ISSUED BY ANY OF THE ENVIRONMENTAL AGENCIES.

3. WITHIN GRADING MEASURES MAY BE REQUIRED DURING BUILDING CONSTRUCTION TO ENSURE THAT DRAINAGE DOES NOT ADVERSELY AFFECT THE NEIGHBOURING PROPERTIES. ROUGH GRADING OF THE PROPERTY SHALL BE COMPLETED SUCH THAT DRAINAGE IS CONTAINED ON SITE OR CONTROLLED TO A PROTECTED OUTLET.

4. ALL DOWNSPOUTS AND OTHER DRAINAGE DISCHARGE

POINTS SHALL DISCHARGE ONTO A SPLASH PAD OR APPROVED EQUIVALENT.

LOCATES PRIOR TO ANY WORKS.
2.6. ALL DISTURBED AREAS ARE TO BE SOODED OR SEEDED OVER A MINIMUM OF 150MM OF TOPSOIL OR APPROVED EQUIVALENT.

7. THE OWNER/BUILDER MUST OBTAIN A ROAD OCCUPANCY PERMIT FROM PUBLIC WORKS PRIOR TO ANY WORKS WITHIN THE MUNICIPAL ROAD ALLOWANCE.

9. BUILDER TO ENSURE MINIMUM OVERBURDEN FOR FROST PROTECTION ON

11. SWALES WITH LESS THAN 2% SLOPE HAVE POTENTIAL FOR PONDING WATER. FOUNDATION TO BE STEPPED FROM REAR WALKOUT AROUND SIDES OF HOME. NO ELEVATIONS WILL BE LESS THAN 0.15m BETWEEN GROUND AND T.B.W. FOOTINGS.

ZONING	RZ-S100A
LOT AREA	689.75 SQ. M.
BUILDING AREA	183.54 SQ. M.
F.F.E.	251.00
T.D.W.	250.70
T.B.S.	249.02
T.G.S.	250.30
U.F.	248.72

No.	DATE	DESCRIPTION
REVISIONS		
SHEET #		

ELEVATIONS:
ELEVATIONS SHOWN HEREON ARE GEOMETRIC DERIVED BY GPS OBSERVATIONS AND ARE REFERRED TO THE EAST BELL OF A FIRE HYDRANT ON PRINCE STREET IN POINT OF CIVIC No. 35 HAVING AN ELEVATION OF 231.62.

FILED 3-20-17

Gerald G. Hickson
GERALD G. HICKSON
ONTARIO LAND SURVEYOR

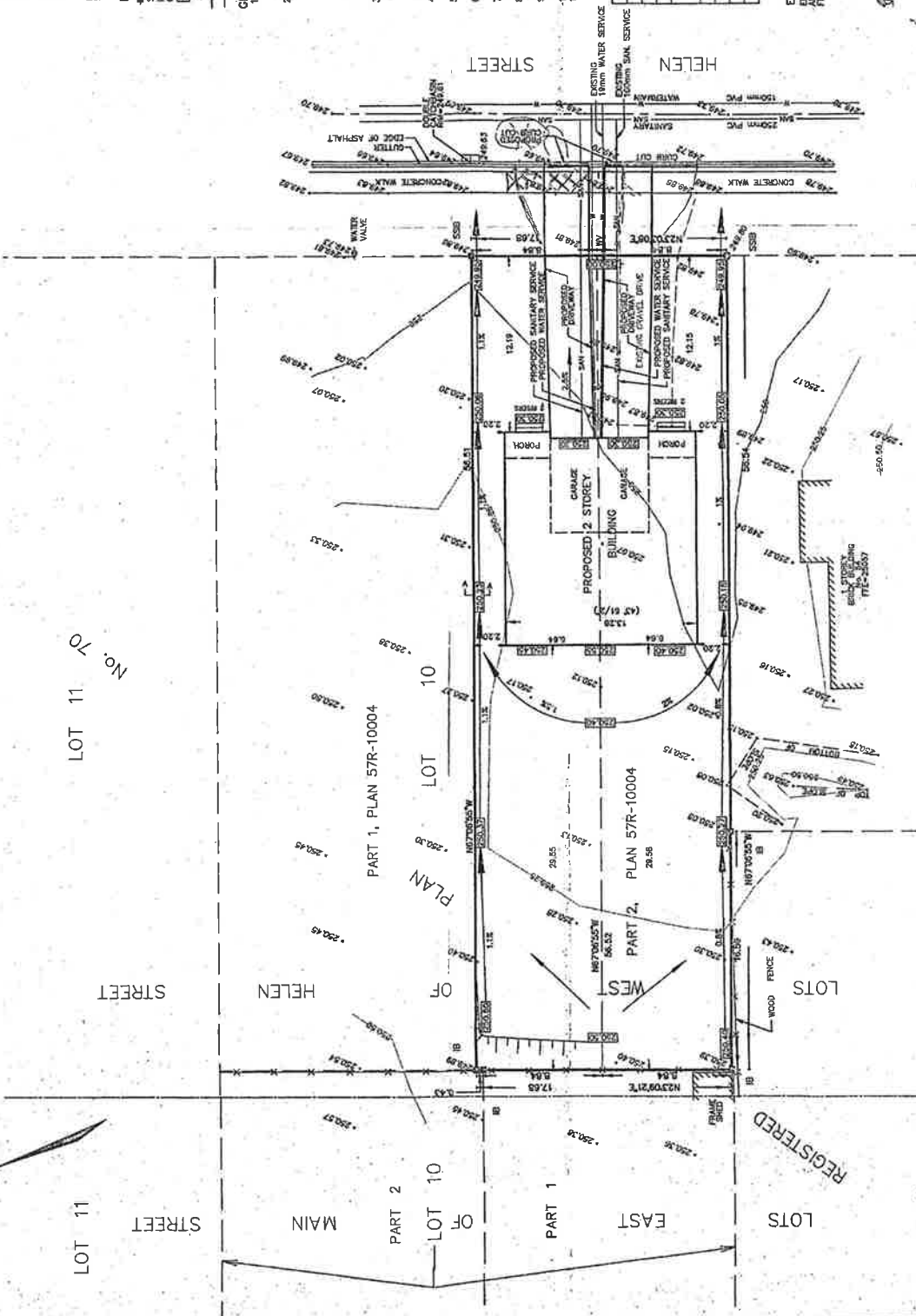
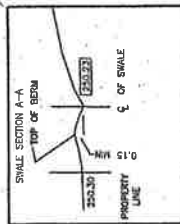


COE FISHER CAMERON
LAND SURVEYORS

... wholly owned subsidiary of J.D. Barnes Limited
KIMT STILETT WEST, LINDSAY, ON R9V 2Z3
(705) 324-4133 F: (705) 324-8606 www.jdbarnes.com

ISSUING OFF:	CHECKED BY:	REFERENCE NO.:
M.C.L.	G.G.H.	18-17-010-02

FILE Q:\16-17-010\01\Drawing\16-17-010-02.dwg	DATE: 1/23/2017
PLOT: 1/23/2017	



ACCORDS STAFF
- PROPOSED AGREEMENT
X SIDEWALK RENEWAL AGREEMENT

* WATER SERVICE LATERALS SHALL NOT BE INSTALLED WITHIN A DRIVEWAY

* WATER SERVICE LATERALS SHALL BE Laid WITH A MINIMUM 2.50 M HORIZONTAL
| SEPARATION OR 0.5 M VERTICAL SEPARATION.

The Corporation of the City of Kawartha Lakes
By-law 2017 -

REPORT

A By-law to Amend the Village of Bobcaygeon Zoning By-law 16-78 to Remove the Holding (H) Symbol from a zone category on property within the City of Kawartha Lakes

[File D06-17-027, Report PLAN2017-060 respecting Part Lot 10, Plan 70, being Parts 1 and 2, Plan 57R-10004, former Village of Bobcaygeon, - Savic/Milosevic and Tom Grimes Construction Ltd.]

Recitals:

1. Section 36 of the *Planning Act* authorizes Council to place a Holding (H) symbol on any zoning category assigned to property. The purpose of the Holding (H) symbol is to restrict the use of the property until conditions imposed by Council have been met.
2. The Council of the City of Kawartha Lakes enacted By-law No. 2008-141, which contained a Holding (H) symbol relating to the use of the property.
3. Council has received a request to remove the Holding (H) symbol from the Urban Residential Type Two Special Ten Holding (R2-S10)(H) Zone.
4. The conditions imposed by Council and shown in By-law No. 2008-141 have been met.
5. Council deems it appropriate to remove the Holding (H) symbol.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017-.**

Section 1:00 Zoning Details

- 1.01 **Property Affected:** The Property affected by this By-law is described as Part Lot 10, Plan 70, being Parts 1 and 2, Plan 57R-10004, former Village of Bobcaygeon, now in the City of Kawartha Lakes.
- 1.02 **Schedule Amendment:** Schedule 'A' to By-law No. 16-78 for the former Village of Bobcaygeon is further amended to remove the Holding (H) symbol from the "Urban Residential Type Two Special Ten Holding (R2-S10)(H)" Zone for the land referred to as 'R2-S10', as shown on Schedule 'A' attached to this By-law.

Section 2:00 General Terms

- 2.01 **Force and Effect:** This By-law shall come into force and take effect on the date it is finally passed, subject to the provisions of Section 34 and 36 of the *Planning Act*.

By-law read a first, second and third time, and finally passed, this ** day of October, 2017.

 Andy Letham, Mayor

 Ron Taylor, Acting City Clerk

THE CORPORATION OF THE CITY OF

KAWARTHA LAKES

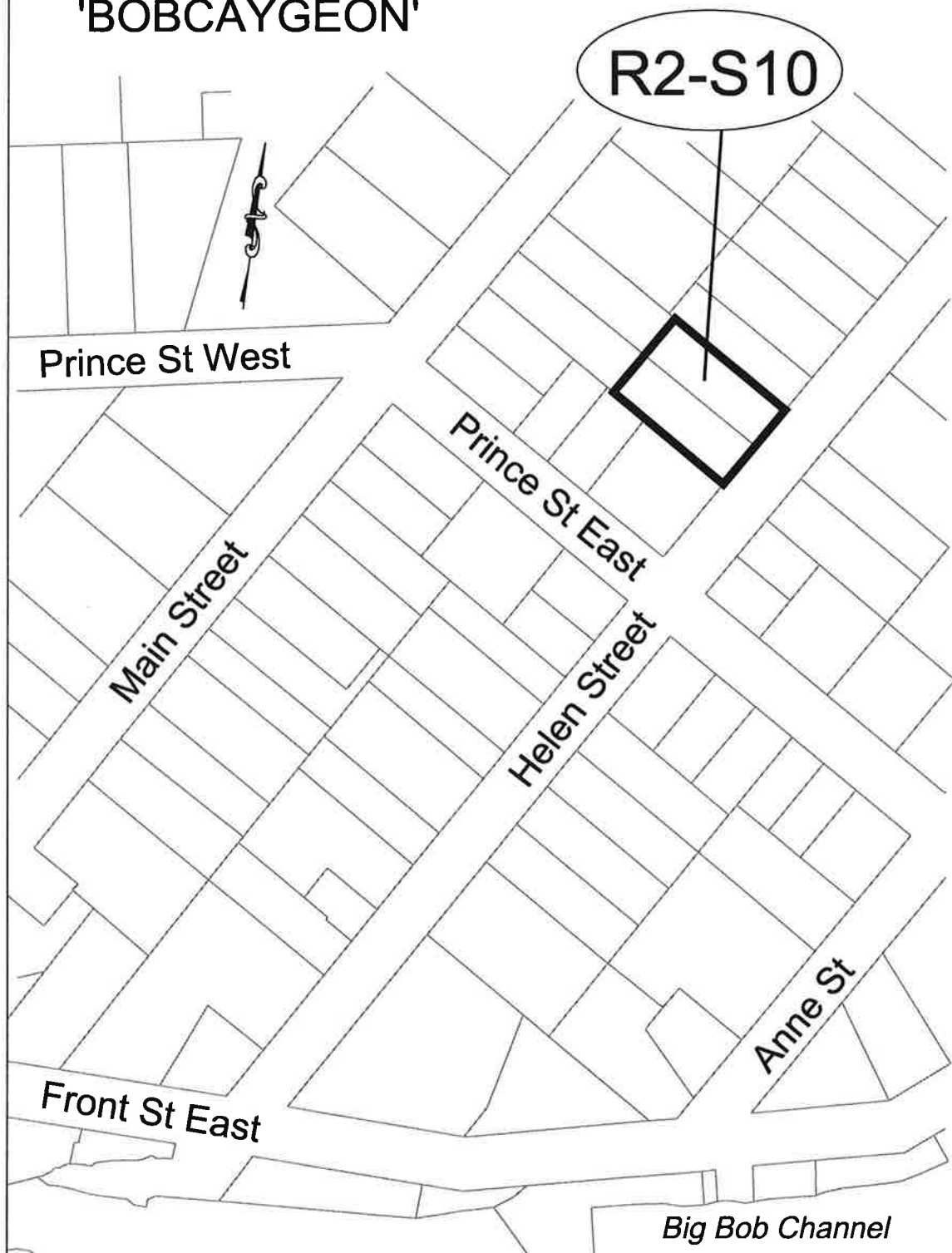
THIS IS SCHEDULE 'A' TO BY-LAW _____ PASSED

THIS _____ DAY OF _____ 2017.

MAYOR _____

CITY CLERK _____

'BOBCAYGEON'



The Corporation of the City of Kawartha Lakes

Council Report

Report Number ENG2017-023

Date: October 10, 2017
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier: 4

Subject: Petition for Drainage Works By Owner - Webster

Michael Farquhar, Supervisor, Technical Services

Recommendation(s):

THAT Report ENG2017-023, "Petition for Drainage Works by Owner – Webster", be received;

THAT Council proceeds with the petition submitted by Alan Webster (Victor Webster Farms Ltd.) for drainage works by owners for Concession 5, Part Lot 11, Geographic Township of Eldon and instruct the City Clerk to proceed with the notices required under Section 5 of the Drainage Act;

THAT Council appoints and retains, R. Dobbin Engineering Inc. in accordance with the Drainage Act, as the Engineer of Record, and to proceed with the requirements of a petition drain; and

THAT should, R. Dobbin Engineering Inc. not be available, that Council instructs staff to retain an alternate qualified Engineer from the standing list.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

On September 11, 2017 a “Petition for Drainage Works by Owners” was filed with the City for Concession 5, Part Lot 11, Geographic Township of Eldon (see Appendix A – Webster petition) by Alan Webster (Victor Webster Farms Ltd.).

The Drainage Board considered the petition at its meeting held on September 25, 2017 and received staff’s report titled Petition for Municipal drainage Webster petition as outlined in Appendix B. The Drainage Board passed the following resolutions recommending that Council proceed with the petition, to instruct the Clerk to proceed with the notices required under Section 5 of the Drainage Act and to also appoint an Engineer as follows:

Moved By Councillor Junkin

Seconded By J. Bedard

RECOMMEND THAT the memorandum by Supervisor of Technical Services – Engineering and Corporate Assets, Mike Farquhar, dated September 19, 2017, regarding the petition for drainage works by Alan Webster (Victor Webster Farms Ltd.) on Concession 5 Part Lot 11, Geographic Township of Eldon, be received,

THAT Council proceed with the petition submitted from Alan Webster (Victor Webster Farms Ltd.) for drainage works for Concession 5 Part Lot 11, Geographic Township of Eldon to be known as the “Webster Drain” and instruct the City Clerk to proceed with the notices required under Section 5 of the *Drainage Act*; and

THAT Staff concurrently continue to pursue with the petitioner options for a mutual drain agreement as per the City's Agricultural Tile Drain Discharge to Roadside Ditches Policy 114 EPW 007.

CARRIED

Moved By J. Bedard

Seconded By J. Oriotis

RECOMMEND THAT pursuant to Section 8(1) of the *Drainage Act, R.S.O. 1990, Chapter D. 17*, that staff recommend to Council a Drainage Engineer for the examination of the area requiring drainage and proceed with the requirements of a petition drain for Concession 5, Part Lot 11, Geographic Township of Eldon.

CARRIED

This report addresses and brings forward those recommendations of the Drainage Board so that Council can make their decisions on this matter within the prescribed 30 day time frame as set out in the Drainage Act.

Rationale:

The Drainage Board has made a recommendation to Council to proceed with the petition. Neither the Drainage Board nor Council has the authority to determine if the petition is valid; this responsibility is vested with the Engineer under the Drainage Act.

Once a decision has been made to accept the petition and proceed, notice of its intention to proceed must be sent, within 30 days, to each petitioner, the Clerk of any other municipality that may be affected, the local conservation authority and the Director of the Ministry of Agriculture, Food and Rural Affairs.

Section 8(1) of the Drainage Act stipulates that where Council has decided to proceed with the drainage works, Council shall by by-law or resolution appoint an Engineer to make an examination of the area and to prepare a report.

An alternative to a petition drain would be to consider mutual agreements between the City of Kawartha Lakes, the petitioners and any downstream property owners. Staff presented this alternative to the Drainage Board. The petitioners were not in support of a mutual agreement and requested that a petition drain process be followed.

In order for any mutual agreement to be viable, all parties involved need to be in agreement. As the petitioners were not receptive to this course of action and there was no representation from the downstream landowners, a mutual agreement was not likely to succeed. In light of this information, the Drainage Board recommended that a petition drain process commence. Staff is satisfied and agrees that accepting the petition is a suitable course of action to deal with this petition.

The Drainage Board left the selection of a Drainage engineering firm up to Council based on a recommendation by staff. Staff has recommended single sourcing drainage engineer, R. Dobbin Engineering Inc. noting that this engineering firm has suitable experience and familiarity with the surrounding municipal drains and subject area. If this recommendation is accepted by Council, the award would proceed through the City's procurement process to be implemented.

Other Alternatives Considered:

If Council's decision is not to accept the petition, the Drainage Act states that the Council must, within 30 days of the filing of the petition, send notice to each petitioner of Council's decision not to accept the petition (section 5(2)). Each

petitioner has the right to appeal to the Tribunal against Council's decision not to accept the petition (Section 5(2)). This action is not recommended.

Financial/Operation Impacts:

If the drainage works proceed, the engineer's report will include an estimate of the cost of the works, which includes the engineer's costs for the preparation of the report and the tendering and construction inspections. The report includes an assessment schedule, which indicates the total assessment of each property assessed on the drainage works, including assessments on roads. When the construction is completed and the final costs of the project are known, a by-law is passed to reflect the true costs, and the costs are billed out to the owners assessed in the report.

Notwithstanding the above, Council adopted Policy No. 118 FD 013 Municipal Drainage Projects on March 23, 2005 which outlines the process to follow for drainage works, as follows:

1. Prior to the commencement of each phase of the project, the Drainage Engineer shall prepare a detailed work program. The work program shall lay out the major items of work, the resources to be employed and the associated costs. The work program shall be reviewed by the Drainage Superintendent and subsequently, the Drainage Board for approval.
2. A schedule of payments shall be determined prior to the commencement of each phase of the work and approved by the Drainage Board. Once approval has been obtained, a purchase order shall be established for the value of the work. According to City policy, a change order is required to amend the initial tender. No payments shall be made until the change order receives the appropriate approvals. City staff shall not proceed with a change order without an amendment to the Engineer's original report which shall be undertaken pursuant to the provisions of the Drainage Act.
3. Once an Engineer's report has been received, the cost of the works shall be built into the City's capital budget. If the construction is to cover multiple taxation years, the capital budget will also be planned for multiple years.
4. The Drainage Superintendent shall satisfy himself that the invoice conforms to the schedule of payments and the work has been completed in accordance with the work program. When satisfied, the Drainage Superintendent shall recommend the invoice for payment. Final sign off shall be by the Director of Public Works or designate.
5. The Finance department shall prepare quarterly reports on all municipal drains for the Drainage Board meetings that document the financial status of all active capital drainage projects.

6. The final step of the procedure is to set the levying by-law before Council for approval, and subsequently, issue invoices to the ratepayers. The Finance Department shall confirm all expenses with the Engineer prior to setting the rate By-law.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

Section 3.1.7 of the Strategic Plan recognizes the protection of prime agricultural land by including policies in the Official Plan and working with the agricultural community to identify opportunities to support the sector.

Consultations:

Drainage Board
Office of the City Clerk

Attachments:

Appendix A – Webster petition memo to Drainage Board



Petition for Drainage
Works Form 1 - Webs

Appendix B – Memo to Drainage Board



Appendix B- Memo to
Drainage board.pdf

Department Head: Juan Rojas Director of Engineering and Corporate

Assets

Department Head: jrojas@city.kawarthalakes.on.ca

**Petition for Drainage Works by Owners
Form 1**
Drainage Act, R.S.O. 1990, c. D.17, clause 4(1)(a) or (b)

This form is to be used to petition municipal council for a new drainage works under the *Drainage Act*. It is not to be used to request the improvement or modification of an existing drainage works under the *Drainage Act*.

To: The Council of the Corporation of the CITY of KAWARTHA LAKES

The area of land described below requires drainage (provide a description of the properties or the portions of properties that require drainage improvements)

192 acre property known as Lot 11 Concession 5, former Township of Eldon, City of Kawartha Lakes

In accordance with section 9(2) of the *Drainage Act*, the description of the area requiring drainage will be confirmed or modified by an engineer at the on-site meeting.

As owners of land within the above described area requiring drainage, we hereby petition council under subsection 4(1) of the *Drainage Act* for a drainage works. In accordance with sections 10(4), 43 and 59(1) of the *Drainage Act*, if names are withdrawn from the petition to the point that it is no longer a valid petition, we acknowledge responsibility for costs.

Purpose of the Petition (To be completed by one of the petitioners. Please type/print)

Contact Person (Last Name) <u>WEBSTER</u>	(First Name) <u>ALAN</u>	Telephone Number <u>905 761-8200</u> ext.
--	-----------------------------	--

Address	
Road/Street Number <u>648</u>	Road/Street Name <u>PROSPECT ROAD</u>

Location of Project			
Lot <u>11</u>	Concession <u>5</u>	Municipality <u>CITY OF KAWARTHA LAKES</u>	Former Municipality (if applicable) <u>ELDON TOWNSHIP</u>

What work do you require? (Check all appropriate boxes)

- ☐ Construction of new open channel
☐ Construction of new tile drain
☐ Deepening or widening of existing watercourse (not currently a municipal drain)
☐ Enclosure of existing watercourse (not currently a municipal drain)
☒ Other (provide description ▼) REQUIRE SUFFICIENT OUTLET

DESIGNATED AS WHITE'S CREEK through LOT 10 downstream

Name of watercourse (if known)

THREE THOUSAND FEET + ACROSS LOT 10 CONC 5

Estimated length of project

CLAY WITH SHALE ROCK in MOST

General description of soils in the area

IMPROVE DRAINAGE FOR BETTER OPPORTUNITY OF CROP PLANTING

What is the purpose of the proposed work? (Check appropriate box)

- ☐ Tile drainage only ☐ Surface water drainage only ☒ Both

RECEIVED

Petition filed this 11 day of SEPTEMBER 20 17
SEP 11 2017

Name of Clerk (Last, first name)

WATTS, JOEL DEPUTY CLERK

Signature **OFFICE OF THE CITY CLERK
KAWARTHA LAKES**

- Your municipal property tax bill will provide the property description and parcel roll number.
- In rural areas, the property description should be in the form of (part) lot and concession and civic address.
- In urban areas, the property description should be in the form of street address and lot and plan number if available.
- If you have more than two properties, please take copy(ies) of this page and continue to list them all.

Number	Property Description
648-650	PROSPECT ROAD in LOT 11 CONCESSION 5
Ward or Geographic Township	Parcel Roll Number
ELDON	1651 160 010 20600

I hereby petition for drainage for the land described and acknowledge my financial obligations.

Ownership

☐ Sole Ownership

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

☐ Partnership (Each partner in the ownership of the property must sign the petition form)

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

☒ Corporation (The individual with authority to bind the corporation must sign the petition)

Name of Signing Officer (Last, First Name) (Type/Print)	Signature
WEBSTER ALAN	Alan Webster
Name of Corporation	I have the authority to bind the Corporation.
VICTOR WEBSTER FARMS LTD.	Date (yyyy/mm/dd)
Position Title	2017 / 09 / 13
PRESIDENT AND SECRETARY	

Number	Property Description
Ward or Geographic Township	Parcel Roll Number

I hereby petition for drainage for the land described and acknowledge my financial obligations.

Ownership

☐ Sole Ownership

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

☐ Partnership (Each partner in the ownership of the property must sign the petition form)

Owner Name (Last, First Name) (Type/Print)	Signature	Date (yyyy/mm/dd)

☐ Corporation (The individual with authority to bind the corporation must sign the petition)

Name of Signing Officer (Last, First Name) (Type/Print)	Signature
Name of Corporation	I have the authority to bind the Corporation.
Position Title	Date (yyyy/mm/dd)

☐ Check here if additional sheets are attached

Clerk initial

Petitioners become financially responsible as soon as they sign a petition.

- Once the petition is accepted by council, an engineer is appointed to respond to the petition. *Drainage Act*, R.S.O. 1990, c. D. 17 subs. 8(1).
- After the meeting to consider the preliminary report, if the petition does not comply with section 4, the project is terminated and the original petitioners are responsible in equal shares for the costs. *Drainage Act*, R.S.O. 1990, c. D. 17 subs. 10(4).
- After the meeting to consider the final report, if the petition does not comply with section 4, the project is terminated and the original petitioners are responsible for the costs in shares proportional to their assessment in the engineer's report. *Drainage Act*, R.S.O. 1990, c. D. 17 s. 43.
- If the project proceeds to completion, a share of the cost of the project will be assessed to the involved properties in relation to the assessment schedule in the engineer's report, as amended on appeal. *Drainage Act*, R.S.O. 1990, c. D. 17 s. 61.

Notice of Collection of Personal Information

Any personal information collected on this form is collected under the authority of the *Drainage Act*, R.S.O. 1990, c. D.17 and will be used for the purposes of administering the Act. Questions concerning the collection of personal information should be directed to: where the form is addressed to a municipality (*municipality to complete*)

and where the form is addressed to a territory without municipal organization, the Drainage Coordinator, Ministry of Agriculture, Food and Rural Affairs, 1 Stone Rd W, Guelph ON N1G 4Y2, 519 826-3552.



**THE CORPORATION OF THE
CITY OF KAWARTHA LAKES**
12 Peel Street P.O. Box 9000
LINDSAY, ON K9V 5R8
Phone: 705-324-9411, Ext. 1156
Fax: 705-324-2982

MEMO

Date: October 2, 2017
To: Drainage Board
From: Mike Farquhar, Supervisor Technical Services – Engineering & Corporate Assets
Re: Petition for Municipal Drainage
Webster petition
CC: Juan Rojas Director of Engineering and Corporate Assets
Paul Herlihey, Municipal Drain Superintendent.

Recommendation:

RECOMMEND THAT the Drainage Board receives the memorandum from the Supervisor of Technical Services- Engineering and Corporate Assets dated September 19, 2017, for information in response to the petition for drainage works by owners of:

Concession 5, Part Lot 11, Geographic Township of Eldon

From Alan Webster (Victor Webster Farms Ltd.)

THAT the Drainage Board recommends to Council for consideration this petition for a Municipal Drain as prescribed under the Ontario Drainage Act; and

THAT Staff pursue with the petitioners concurrently an option for a mutual drainage agreement as per the City's Agricultural Tile Discharge to Roadside Ditches Policy.



**THE CORPORATION OF THE
CITY OF KAWARTHA LAKES**
12 Peel Street P.O. Box 9000
LINDSAY, ON K9V 5R8
Phone: 705-324-9411, Ext. 1156
Fax: 705-324-2982

Background:

The subject area/ land is bounded by Prospect road to the West, Sandringham road to the East and Glenarm road (CKL 8) to the South (refer to Appendix A). There are no existing Municipal Drains within the vicinity. The area of the land identified as Concession 5 Part lot 11 is approximately 196 acres in size.

The property is within the Simcoe County Conservation Authority jurisdiction as defined under the Ontario Conservation Act and has an identified watercourse on the property (see appendix B). The grade of the lands from the middle of the property contours to the south east.

On September 11, 2017 the City of Kawartha Lakes Clerks department received a petition for Drainage works within the subject area (Appendix C).

Subsequent meetings where held with the applicants representative and City staff on site to review options for a mutual drain. How this was not a viable option because this would have involved alterations to the City's infrastructure that would have increased the amount of water the downstream property owner is currently receiving , and they had already expressed to the applicant that they did not wish to receive any more water. The applicant had pursued and received a permit from the Simcoe County Conservation Authority to tile the lands he could to the existing watercourse on his property, however it did not afford him an adequate out for all of his lands.

Alternatives:

As an option for required drainage the City firstly promotes the use of a Mutual agreement through the City's policy for Agricultural Tile discharge to roadside ditches prior to pursuing a petition for a Municipal drain under the Ontario Drainage Act. At this point in time the Drainage Superintendent has currently presented this option to the petitioners and explained its avenues in comparison to petitioning for a Municipal Drain under the Drainage Act. At this current time the petitioners wish to carry on with the process under the Drainage Act for the petition. Staff will leave the door open for pursuing a mutual agreement up until the prescribed time the petitioner has under the Drainage Act for removing their names and abandoning the petition.

Recommendation for appointment of a Drainage Engineer:

Currently the City has a pool of Drainage Engineers which list in the following.

Burnside Engineering
Tulloch Engineering
K-Smart Engineering
R. D. Dobbin Engineering
DM Wills Engineering.



**THE CORPORATION OF THE
CITY OF KAWARTHA LAKES**
12 Peel Street P.O. Box 9000
LINDSAY, ON K9V 5R8
Phone: 705-324-9411, Ext. 1156
Fax: 705-324-2982

Attachments:



Appendix A.pdf



Appendix B.pdf

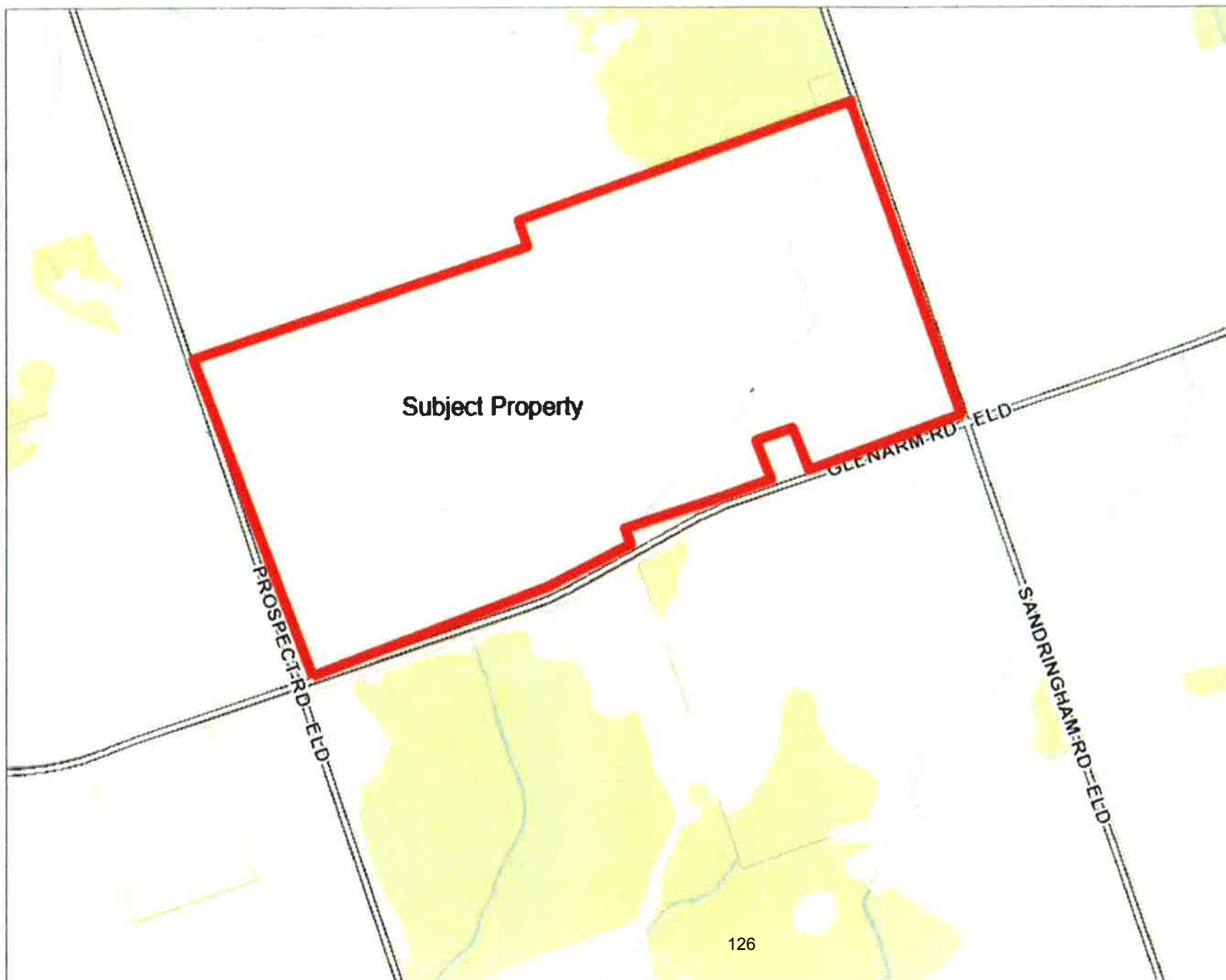


Appendix C.pdf



Petition for Drainage
Works Form 1 - Webs

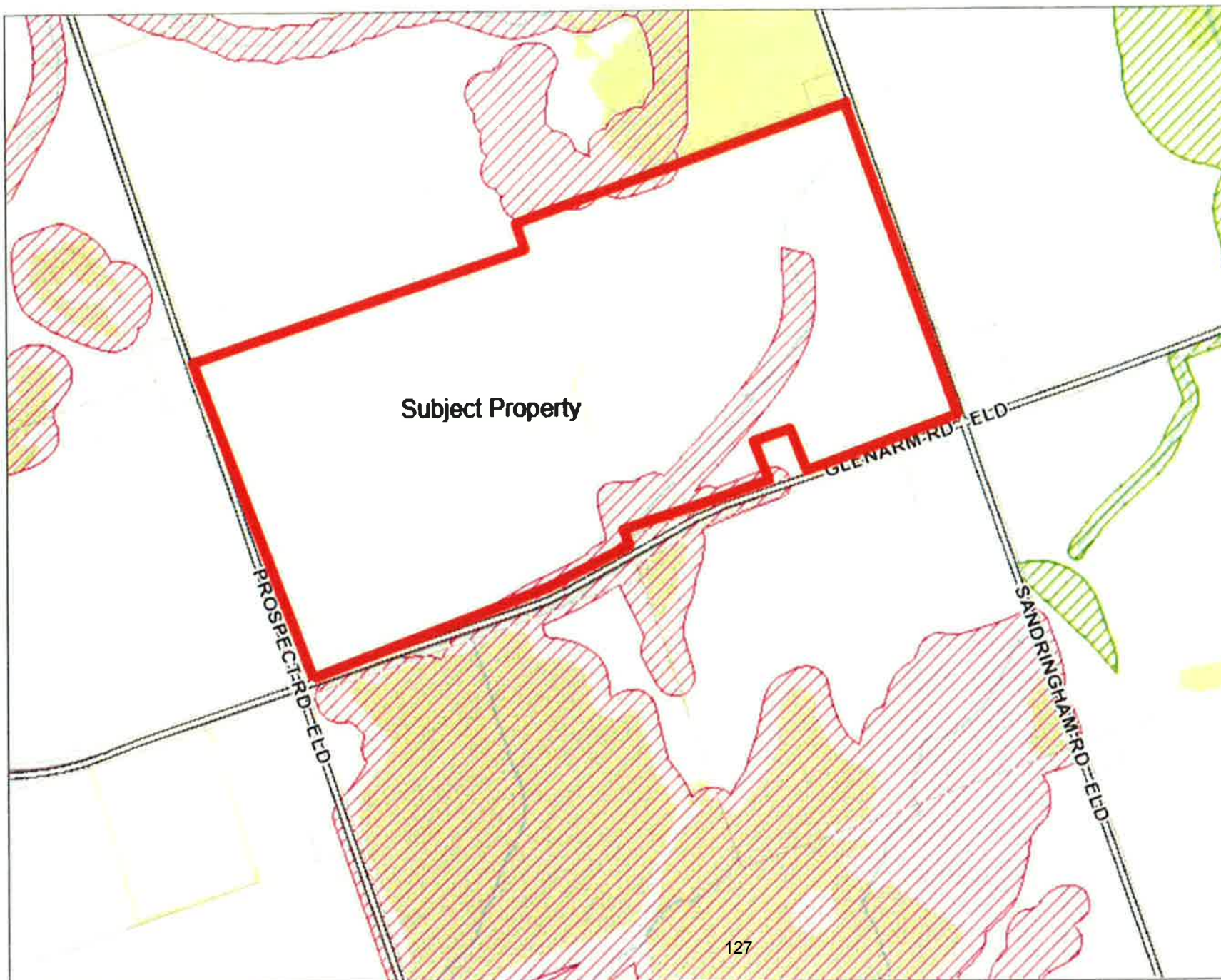
Appendix A



Legend

- = Road Centreline
- = Municipal Drains
- ▭ Municipal Catchment Areas
- ▭ Upper Municipalities
- ▭ Lower Tier Municipalities
- ⊙ Populated Places
- Water Labels
- Property ROLL#

Appendix B



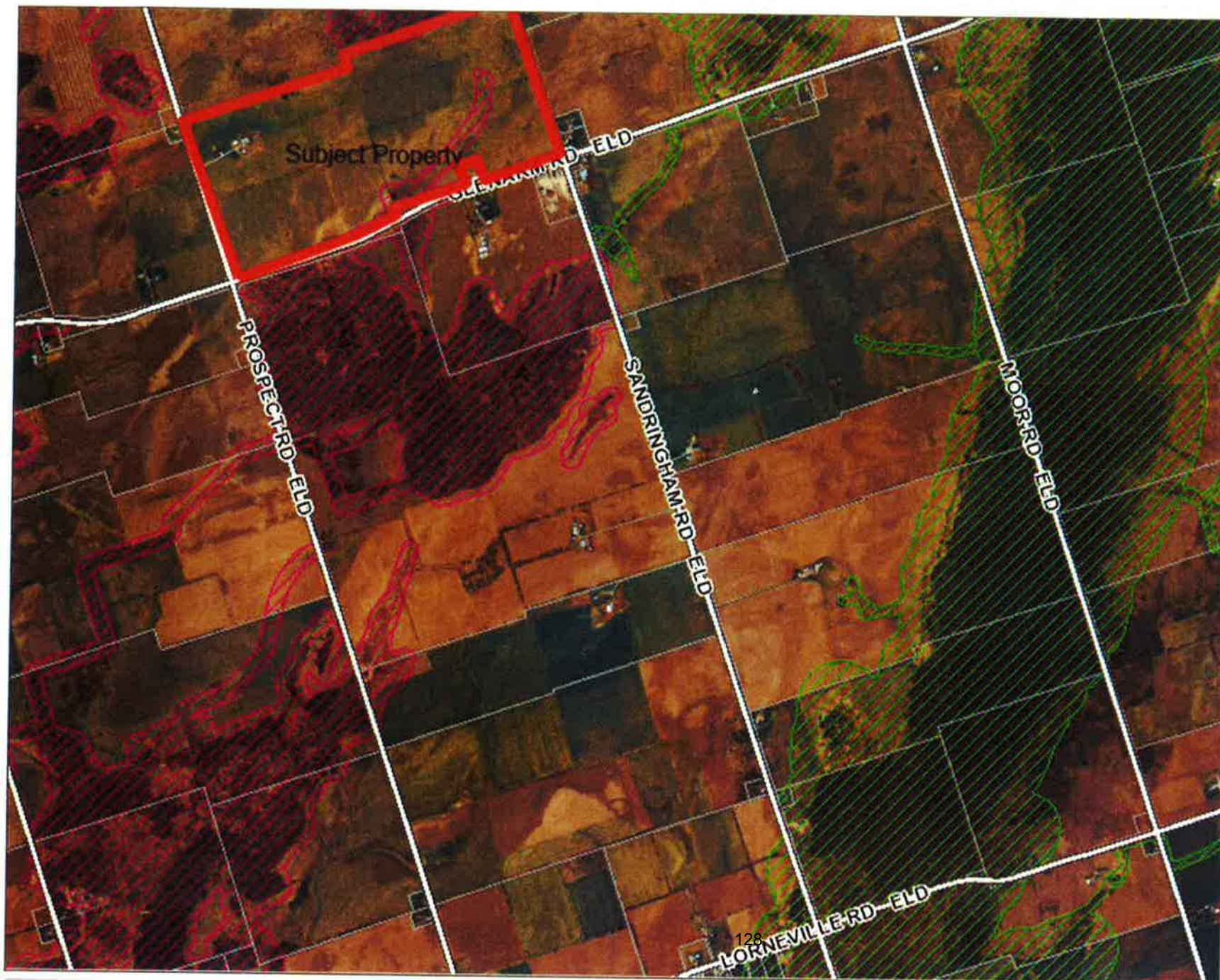
Legend

- Road Centreline
- Municipal Drains
- Municipal Catchment Areas
- Upper Municipalities
- Lower Tier Municipalities
- Populated Places
- Water Labels
- Property ROLL#
- KRCA Regulated Areas
- LSRCA Regulated Areas
- ORCA Regulated Areas
- Oak Ridges Moraine

Notes

Notes

Appendix C



Legend

- == Road Centreline
- == Municipal Drains
- Municipal Catchment Areas
- Upper Municipalities
- Lower Tier Municipalities
- Populated Places
- Water Labels
- Property ROLL#
- KRCA Regulated Areas
- LSRCA Regulated Areas
- ORCA Regulated Areas
- Oak Ridges Moraine

Notes

The Corporation of the City of Kawartha Lakes

Council Report

Report Number WWW2017-007

Date: October 10, 2017
Time: 2:00 p.m.
Place: Council Chambers

Ward Community Identifier: 9, 10, 11, 12

Subject: Coagulant Selection for the Lindsay Water Treatment Plant

Author Name and Title: Rob MacPherson, Water and Wastewater Technician

Recommendation(s):

RESOLVED THAT Report WWW2017-007, Coagulant Selection for the Lindsay Water Treatment Plant, be received;

THAT Staff be directed to negotiate a contract in accordance with the Purchasing Policy, between the City and Kemira, the sole supplier of SternPAC, for continued supply and delivery of SternPAC to the Lindsay Water Treatment Plant; and

THAT Staff continues to review new technology, products and pricing to ensure the most cost effective delivery of services.

Department Head:_____

Financial/Legal/HR/Other:_____

Chief Administrative Officer:_____

Background:

At the Lindsay Water Treatment Plant (WTP), coagulation is one of the key treatment processes completed. A chemical, or coagulant, is added to the raw, untreated water as part of the coagulation/flocculation stage to aid in this step of the process. During this stage impurities in the water join into small lumps and to aide in removal from the raw water. The Lindsay WTP currently uses SternPAC as their primary coagulant during the winter months, typically from October – May of each year when water temperatures are colder.

At the Council Meeting of January 13, 2015, Council adopted the following resolution:

Moved by Councillor Yeo, seconded by Councillor Junkin,

RESOLVED THAT Report PUR2015-001, **2014-107-SS - Sole Source Approval of SternPAC Coagulant for the Lindsay Water Treatment Plant**, be received;

THAT, in keeping with Policy No. 065 FD 007, Interim Spending Prior to the Adoption of Annual Operating Budget, that Kemira Water Solutions Canada Inc. of Brantford, be selected for the award for the supply and delivery of SternPAC over a two (2) year term at the proposed price of \$0.501 per liquid kilogram for 2015 and \$0.513 per liquid kilogram for 2016;

THAT subject to the approval of the award and receipt of the required documents, the Purchasing Division be authorized to issue a purchase order; and

THAT during the two year contract time frame that further testing be done on alternative coagulants products for the Lindsay Water Treatment Plant to allow for future purchases to be conducted through a competitive procurement process prior to the expiration of the contract.

CARRIED CR2015-079

In response to the resolution above in 2016 WSP Canada Inc., was retained by the City of Kawartha Lakes to explore alternative coagulants for the Lindsay WTP. Through their study ten coagulants were reviewed and it was recommended that two coagulants, SternPAC and DeltaFloc-1118, were the best available coagulant options for the Lindsay WTP based on Lindsay's specific treatment process, source water conditions, chemical specifications of coagulants, and compatibility with plant equipment. Before either coagulant was selected by the City as a preferred choice, WSP recommended both chemicals be further tested to determine what one could work most efficiently during cold water temperatures. Due to the timing of the testing, water temperatures were too high to continue testing the two recommended coagulants at that time. A report was brought to Council to provide an update.

At the Council Meeting of August 9, 2016, Council adopted the following resolution:

Moved by Councillor Dunn and seconded by Councillor O'Reilly

RESOLVED THAT Report WWW2016-006, **Coagulant Testing at Lindsay Water Treatment Plant**, be received;

THAT additional testing be undertaken in 2017 on two specific coagulants that performed better than the others, based on results from recent comparative testing, to further assess their capability under various conditions to treat water at the Lindsay Water Treatment Plant, as recommended in the June 23, 2016 WSP report;

THAT staff be directed to negotiate a contract between the City and Kemira, the sole supplier of SternPAC, for continued supply and delivery of SternPAC to the Lindsay Water Treatment Plant for a period of one year extending from December 31, 2016 to December 31, 2017; and

THAT upon completion of the additional coagulant testing in 2017, staff report back to Council regarding the conclusions from the testing and make recommendations for the long term procurement of coagulants for the Lindsay Water Treatment Plant.

CARRIED: CR2016-714

This report provides an update on the results collected from the testing of the two coagulants and the recommendations made by WSP on the preferred cold water coagulant to be used at the Lindsay Water Treatment Plant.

WSP continued their testing in the winter of 2017 to determine whether SternPAC or DeltaFloc-1118 exhibited superior performance at the Lindsay WTP during cold temperature conditions for the raw water source. This process was broken down into two stages.

The initial stage aimed to optimize the testing parameters surrounding the coagulant to ensure that once the coagulants were tested there would be significantly fewer sources of error. Microsand dosage, polymer dosage, and pH were adjusted to create the ideal environment for each coagulant in order to utilize the coagulants full water treatment capabilities. An in depth explanation of how each parameter was optimized can be found in the Attachment 1: *Follow up Coagulant Testing for the Lindsay Water Treatment Plant*.

Once the ideal environment was created for each coagulant, WSP was able to conduct the second stage of the experiment, optimizing the coagulant dosage. The following water quality parameters were analyzed to compare the effectiveness of each coagulant concentration in 4 °C water: Alkalinity, Colour, Apparent Colour, Total Dissolved Solids (TDS), Dissolved Organic Carbon (DOC), Total Organic Carbon (TOC), and Hardness.

The results indicated that while DeltaFloc-1118 was marginally less corrosive than SternPAC, the effectiveness of each coagulant was similar in performance.

WSP concluded that from a water quality and financial standpoint, the use of DeltaFloc-1118 does not provide significant benefits over the currently used SternPAC. It is therefore the recommendation of WSP and endorsed by Staff that a change in coagulant at this time should not occur and that SternPac should be continued to be used as the cold water coagulant.

Rationale:

As indicated in the report prepared by WSP, based on the results obtained from the further testing and the financial evaluation SternPAC remains the preferred cold water coagulant at the Lindsay WTP.

Based on an estimate calculated by WSP and shown in more detail under the Financial Impacts section of this Report, the continued usage of SternPAC as the primary coagulant for cold temperature raw water would cost approximately \$10,000 less per year than DeltaFloc-1118.

Changing the coagulant would also result in additional costs to the City to perform additional testing to assess the impact on corrosion control within the distribution system as per the requirement in the Drinking Water Works Permits and potential retrofits required to chemical pumping and storage equipment.

Staff did negotiate with Kemira in late 2016 for a one year extension of the contract for the supply and delivery of SternPAC for 2017 until a final decision on preferred coagulant could be made. Since Kemira is the sole provider of SternPAC and based on the professional opinion of WSP, it is recommended that staff negotiate a contract between the City and Kemira for the continued supply and delivery of SternPAC to the Lindsay Water Treatment Plant for a term that would be most cost effective.

Through the review process it was determined there are a number of municipalities that also use SternPAC and are satisfied with its performance. In addition, experts from the Walkerton Clean Water Center are supportive of the applicability of SternPAC in the Lindsay WTP.

Other Alternatives Considered:

As indicated in the Background Section of this Report, ten (10) alternative coagulants were reviewed and tested before further research and testing was conducted on the two short listed coagulants, SternPAC and DeltaFloc-1118, in order to determine their application in colder water.

Based on the testing and analysis, there are no alternate recommendations to SternPAC.

Financial/Operation Impacts:

The cost of each coagulant for a one year supply was estimated by WSP based on water usage rates provided by the City. The City provided a current SternPAC unit price and the supplier, Control Chem, provided a unit price for DeltaFloc-1118. Based on estimated consumption rates, DeltaFloc-1118 would be approximately \$10,000 more per year in comparison to SternPAC.

Therefore the most cost effective coagulant would be the SternPAC. The estimates which are provided in the WSP report may vary from the actual costs depending on volume of water treated per year and the quality of raw water.

All costs for coagulant are included in the department's annual operating budget. There is adequate funds to support the recommendations in this report.

Relationship of Recommendation(s) To The 2016-2019 Strategic Plan:

This Report contributes to the Council Adopted Strategic Plan in the following ways:

This report directly addresses "*Goal 3 – A Healthy Environment; Objective 3.1: A healthier environment; Action 3.1.6: Protect & enhance water quality*" of the Strategic Plan. The coagulant dosage used has been researched and optimized for the Lindsay WTP, enhancing the treated water quality and protecting the public health.

This report relates to *Objective 1: Best technology and best use of technology* of the *Enabler 4: Efficient Infrastructure and Asset Management* of the Strategic Plan. The selection of the optimized coagulant has reduced waste, improved asset management and allows for a more efficient water treatment process.

This Report is in line with the City of Kawartha Lakes values, specifically continuous improvement and excellence as this proposed program will improve the municipal drinking water system quality as well as provide excellent, efficient, and safe services for the public of Kawartha Lakes.

Review of Accessibility Implications of Any Development or Policy:

There are no accessibility implications associated with this report.

Servicing Implications:

There are no servicing implications associated with this report.

Consultations:

Manager, Revenue and Procurement
Supervisor, Water & Wastewater Operations

Manager, Environmental Services
WSP Canada Inc.
Walkerton Clean Water Centre
Municipalities across Ontario

Attachments:

Attachment 1- Appendix A: Follow up Coagulant Testing for the Lindsay Water Treatment Plant, WSP, July 17, 2017



Follow Up Coagulant
Testing for the Lindsay

Attachment 2 – Appendix B: Coagulant Testing for the Lindsay Water Treatment Plant, WSP, June 23, 2016



Coagulant Testing for
the Lindsay Water Tre

Department Head E-Mail:brobinson@kawarthalakes.ca

Department Head: Bryan Robinson, Director of Public Works



Appendix # A

to

MEMORANDUM

Report # WWW 2017-007

Date: July 17, 2017
To: Amber Hayter, City of Kawartha Lakes
From: Mazahir Alidina, Maika Pellegrino, WSP
Project No.: 161-15613
Location: Lindsay Water Treatment Plant
Subject: Follow Up Coagulant Testing for the Lindsay Water Treatment Plant

1. Introduction

The Lindsay Water Treatment Plant is a conventional treatment plant with an ACTIFLO® System that consists of two (2) ballasted flocculation/clarification units, two (2) sedimentation tanks and five (5) multi-media filters to handle the plant rated flow of 22,730 m³/d. The source water for the plant is the Scugog River where water temperatures range between 0 and 30°C. Currently polyaluminum chloride (PAC) is used when raw water is below 12°C and alum is used above 12°C.

WSP was retained by The City of Kawartha Lakes in the Spring of 2016 to explore alternative coagulants for the Lindsay Water Treatment Plant during Raw Water cold temperature conditions. WSP completed this jar testing at temperatures between 10.5°C and 12.5°C, and recommended that SternPAC (current coagulant in use at the plant) and DeltaFloc-1118 be tested further at lower temperatures of 2 - 4°C, to investigate if DeltaFloc-1118 exhibits superior performance compared to SternPAC.

It was also recommended that when SternPAC and DeltaFloc-1118 were re-tested at cold temperatures, the following additional parameters be included in the analysis to assess for corrosivity: chloride, sulphate and total dissolved solids (TDS). This would allow the calculation of the following corrosion indices: Langelier Saturation Index (LSI), Ryznar Stability Index (RSI), Chloride to Sulphate Mass Ratio (CSMR).

Following the jar testing, WSP also recommended that an optimization jar test study be conducted to review the microsand dose, determine the optimum polymer dose and optimum pH since the dosing ranges used during the jar testing did not seem to be optimized.

2. Aim

The aims of the current jar tests were as follows:

1. Determine optimum microsand dose
2. Determine optimum polymer dose
3. Determine optimum pH
4. Determine optimum coagulant dose

The jar testing simulated a full scale ACTIFLO® process by using similar contact times in each basin of the ACTIFLO® process and by adding the chemicals and micro-sand along the same sequence used in the full-scale unit.

3. Jar Testing Procedure

The jar testing was carried out in accordance with the industry standard "Actiflo® Jar Testing Procedure" (Appendix 1). The jar tests were performed using a Phipps & Bird PB-700™ Jar Test Apparatus (supplied by WSP, Figure 1) at the Lindsay Water Treatment Plant. The PB-700™ is a six-paddle model with regulated variable paddle speed control between a range of 1 – 300 rpm with a digital readout of the exact speed. The unit comes with six, square acrylic 2L jar testing jars and has a fluorescent lamp floc illuminator built into its base.

Figure 1 Jar Testing Apparatus used for testing the coagulants



The microsand to be used for the testing was washed thoroughly (by plant staff) before beginning of the jar testing. The microsand was washed until the supernatant was clear, in order to eliminate turbidity caused by micro-grains or any suspended particles that could be introduced into the water tested in the jar test. The microsand was laid out to dry overnight and stored in plastic jars.

Since these jar tests were to be carried out at cold temperatures around 4°C, plant staff were requested to collect raw water the afternoon before a jar testing event was scheduled. Actual raw water temperatures were noted to be in the 4°C to 5°C range, and to maintain the temperature at this level, collected water was stored in the refrigerator. Care was taken to leave the raw water in the refrigerator and fill the 2 L test jars just before beginning of the jar test to minimize temperature increase. Ice packs were also placed between the jars to try and keep the jars cold.

Ultimately however, where individual readings of the jars were required before beginning of the jar test (e.g. pH), there was some time period when the jars had to be kept at room temperature which resulted in slight increases in liquid temperature. During the jar tests as well, due to heat dissipation from the moving paddles as well as the large surface area of the jars exposed to atmospheric temperature, the temperature of the water inevitably increased. The experiment however was run such that these effects were minimized as much as possible.

Polymer solution utilized in the jar tests was obtained (by plant staff) from the bulk solutions prepared for the full-scale unit in the plant. The concentration of the bulk polymer was approximately: 0.003 kg/L (3000 mg/L).

The water quality parameters tested are summarized in Table 1 below:

Table 1 Water Quality Parameters Tested

WSP (In Lab)	Commercial Lab (SGS Canada Inc.)	
pH	Alkalinity	DOC
Temperature	Apparent Colour	TOC
Turbidity	True Colour	Calcium
UVA	Residual Aluminum	TDS
	Total Hardness	Chloride
	Calcium Hardness	Sulphate

Before undertaking the cold water jar test to compare performance of SternPAC and DeltaFloc-1118, the optimization jar tests were carried out. The microsand and polymer optimization jar tests were carried out using SternPAC as the coagulant. These optimal values were carried forward for future jar tests.

Optimum pH was tested separately for SternPAC and DeltaFloc-1118. These optimal pH values were used when the jar tests to compare performance of the two coagulants were carried out. Details of the different jar tests are presented below:

3.1 Optimum Microsand Dose Jar Test

With the aim of optimizing the coagulation/flocculation process, a jar test was carried out to investigate the optimal microsand dose. The difference in microsand dosage was achieved by adding different amounts of microsand into each jar. The amounts of the microsand added to each 2 L jar ranged between 10 and 35 g, representing doses of 5 – 17.5 g/L. Other parameters were kept constant as follows:

- Coagulant: SternPAC
- Coagulant Dose: 85 mg/L
- Polymer Dose: 0.35 mg/L
- pH: Unchanged from raw water (7.59)

3.2 Optimum Polymer Dose Jar Test

During the first round of jar testing investigating alternative cold water coagulants, a constant polymer dose was utilized. A jar test experiment was undertaken to investigate if this dose could be optimized. The polymer dose was varied between 0.2 and 0.7 mg/L by addition of different amounts of polymer into each jar. Other parameters were kept constant as follows:

- Coagulant: SternPAC
- Coagulant Dose: 85 mg/L
- pH: Unchanged from raw water (7.59)
- Microsand Dose: 10 g/L

3.3 Optimum pH Jar Test

During the first round of jar testing investigating alternative cold water coagulants, pH was not altered since the optimum pH ranges obtained from the data sheets for all the coagulants were between 6 and 8. The raw water pH was noted to be within this range and no pH control was hence implemented.

However, due to the impact pH has on efficacy of coagulants, during the current investigation; jar tests were undertaken to determine the optimal pH for SternPAC and DeltaFloc-1118.

A 10X dilution of the concentrated 19.2N Sulphuric acid available in the lab was used to achieve pH control. A test was carried out using raw water to investigate the amount of the diluted acid required to lower the pH of the 2 L jar in set intervals. From the results of this experiment, the determined amount of acid was added to each jar to achieve a pH as close as possible to the target value. pH readings were taken for each jar at the beginning and at the end of the jar test. Optimal pH jar tests were carried out separately for the two coagulants as presented below:

3.3.1 SternPAC pH Test

The initial pH in the SternPAC pH test was varied between 6.3 and 7.6. Other parameters were as follows:

- Coagulant Dose: 85 mg/L
- Polymer dose: 0.3 mg/L
- Microsand Dose: 10 g/L

3.3.2 DetlaFloc pH Test

The initial pH in the DetlaFloc pH test was also varied within the same range as SternPAC, between 6.3 and 7.6. Other parameters were as follows:

- Coagulant Dose: 37 mg/L
- Polymer dose: 0.3 mg/L
- Microsand Dose: 10 g/L

3.4 Optimum Coagulant Dose Jar Test

Once the optimal microsand and polymer dose were determined and the optimal pH specific to the coagulant was established, a final jar test was done to determine the optimal coagulant dose.

3.4.1 SternPAC Dose Test

The SternPAC dose was varied between 55 and 105 mg/L. Other parameters were as follows:

- pH: 6.5
- Polymer dose: 0.3 mg/L
- Microsand Dose: 7.5 g/L

3.4.2 DeltaFloc-1118 Dose Test

The DeltaFloc-1118 dose was varied between 24 and 46 mg/L. Other parameters were as follows:

- pH: 6.45 (Target pH: 6.5)
- Polymer dose: 0.3 mg/L
- Microsand Dose: 7.5 g/L

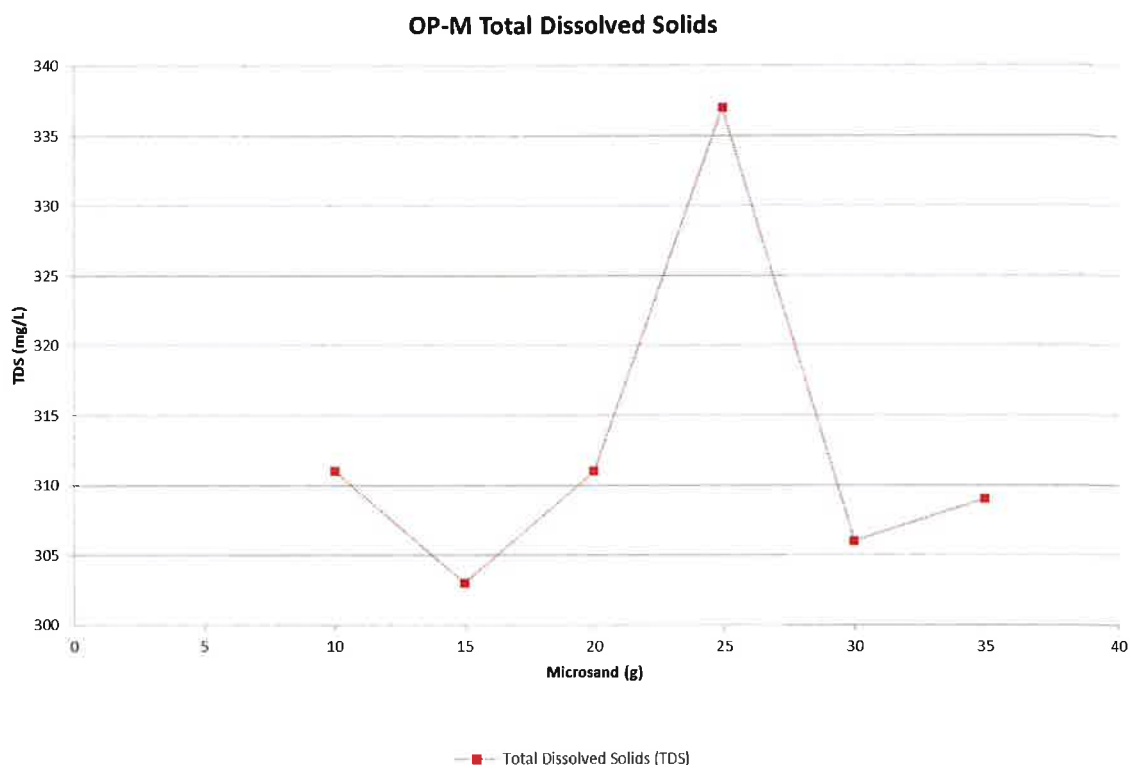
4. Results

4.1 Jar Test Results

Lab results from SGS Canada Inc. are presented in Appendix 2. Data sheets completed during and after the jar tests by WSP summarizing recorded jar test parameters and results for each of the jar tests are included in Appendix 3. Graphs summarizing the results from each of the jar tests are included in Appendix 4.

4.1.1 Optimal Microsand Dose

Turbidity values ranging between 0.339 and 0.369 NTU were observed with microsand doses of 10 -15 g. Turbidity was noted to increase at a dose of 20 g, and then decrease again at higher doses. Apparent colour of 12 CU noted at a microsand quantity of 10 g was noted to increase with increasing microsand amount, before reaching its lowest value at 30 g of microsand. There was a difference of only 2 CU between the microsand amounts of 10 g and 30 g. The lowest TDS of 303 mg/L was noted at a microsand amount of 15 g, though TDS values ranged between 306 and 311 mg/L for microsand amounts of 10, 20, 30 and 35 g.



TOC values of 6 mg/L were noted at 10 and 35 g of microsand, while slightly higher TOC values of 7 mg/L were noted at 15, 25 and 30 g of microsand.

Overall, the lower microsand doses of 10-15 g seem to yield better water quality results. Microsand amount of 15 g appeared to yield similar water quality results to higher microsand doses and was hence selected as the optimal microsand dose.

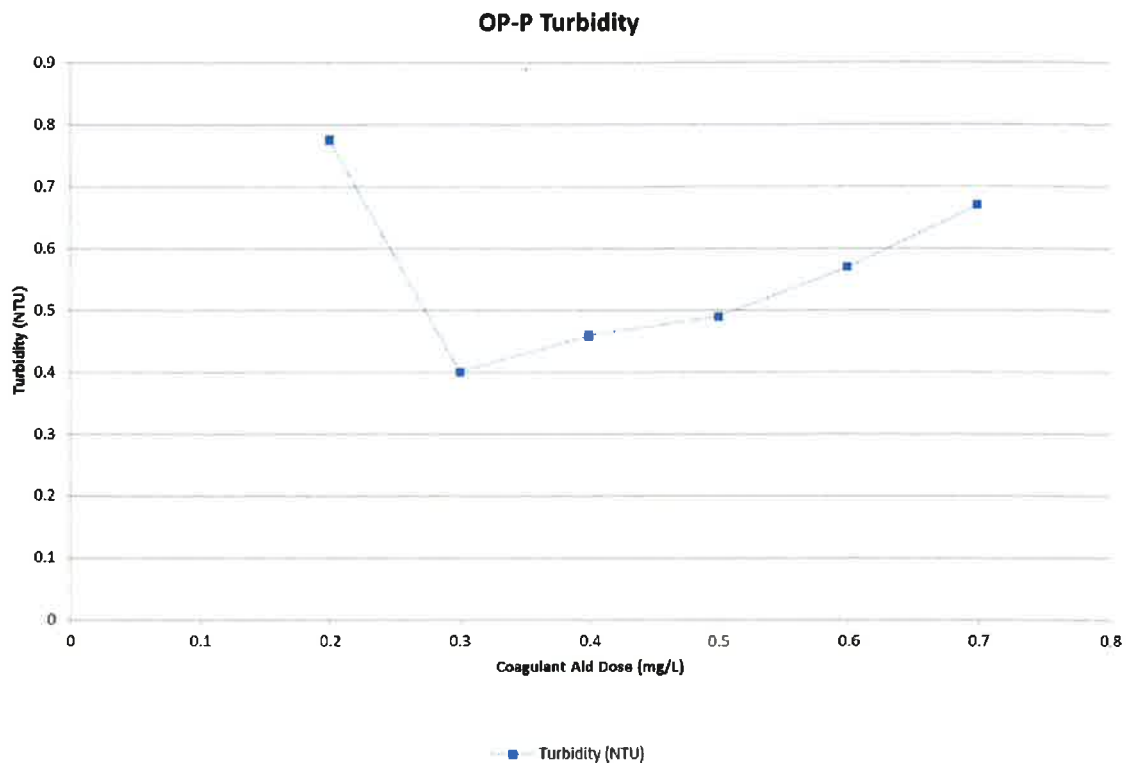
4.1.2 Optimal Polymer Dose

Results from some of the parameters, such as DOC, TOC and apparent colour did not exhibit a clear preference of one polymer dose over another. Turbidity was lowest at a polymer dose of 0.3 mg/L, and turbidity increased with increasing polymer dose.

Similarly, TDS was lowest at a polymer dose of 0.3 mg/L and increased with increasing polymer dose. Turbidity and TDS were higher at a polymer dose of 0.2 mg/L compared to values at a dose of 0.3 mg/L, suggesting that lowering the polymer dose below 0.3 mg/L was not beneficial.

Alkalinity was also noted to be highest at a polymer dose of 0.3 mg/L, representing the least amount of alkalinity consumed at this dose.

Based on the above results, the obvious optimal polymer dose was noted to be 0.3 mg/L.

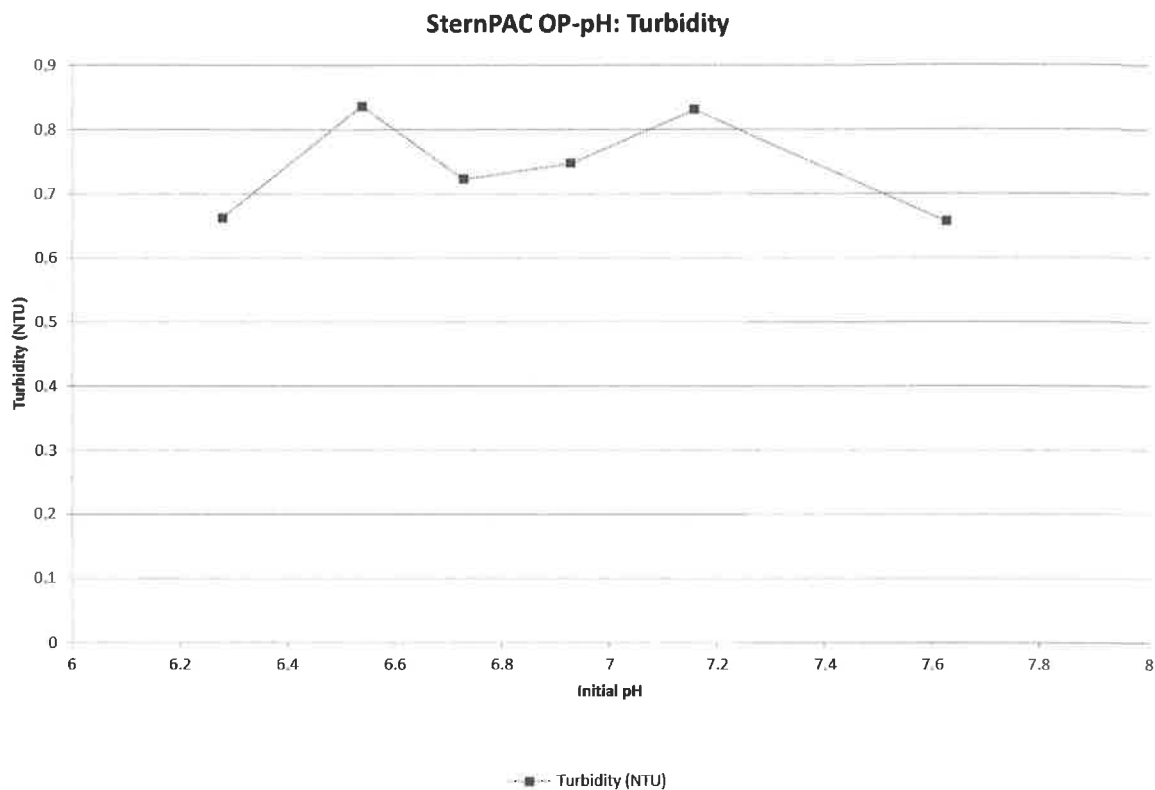


4.1.3 Optimal pH

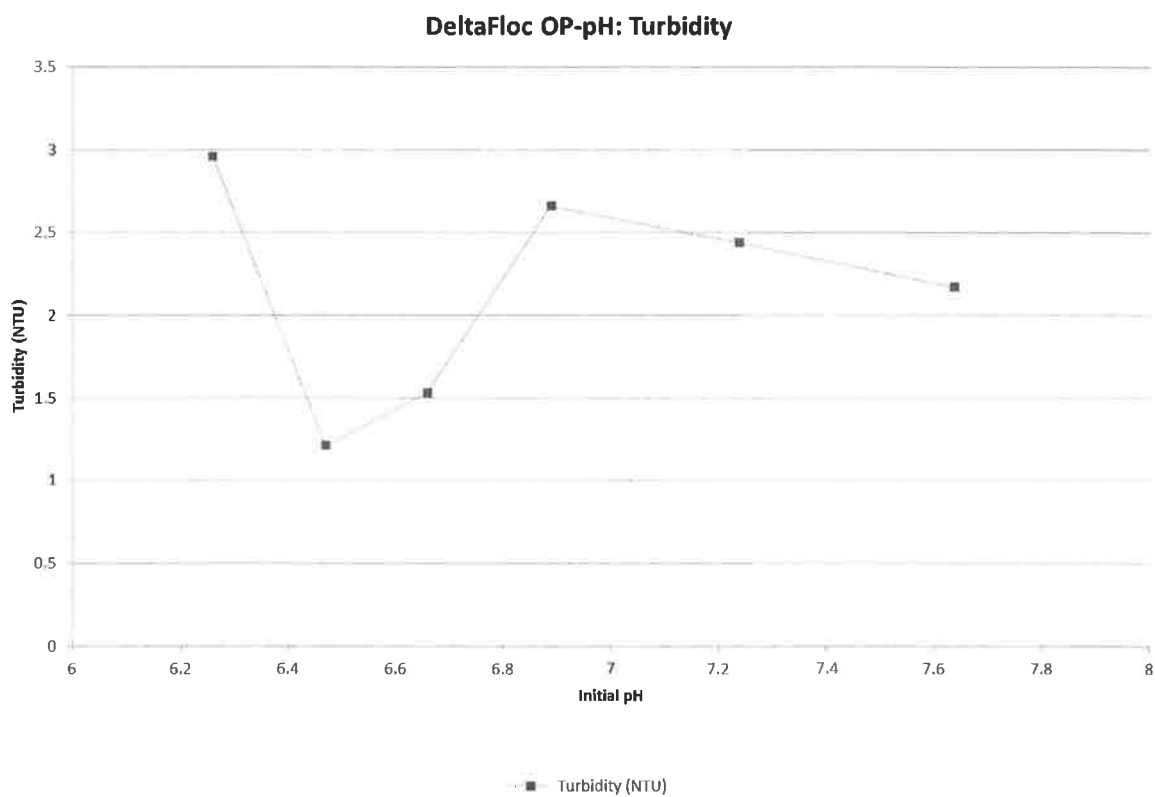
4.1.3.1 SternPAC: Optimal pH

Optimal water quality results for SternPAC were less clear compared to DeltaFloc-1118 when pH was altered. Turbidity, UVA and apparent colour were noted to have least values at the lower pH values and displayed an upward trend as pH was raised. TDS on the other hand seemed to decrease as pH was increased with a minimum value of 263 mg/L observed at a pH of around 7.2 mg/L. Lower values of DOC and TOC were noted at pH values less than 7 and 6.5 respectively.

Since lower pH values appeared to yield better water quality results, the highest pH of 6.5 that also yielded lower TOC and DOC values was selected as the optimal pH for SternPAC.



The optimal pH range for DeltaFloc-1118 was hence noted to be between 6.4 and 6.6.



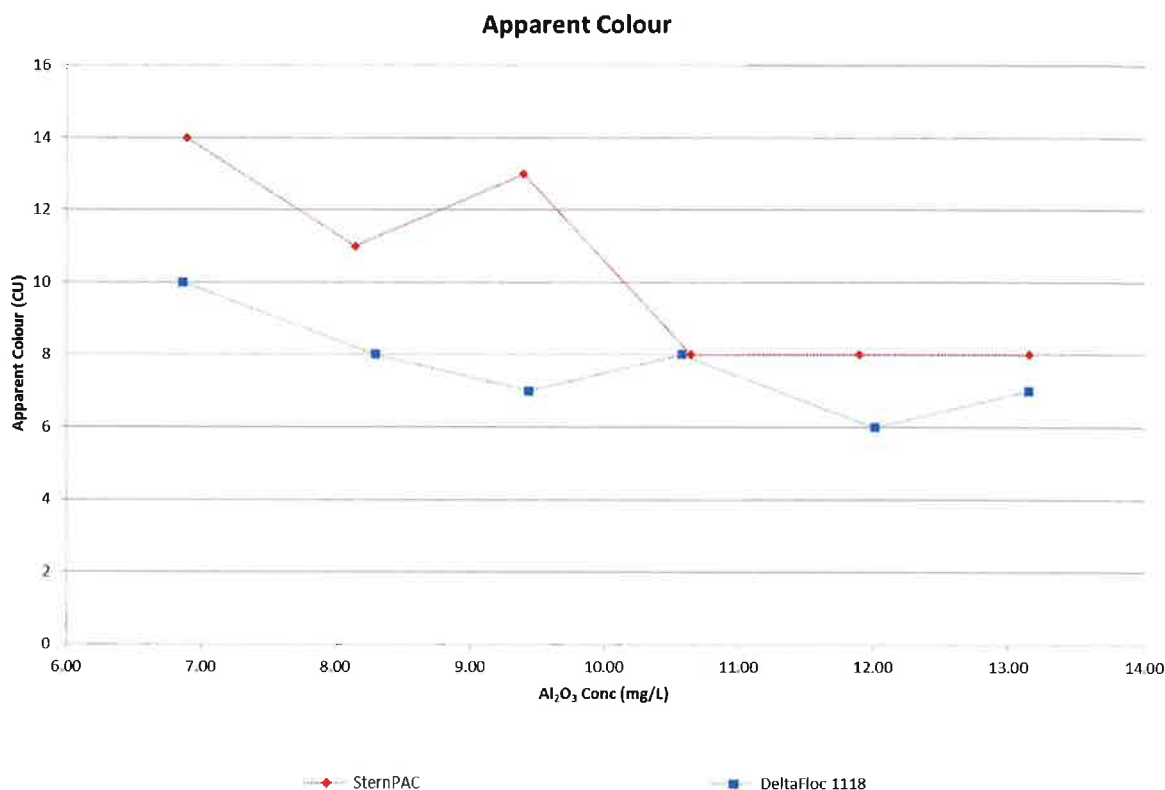
also has the benefit of providing a common baseline in terms of acid costs when comparing the two coagulants.

4.1.4 Optimal Coagulant Dose

4.1.4.1 Water Quality parameters

With the previously determined optimal microsand dose, optimal polymer dose and optimal pH, separate jar tests were carried out to determine the optimal coagulant doses for SternPAC and DeltaFloc-1118.

When the water quality parameters of turbidity, UVA, DOC and TOC were analyzed, the results for SternPAC and DeltaFloc-1118 did not exhibit significant differences. At doses above 8 mg/L of Al_2O_3 , DeltaFloc-1118 was noted to yield lower TDS. Apparent colour on the other hand was always lower with DeltaFloc-1118 compared to SternPAC.



differences between the results of SternPAC and DeltaFloc-1118. The raw water alkalinity of 152 mg CaCO_3/L was depressed much more by SternPAC than by DeltaFloc-1118. Higher alkalinity means higher water stability suggesting more water stability with DeltaFloc-1118 than SternPAC.

Chloride was lower for DeltaFloc-1118, while sulphate was mainly higher. Water hardness and calcium were also lower when DeltaFloc-1118 was considered compared to SternPAC.

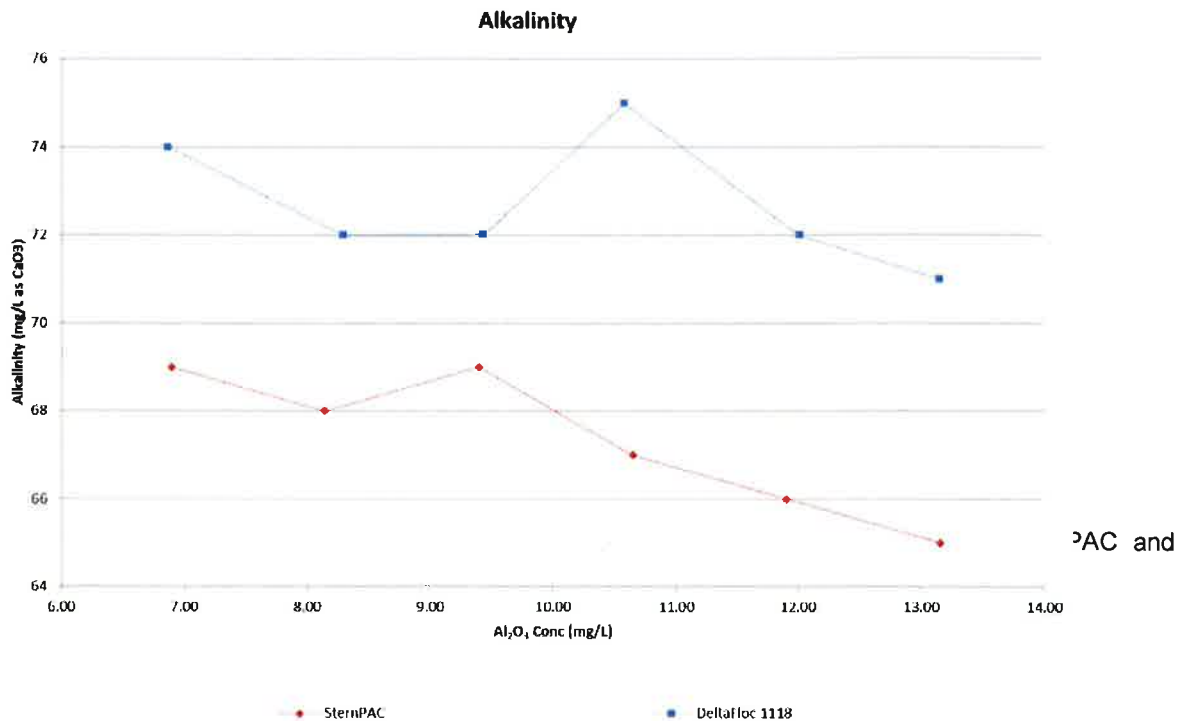


Table 2 Corrosivity Indices for SternPAC and DeltaFloc-1118

	SternPAC (10 mg/L Al ₂ O ₃)	DeltaFloc-1118 (12 mg/L Al ₂ O ₃)	
CSMR	0.48	0.43	Higher CSMR: increase in galvanic corrosion of lead solder connected to copper pipe.
Langelier Saturation Index (LSI) Method 1	-1.39	-1.28	LSI < 0: water under saturated with calcium carbonate and will tend to be corrosive LSI > 0 water over saturated with calcium carbonate and will tend to deposit calcium carbonate forming scales
Langelier Saturation Index (LSI) Method 2	-1.71	-1.60	If LSI close to zero, then water is just saturated with calcium carbonate and will neither be strongly corrosive nor scale forming.
Ryznar Stability Index (RSI)	9.96	9.81	RSI < 6.5 the scale tendency increases as the index decreases. RSI > 7.0 under saturated

When CSMR was considered, SternPAC was noted to have a higher value indicating higher corrosivity towards lead solder when compared to DeltaFloc-1118.

The Langelier Saturation Index (LSI) for both SternPAC and DeltaFloc-1118 were less than 0 suggesting under saturation with calcium carbonate and corrosive water. Using both methods, the LSI of SternPAC was less than that of DeltaFloc-1118 indicating that DeltaFloc-1118 was less corrosive.

Similarly, the Ryznar Stability Index (RSI) for both coagulants were above 7 indicating under saturation. The SternPAC RSI was larger than the DeltaFloc-1118 RSI indicating the water was less saturated and hence more corrosive.

When all three indices are considered, the corrosivity tendency of DeltaFloc-1118 was noted to be similar to that of SternPAC i.e. both were noted to be under saturated with calcium carbonate and hence noted to be corrosive. When the magnitudes of corrosivity are considered however, DeltaFloc-1118 is noted to be slightly less corrosive than SternPAC. In light of these results, a switch to DeltaFloc-1118 from SternPAC is not expected to have an adverse impact on the distribution system in terms of corrosivity. Additional studies may be required to evaluate other impacts before making a switch.

4.1.4.3 Financial Analysis

The optimal dose determined for SternPAC and DeltaFloc-1118 were 85-88 mg/L (85 mg/L considered for the calculation) and 42 mg/L respectively. The City of Kawartha Lakes provided a current SternPAC cost of \$0.47/liquid kg (one year term). The supplier of DeltaFloc-1118 provided a budgetary pricing of \$0.994/liquid kg (assuming loads of 18,000 L).

Based on SCADA data provided by the City for 2016, the average SternPAC dose was 90 mg/L, and the estimated quantity of SternPAC required for 2017 as provided by the City was 504,360 kg. With the slightly lower optimal dose calculated of 85 mg/L the proposed consumption of SternPAC would actually be 476,340 kg. The proposed DeltaFloc-1118 consumption required at an optimal dose of 42 mg/L would hence be 235,368 kg. The calculated costs for each of the coagulants are presented in Table 3 below.

Table 3 Estimated Cost Comparison

Chemical	Supplier	Unit Price /kg	Proposed Consumption (kg)	Calculated Cost
SternPAC	Kemira	\$0.47	476,340	\$224,000
DeltaFloc-1118	Control Chem	\$0.994	235,368	\$234,000

Based on the amounts presented in Table 3, even though DeltaFloc-1118 has a higher unit price, since it contains a larger percentage of Al_2O_3 , less is required compared to SternPAC. The total annual costs for SternPAC and DeltaFloc-1118 at their optimal doses are noted to be similar with values of \$224,000 and \$234,000 respectively.

5. Conclusion

Based on the results of the optimization jar tests, the microsand dose was lowered from the previously used amount of 20 g (10 g/L) to 15 g (7.5 g/L). The polymer dose was reduced slightly based on the optimization jar test from 0.35 mg/L to 0.3 mg/L. The optimal pH for both SternPAC and DeltaFloc-1118 were found to be between 6.4 and 6.6.

The findings from these optimization studies were used to provide the optimal conditions for the final jar tests in which SternPAC and DeltaFloc-1118 were tested to investigate the better cold water coagulant. Water quality results from this study indicated similar performance for the two coagulants. When corrosivity was considered, DeltaFloc-1118 was noted to be slightly less corrosive than SternPAC suggesting that a shift in coagulant would not adversely affect the distribution system. A financial analysis carried out for the supply of these two chemicals indicated similar costs, with an annual projected difference of only around \$10,000.

In conclusion, from a water quality and financial standpoint, the use of DeltaFloc-1118 does not provide significant benefits over the current use of SternPAC. A change of coagulant would hence not be recommended at the current time.

Appendix 1

Actiflo® Laboratory Jar Test Procedure

ACTIFLO® JARTEST PROCEDURE

N° method		Revision date
Reference	ACTIFLO LABORATORY JAR TEST PROCEDURE	2015-07-02

In order to simulate the ACTIFLO® process, a modified Jar test procedure was developed. The procedure can be used to find the adequate coagulant and polymer dosages to obtain a clarified water with a low turbidity. Furthermore, the modified jar test procedure has the capability of evaluating or predicting process performances of an existing ACTIFLO® unit and bring accurate diagnosis on operation troubleshooting.

The simulation method reproduces results that are very close to full-scale unit results. Such reproduction is achieved by simulating the same contact times in each basin and adding the chemicals and micro-sand along the same sequence used in the full-scale unit.

At the designed flow rate, the surface loading rate in a typical ACTIFLO® unit is 40 m/hr. This loading rate corresponds to hydraulic contact times of respectively 2, 2, 6 and 3 minutes in the coagulation, injection, maturation and settling tanks.

A. Material

- Jar test apparatus
- Raw water
- Circulating open bath for temperature control (optional).
- Square glass beakers or round beakers (1 Liter)
- Washed micro-sand
- Polymer
- Coagulant
- Acid or alkali, to adjust the pH (optional)
- Measurement apparatus (turbidimeter, spectrophotometer, etc.)
- Stopwatch

B. Chemicals Preparation

- Prepare the microsand dedicated to Jar-Test.

This microsand has to be already washed with distilled or tap water to remove sand dust causing turbidity. To prepare the microsand, follow the procedure below:

Rinse the new or used micro-sand thoroughly 10 times or until the supernatant is clear, in order to eliminate turbidity caused by micro-grains or any suspended particles that could be introduced into the water tested in the jar test. Dry in a 104°C oven overnight. Place in a identified microsand plastic jar.

- Prepare a polymer solution in the laboratory or use the polymer solution prepared for the full-scale unit in the WTP.

From dry polymer powder:

Prepare a 0.1% solution. Weight 0.1 g of dry polymer and slowly add in a 0.25L beaker filled with 0.1 L of distilled water. The beaker has to be mixed to avoid eye fish in the solution. Add the dry polymer weight into the vortex formed by mixing. Mix the solution for approximately 1 hour until complete dissolution of the polymer. 0.1 mL of this

ACTIFLO® JARTEST PROCEDURE

solution corresponds to 1 mg/L. 1mL of this prepared solution added in a 1000 L beaker corresponds to 1 mg/L of polymer dosage.

For better accuracy, it is recommended to dilute this solution prior injecting in the jar test beakers if the dosages to apply are less than 1 mg/L. Measure 10 mL of prepared polymer solution and complete at 100 mL with distilled water. 1mL of this diluted solution corresponds to 0.1 mg/L of polymer dosage.

Caution: the 0.1% solution is efficient for 1 day. The diluted polymer solution is efficient for approximately 1 hour. Prepare new diluted solution after 1hour use.

From polymer preparation tank:

For polymer at 1 g/L (0.1%), sample polymer from polymer metering pump or polymer preparation tank at the WTP.

Dilution to obtain a 0.1 g/L solution:

Concentration in the tank (g/L)	Dilution factor	Volume to add in the 100 ml cylinder (mL)
1.5	15	6.7
2.0	20	5
2.5	25	4
3.0	30	3.3

Fill the cylinder to 100 mL mark with distilled water and stir.

Caution: The polymer solution as prepared is efficient for approximately 1 hour. Prepare new dilution after 1 hour use.

Caution: Polymer solution is viscous and very slippery if dropped on the floor.

Polymer volume to inject for 1L water during the jar test is as follow:

Plant polymer diluted at 1.0 g/L (0.01%), for 1 L jar test.			
Dosage required (mg/L)	Total Volume (mL)	Polymer volume to add (mL)	
		1st injection	2nd injection
0.5	0.5	0.25	0.25
0.75	0.75	0.375	0.375
1.25	1.25	0.625	0.625
1.5	1.5	0.75	0.75
2.0	2.0	1.0	1.0
3.0	3.0	1.5	1.5

- Coagulant

Use coagulant from manufacturer bottle or sample coagulant metering pump skid in the WTP.

Caution: Dilution is not necessary if a micropipette is available (0-200 µL).

Caution: Change your tip or pipette between each jar tests series (risk of coagulant precipitation in the tip)

Caution: Never dilute PAC or PASS coagulants (risk of precipitation)

If no micropipette available, the following dilution

For organic coagulant, a dilution factor of 10 is recommended. Dilute 10 mL of neat coagulant into a 100 mL graduated cylinder using distilled water for dilution.

For inorganic coagulant, a dilution factor of 10 or 50 can be used.

The coagulant dosage may be expressed in different ways:

Volumetric dosage (µL /L)

mg/L of commercial product as sold = volume (µL /L) x specific gravity

mg/L of active ingredient = volume (µL /L) x specific gravity x concentration (%)

mg Fe or Al/L (recommended but not common)= volume (µL /L) x specific gravity x % Fe or Al

mg/L solid product (not recommended but very common in WTP) = volume (µL /L) x specific gravity x dry solids content (%)

To validate the calculation, please refer to the chemical technical specifications sheet.

C. Test Method

The optimal results will be achieved using the following jar test steps:

Step 1: Perform a series of jar test at fix coagulant dosage, fix polymer dosage and different pH (pH curve).

Step 2: Perform a series of jar tests at fix pH and using different coagulant dosages and fix polymer dosage (coagulant curve). You may review the pH curve at the optimal coagulant dosage found (optional).

Step 3: Perform a series of jar tests at different polymer dosage, with the optimal pH and coagulant found in the previous steps (polymer curve).

The Actiflo jar test method may be executed as follow:

Times given in the test method below are specific to a rise rate of 40 m/h.

Set the circulating bath to desired temperature (optional).

Measure the raw water parameters (pH, alkalinity, true and apparent colour, turbidity, UV absorbance, temperature). Measure parameters according to protocol and test objectives.

Fill up the 1-Liter beakers with raw water.

Set the beakers on the bench.

Make sure raw water temperature corresponds with the desired temperature (optional).

Set the paddle between 0.5 and 1.0 cm from the bottom of the beaker.

Start mixing and adjust speed at 150 RPM.

Add the acid or the alkali to adjust the pH (optional).

Add the coagulant (see timeline below).

Start the stopwatch or the sequential run in the Jar tester.

Two minutes after adding coagulant, add micro-sand (8-10 g/L of water) and 50% of the polymer dosage.

Two minutes (cationic polymer) or 5 minutes (anionic polymer) after adding the micro-sand and first polymer dosage, inject the remaining 50 % polymer dosage.

After a supplementary maturation contact time of 6 minutes (cationic polymer) or 3 minutes (anionic polymer), stop stirring and allow the water to settle for the next 3 minutes.

Use a 25-100 mL syringe, pipet or a pipe under vacuum to collect the supernatant (NOT collect the surface, due to microsand and microflocs that may float). Sample the clarified water.

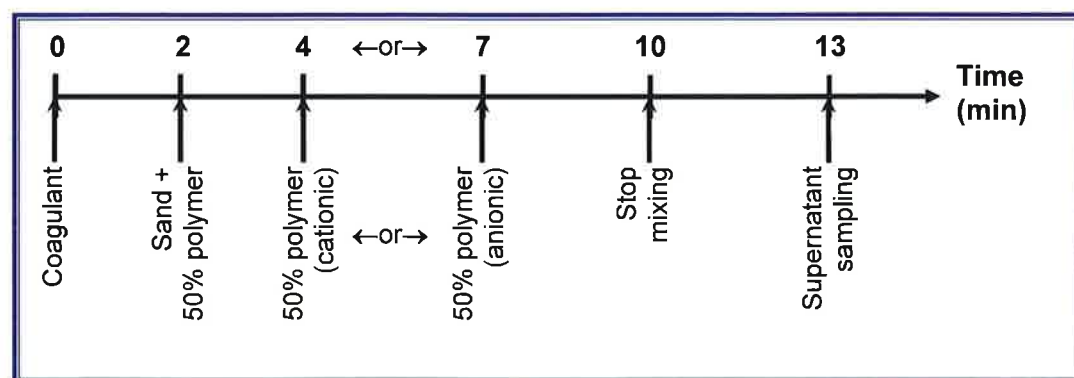
Measure the clarified water parameters important for the test objectives.

Note all the results and parameters on the ACTIFLO® jar test log sheet.

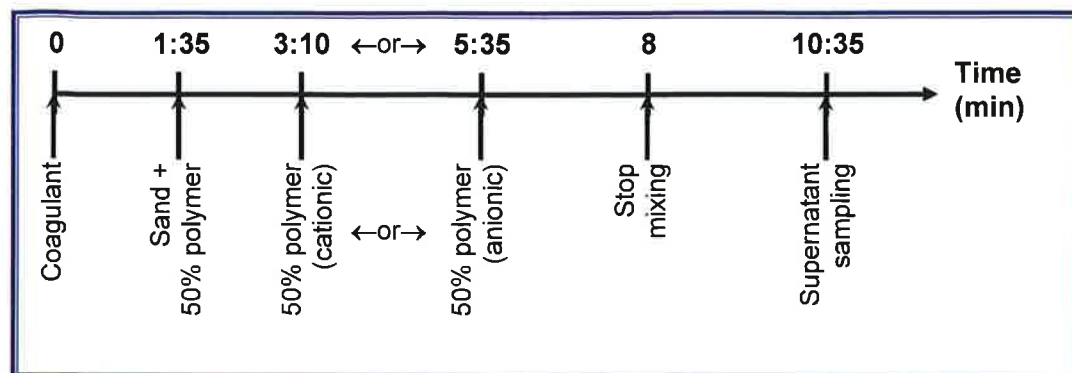
TIMELINE FOR SELECTED RISE RATES

20 m/h: twice the time for 40 m/h

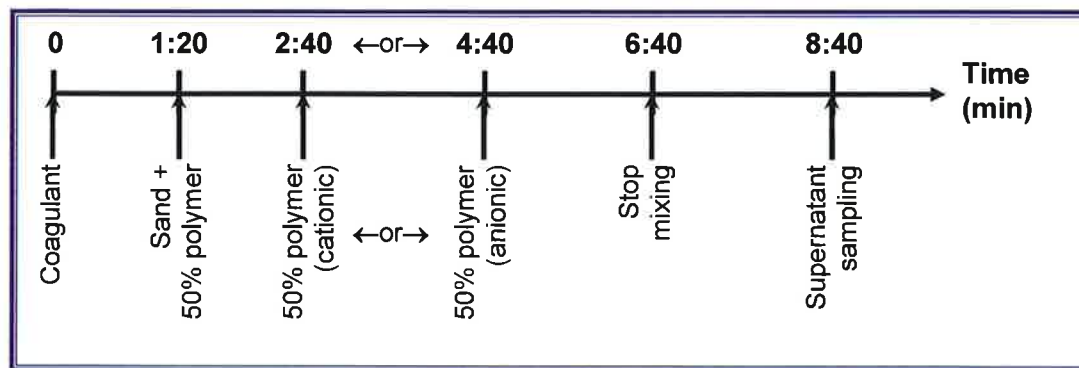
40 m/h



50 m/h



60 m/h



80 m/h: half the time for 40 m/h

C. Waste

Do not throw the sand in the wash bin. Collect sand and discard as stated by site regulation.

Date de révision : 2015-07-02

Révisé par : CDM

Approuvé par : SV

Appendix 2

SGS Lab results



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Works #: 220000175-NR

24-February-2017

Date Rec. : 22 February 2017
LR Report: CA14374-FEB17

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	7: AO/OG	8: MDL	9: NR OP-M J1	10: NR OP-M J2	11: NR OP-M J3	12: NR OP-M J4	13: NR OP-M J5	14: NR OP-M J6
Sample Date & Time							21-Feb-17 14:00	21-Feb-17 14:00	21-Feb-17 14:00	21-Feb-17 14:00	21-Feb-17 14:00	21-Feb-17 14:00
Temperature Upon Receipt [°C]	---	---	---	---	---	---	5.0	5.0	5.0	5.0	5.0	5.0
Alkalinity [mg/L as CaCO ₃]	22-Feb-17	11:43	23-Feb-17	14:23	30-500	2	139	143	144	143	140	142
Colour [TCU]	22-Feb-17	10:10	22-Feb-17	16:03	5	3	4	4	4	4	4	4
Apparent Colour [CU]	22-Feb-17	10:10	22-Feb-17	16:03		3	12	15	15	13	10	14
Total Dissolved Solids [mg/L]	22-Feb-17	15:27	24-Feb-17	10:44	500	30	311	303	311	337	306	309
Chloride [mg/L]	23-Feb-17	17:34	24-Feb-17	12:22	250	0.04	53	54	53	54	56	56
Sulphate [mg/L]	23-Feb-17	17:34	24-Feb-17	12:22	500	0.04	19	19	20	20	19	19
Hardness [mg/L as CaCO ₃]	23-Feb-17	10:55	24-Feb-17	11:21	80-100	0.05	188	193	188	189	191	190
Aluminum [ug/L]	23-Feb-17	10:55	24-Feb-17	11:21	100	0.3	240	155	281	180	149	143
Calcium [mg/L]	23-Feb-17	10:55	24-Feb-17	11:21	---	0.01	58.8	60.5	57.9	58.5	59.2	58.4
Dissolved Organic Carbon [mg/L]	23-Feb-17	19:00	24-Feb-17	13:25	5	1	6	6	7	6	6	6
Total Organic Carbon [mg/L]	23-Feb-17	19:00	24-Feb-17	13:25		1	6	7	8	7	7	6

AO/OG - Aesthetic Objective / Operational Guideline

MDL - SGS Method Detection Limit

NR - Not regulated / reportable under applicable Provincial drinking water regulations as per client.

Page 1 of 2

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.



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Works #: 220000175-NR

LR Report : CA14374-FEB17

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Works #: 220000175-NR

24-February-2017

Date Rec. : 22 February 2017
LR Report: CA14375-FEB17

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CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Alkalinity mg/L as CaCO ₃	Colour TCU	Apparent Colour CU	Total Dissolved Solids mg/L	Chloride mg/L	Sulphate mg/L	Hardness mg/L as CaCO ₃	Aluminum ug/L	Calcium mg/L	Dissolved Organic Carbon mg/L	Total Organic Carbon mg/L
1: Analysis Start Date		---	22-Feb-17	22-Feb-17	22-Feb-17	22-Feb-17	23-Feb-17	23-Feb-17	23-Feb-17	23-Feb-17	23-Feb-17	23-Feb-17	23-Feb-17
2: Analysis Start Time		---	11:43	10:10	10:10	15:27	17:34	17:34	10:55	10:55	10:55	19:00	19:00
3: Analysis Approval Date		---	23-Feb-17	22-Feb-17	22-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17	24-Feb-17
4: Analysis Approval Time		---	14:36	16:04	16:04	10:44	10:08	10:08	11:21	11:21	11:21	13:25	13:25
7: AO/OG		---	30-500	5		500	250	500	80-100	100	---	5	---
8: MDL		---	2	3	3	30	0.04	0.04	0.05	0.3	0.01	1	1
9: NR OP-P J1	21-Feb-17 12:00	5.0	137	4	11	340	56	19	184	231	56.8	6	7
10: NR OP-P J2	21-Feb-17 12:00	5.0	149	6	12	291	57	19	189	179	58.8	6	6
11: NR OP-P J3	21-Feb-17 12:00	5.0	140	4	11	314	55	20	189	173	58.3	6	6
12: NR OP-P J4	21-Feb-17 12:00	5.0	137	3	12	317	53	19	187	152	58.0	6	7
13: NR OP-P J5	21-Feb-17 12:00	5.0	141	4	11	326	58	19	194	139	60.2	6	6
14: NR OP-P J6	21-Feb-17 12:00	5.0	141	4	14	317	58	19	188	247	58.1	6	6
15: Raw Water	21-Feb-17 12:00	5.0	152	11	25	326	48	18	189	13.1	58.9	8	9

AO/OG - Aesthetic Objective / Operational Guideline

MDL - SGS Method Detection Limit

NR - Not regulated / reportable under applicable Provincial drinking water regulations as per client.

Page 1 of 2

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Works #: 220000175-NR

LR Report : CA14376-FEB17



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Works #: 220000175

07-March-2017

Date Rec. : 02 March 2017
LR Report: CA16113-MAR17

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CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Alkalinity mg/L as CaCO ₃	Colour TCU	Apparent Colour CU	Total Dissolved Solids mg/L	Chloride mg/L	Sulphate mg/L	Hardness mg/L as CaCO ₃	Aluminum ug/L	Calcium mg/L	Dissolved Organic Carbon mg/L	Total Organic Carbon mg/L
1: Analysis Start Date		---	02-Mar-17	02-Mar-17	02-Mar-17	02-Mar-17	02-Mar-17	02-Mar-17	03-Mar-17	03-Mar-17	03-Mar-17	03-Mar-17	03-Mar-17
2: Analysis Start Time		---	13:57	12:55	12:06	15:23	04:30	04:30	14:56	14:56	14:56	07:20	07:20
3: Analysis Approval Date		---	03-Mar-17	02-Mar-17	02-Mar-17	03-Mar-17	03-Mar-17	03-Mar-17	06-Mar-17	06-Mar-17	06-Mar-17	03-Mar-17	03-Mar-17
4: Analysis Approval Time		---	11:11	15:31	15:59	14:33	13:47	13:47	16:37	16:37	16:37	15:22	15:22
5: MAC		---	---	---	---	---	---	---	---	---	---	---	---
6: Half MAC		---	---	---	---	---	---	---	---	---	---	---	---
7: AO/OG		---	30-500	5		500	250	500	80-100	100	---	5	
8: MDL		---	2	3	3	30	0.04	0.04	0.05	0.3	0.01	1	1
9: RW DF-PH-1	01-Mar-17 02:45	6.0	127	10	32	266	27	44	202	1020	70.1	6	5
10: RW DF-PH-2	01-Mar-17 02:45	6.0	118	10	28	271	27	44	201	1440	69.4	6	5
11: RW DF-PH-3	01-Mar-17 02:45	6.0	102	10	46	263	27	60	203	1580	70.2	5	5
12: RW DF-PH-4	01-Mar-17 02:45	6.0	87	9	18	277	27	77	204	898	71.0	5	5
13: RW DF-PH-5	01-Mar-17 02:45	6.0	71	9	28	286	27	92	200	783	69.9	4	5
14: RW DF-PH-6	01-Mar-17 02:45	6.0	57	9	33	286	27	100	199	1090	69.0	5	5
15: RW Raw Water	01-Mar-17 02:45	6.0	132	33	53	254	24	29	204	68.4	71.1	8	8

MAC - Maximum Acceptable Concentration
AO/OG - Aesthetic Objective / Operational Guideline
MDL - SGS Method Detection Limit

Works #: 220000175

LR Report : CA16113-MAR17

Method Descriptions

Units	Description	SGS Method Code
mg/L as CaCO ₃	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006
ug/L	Aluminum by ICP-MS Drinking Water	ME-CA-[ENV]SPE-LAK-AN-006
CU	Apparent Colour by colourimetric method	ME-CA-[ENV]EWL-LAK-AN-002
mg/L	Calcium by ICP-MS drinking water	ME-CA-[ENV]SPE-LAK-AN-006
mg/L	Chloride by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
TCU	True Colour by colourimetric method	ME-CA-[ENV]EWL-LAK-AN-002
mg/L	DOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009
mg/L as CaCO ₃	Hardness (CaCO ₃) by ICP	ME-CA-[ENV]SPE-LAK-AN-003
mg/L	Sulphate by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005
mg/L	TOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009



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Works #: 220000175

09-March-2017

Date Rec. : 02 March 2017
LR Report: CA16114-MAR17

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	7: AQ/OG	8: MDL	9: RW SP-PH-1	10: RW SP-PH-2	11: RW SP-PH-3	12: RW SP-PH-4	13: RW SP-PH-5	14: RW SP-PH-6
Sample Date & Time							01-Mar-17 14:30	01-Mar-17 14:30	01-Mar-17 14:30	01-Mar-17 14:30	01-Mar-17 14:30	01-Mar-17 14:30
Temperature Upon Receipt [°C]	---	---	---	---	---	---	6.0	6.0	6.0	6.0	6.0	6.0
Alkalinity [mg/L as CaCO ₃]	02-Mar-17	11:56	03-Mar-17	11:36	30-500	2	133	114	99	87	71	53
Colour [TCU]	02-Mar-17	12:55	02-Mar-17	15:31	5	3	11	11	10	10	9	8
Apparent Colour [CU]	02-Mar-17	12:06	02-Mar-17	15:59		3	16	20	17	15	14	13
Total Dissolved Solids [mg/L]	02-Mar-17	15:23	03-Mar-17	14:33	500	30	269	263	271	271	274	274
Chloride [mg/L]	02-Mar-17	05:00	07-Mar-17	14:43	250	0.04	31	31	31	31	31	31
Sulphate [mg/L]	02-Mar-17	05:00	07-Mar-17	14:43	500	0.04	31	45	58	72	87	110
Hardness [mg/L as CaCO ₃]	03-Mar-17	14:56	06-Mar-17	16:38	80-100	0.05	211	202	198	198	210	205
Aluminum [µg/L]	03-Mar-17	14:56	06-Mar-17	16:38	100	0.3	337	714	360	325	580	356
Calcium [mg/L]	03-Mar-17	14:56	06-Mar-17	16:38	---	0.01	73.4	69.8	68.6	68.4	72.6	71.0
Dissolved Organic Carbon [mg/L]	03-Mar-17	07:20	03-Mar-17	15:22	5	1	5	5	4	4	4	4
Total Organic Carbon [mg/L]	03-Mar-17	07:20	03-Mar-17	15:22	---	1	5	5	5	5	4	4

AQ/OG - Aesthetic Objective / Operational Guideline

MDL - SGS Method Detection Limit

Method Descriptions

Units	Description	SGS Method Code
mg/L as CaCO ₃	Alkalinity by Titration	ME-CA-ENVJEWL-LAK-AN-006
µg/L	Aluminum by ICP-MS Drinking Water	ME-CA-ENVJSPE-LAK-AN-006
CU	Apparent Colour by colourimetric method	ME-CA-ENVJEWL-LAK-AN-002

Page 1 of 2

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.

Works #: 220000175

LR Report : CA16114-MAR17

Units	Description	SGS Method Code
mg/L	Calcium by ICP-MS drinking water	ME-CA-[ENV]SPE-LAK-AN-006
mg/L	Chloride by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
TCU	True Colour by colourimetric method	ME-CA-[ENV]EWL-LAK-AN-002
mg/L	DOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009
mg/L as CaCO3	Hardness (CaCO3) by ICP	ME-CA-[ENV]SPE-LAK-AN-003
mg/L	Sulphate by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005
mg/L	TOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009


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Works #: 220000175

23-March-2017

Date Rec. : 14 March 2017
LR Report: CA18131-MAR17

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	7: AO/OG	8: MDL	9: RW Raw Water	10: RW OP-SPD-1	11: RW OP-SPD-2	12: RW OP-SPD-3	13: RW OP-SPD-4	14: RW OP-SPD-5	15: RW OP-SPD-6
Sample Date & Time							13-Mar-17 12:00	13-Mar-17 12:00	13-Mar-17 12:00	13-Mar-17 12:00	13-Mar-17 12:00	13-Mar-17 12:00	13-Mar-17 12:00
Temperature Upon Receipt [°C]							6.0	6.0	6.0	6.0	6.0	6.0	6.0
Alkalinity [mg/L as CaCO ₃]	15-Mar-17	08:02	16-Mar-17	16:03	30-500	2	152	69	68	69	67	66	65
Colour [TCU]	15-Mar-17	08:51	15-Mar-17	14:25	5	3	18	7	6	6	5	5	5
Apparent Colour [CU]	15-Mar-17	08:51	15-Mar-17	14:25		3	80	14	11	13	8	8	8
Total Dissolved Solids [mg/L]	14-Mar-17	17:53	15-Mar-17	16:10	500	30	263	277	294	306	300	294	297
Chloride [mg/L]	16-Mar-17	18:59	21-Mar-17	16:03	250	0.04	33	38	39	40	41	42	42
Sulphate [mg/L]	16-Mar-17	18:59	21-Mar-17	16:03	500	0.04	19	86	89	89	86	85	86
Hardness [mg/L as CaCO ₃]	15-Mar-17	14:34	17-Mar-17	08:52	80-100	0.05	192	193	195	196	202	195	198
Aluminum [ug/L]	15-Mar-17	14:34	17-Mar-17	08:52	100	0.3	163	338	197	185	173	138	157
Calcium [mg/L]	15-Mar-17	14:34	17-Mar-17	08:52		0.01	64.6	64.7	65.2	65.6	67.5	65.1	65.9
Dissolved Organic Carbon [mg/L]	15-Mar-17	08:45	15-Mar-17	13:29	5	1	7	6	5	4	4	4	4
Total Organic Carbon [mg/L]	15-Mar-17	08:45	15-Mar-17	13:29		1	8	6	5	5	5	4	4

AO/OG - Aesthetic Objective / Operational Guideline
MDL - SGS Method Detection Limit

Works #: 220000175

LR Report : CA18131-MAR17

Method Descriptions

Units	Description	SGS Method Code
mg/L as CaCO ₃	Alkalinity by Titration	ME-CA-[ENV]EWL-LAK-AN-006
ug/L	Aluminum by ICP-MS Drinking Water	ME-CA-[ENV]SPE-LAK-AN-006
CU	Apparent Colour by colourimetric method	ME-CA-[ENV]EWL-LAK-AN-002
mg/L	Calcium by ICP-MS drinking water	ME-CA-[ENV]SPE-LAK-AN-006
mg/L	Chloride by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
TCU	True Colour by colourimetric method	ME-CA-[ENV]EWL-LAK-AN-002
mg/L	DOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009
mg/L as CaCO ₃	Hardness (CaCO ₃) by ICP	ME-CA-[ENV]SPE-LAK-AN-003
mg/L	Sulphate by Dionex - solution	ME-CA-[ENV]IC-LAK-AN-001
mg/L	Total Dissolved Solids by Gravimetric	ME-CA-[ENV]EWL-LAK-AN-005
mg/L	TOC by Skalar	ME-CA-[ENV]SFA-LAK-AN-009



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Works #: 220000175

20-March-2017

Date Rec. : 14 March 2017
LR Report: CA18134-MAR17

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CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Approval Date	4: Analysis Approval Time	5: MAC	7: AO/OG	8: MDL	9: RW OP-DFD-1	10: RW OP-DFD-2	11: RW OP-DFD-3	12: RW OP-DFD-4	13: RW OP-DFD-5	14: RW OP-DFD-6
Sample Date & Time								13-Mar-17 14:00	13-Mar-17 14:00	13-Mar-17 14:00	13-Mar-17 14:00	13-Mar-17 14:00	13-Mar-17 14:00
Temperature Upon Receipt [°C]	---	---	---	---	---	---	---	6.0	6.0	6.0	6.0	6.0	6.0
Alkalinity [mg/L as CaCO ₃]	15-Mar-17	08:02	16-Mar-17	16:03	---	30-500	2	74	72	72	75	72	71
Colour [TCU]	15-Mar-17	08:51	15-Mar-17	14:25	---	5	3	7	5	5	6	5	5
Apparent Colour [CU]	15-Mar-17	08:51	15-Mar-17	14:25	---	---	3	10	8	7	8	6	7
Total Dissolved Solids [mg/L]	14-Mar-17	17:53	15-Mar-17	16:10	---	500	30	294	297	294	289	280	294
Chloride [mg/L]	16-Mar-17	18:59	20-Mar-17	08:50	---	250	0.04	35	35	36	36	37	37
Sulphate [mg/L]	16-Mar-17	18:59	20-Mar-17	08:50	---	500	0.04	87	88	88	88	87	87
Hardness [mg/L as CaCO ₃]	15-Mar-17	14:34	17-Mar-17	08:52	---	80-100	0.05	192	194	194	197	196	195
Aluminum [µg/L]	15-Mar-17	14:34	17-Mar-17	08:52	---	100	0.3	232	131	104	157	133	146
Calcium [mg/L]	15-Mar-17	14:34	17-Mar-17	08:52	---	---	0.01	63.6	64.7	64.9	65.8	65.0	64.9
Dissolved Organic Carbon [mg/L]	15-Mar-17	06:45	15-Mar-17	13:30	---	5	1	5	5	4	4	4	4
Total Organic Carbon [mg/L]	15-Mar-17	06:45	15-Mar-17	13:30	---	---	1	6	5	4	5	4	4

MAC - Maximum Acceptable Concentration
AO/OG - Aesthetic Objective / Operational Guideline
MDL - SGS Method Detection Limit

Works #: 220000175

LR Report : CA18134-MAR17

Method Descriptions

Units	Description	SGS Method Code	Reference Method Code
mg/L as CaCO ₃	Alkalinity by Titration	ME-CA-ENVJEWL-LAK-AN-006	SM 2320
ug/L	Aluminum by ICP-MS Drinking Water	ME-CA-ENVJSPE-LAK-AN-006	SM 3030/EPA 200.8
CU	Apparent Colour by colourimetric method	ME-CA-ENVJEWL-LAK-AN-002	SM 2120
mg/L	Calcium by ICP-MS drinking water	ME-CA-ENVJSPE-LAK-AN-006	SM 3030/EPA 200.8
mg/L	Chloride by Dionex - solution	ME-CA-ENVJIC-LAK-AN-001	EPA300/MA300-Ions1.3
TCU	True Colour by colourimetric method	ME-CA-ENVJEWL-LAK-AN-002	SM 2120
mg/L	DOC by Skalar	ME-CA-ENVJSFA-LAK-AN-009	SM 5310
mg/L as CaCO ₃	Hardness (CaCO ₃) by ICP	ME-CA-ENVJSPE-LAK-AN-003	SM 3030/EPA 200.8
mg/L	Sulphate by Dionex - solution	ME-CA-ENVJIC-LAK-AN-001	EPA300/MA300-Ions1.3
mg/L	Total Dissolved Solids by Gravimetric	ME-CA-ENVJEWL-LAK-AN-005	SM 2540C
mg/L	TOC by Skalar	ME-CA-ENVJSFA-LAK-AN-009	SM 5310



Patti Stark
Project Specialist Environmental Services, Analytical

Appendix 3

WSP Result Data Sheets

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet			Source Water:			
Date:	2/21/2017		pH			7.59
Time:	12:00 PM		(°C)		(°C)	4.1
Performed By:	Mazahir Alidina		Turbidity (NTU)		(NTU)	0.855
Coagulant Type:	SternPAC	UVA				0.181
		Alkalinity as CaCO3 (mg/L)		mg/L		152
		OPTIMIZE MICROSAND DOSE		Colour (TCU)	mg/L	11
Coagulant Dosage:	80 mg/L		Apparent Colour (CU)		(mg CaCO3/L)	25
Coagulant Aid Type:	Cationic Polmer		Tottal Dissolved Solids (TDS)			326
Coagulant Aid Dosage (mg/L)	0.35		Chloride			48
Coagulant Aid Conc.:	0.30%		Sulphate			18
Microsand Dose:			Hardness as CaCO3 (mg/L)		mg/L	189
Specific Gravity	1.205		Aluminum (ug/L)		mg/L as CaCO3	13.1
Conc. Of Alum (Al ₂ O ₃) (%)	10.40		Calcium (mg/L)		ug/L	58.9
			Dissolved Organic Carbon (mg/L)			8
			Total Organic Carbon (mg/L)			9
JAR NUMBER	OP-M1	OP-M2	OP-M3	OP-M4	OP-M5	OP-M6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	85	85	85	85	85	85
Al ₂ O ₃ Conc. (mg/L)	10.65	10.65	10.65	10.65	10.65	10.65
Volume of 1:10 diluted Coagulant added (mL)	1.411	1.411	1.411	1.411	1.411	1.411
Microsand added (g)	10	15	20	25	30	35
Coagulant-Aid Dose (mg/L)	0.35	0.35	0.35	0.35	0.35	0.35
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.167	1.167	1.167	1.167	1.167	1.167
Remaining Volume of 1:10 diluted Polymer added (mL)	1.167	1.167	1.167	1.167	1.167	1.167
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	7.70	7.61	7.59	7.52	7.48	7.34
Temperature (°C)	6.90	7.00	7.00	7.00	7.00	7.00
Turbidity (NTU)	0.369	0.339	0.424	0.315	0.310	0.364
UVA	0.113	0.107	0.112	0.109	0.109	0.106
Alkalinity as CaCO3 (mg/L)	139	143	144	143	140	142
Colour (TCU)	4	4	4	4	4	4
Apparent Colour (CU)	12	15	15	13	10	14
Tottal Dissolved Solids (TDS)	311	303	311	337	306	309
Chloride	53	54	53	54	56	56
Sulphate	19	19	20	20	19	19
Hardness as CaCO3 (mg/L)	188	193	188	189	191	190
Aluminum (ug/L)	240	155	281	180	149	143
Calcium (mg/L)	58.8	60.5	57.9	58.5	59.2	58.4
Dissolved Organic Carbon (mg/L)	6	6	7	6	6	6
Total Organic Carbon (mg/L)	6	7	8	7	7	6

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet		Source Water:				
Date:	2/21/2017	pH			7.59	
Time:	2:00 PM	(°C)		(°C)	4.1	
Performed By:	Mazahir Alidina	Turbidity (NTU)		(NTU)	0.855	
Coagulant Type:	SternPAC	UVA			0.181	
		Alkalinity as CaCO3 (mg/L)		mg/L	152	
OPTIMIZE POLYMER DOSE		Colour (TCU)		mg/L	11	
Coagulant Dosage:	80 mg/L	Apparent Colour (CU)		(mg CaCO3/L)	25	
Coagulant Aid Type:	Cationic Polmer	Tottal Dissolved Solids (TDS)			326	
Coagulant Aid Dosage (mg/L)	0.2-.06	Chloride			48	
Coagulant Aid Conc.:	0.30%	Sulphate			18	
Microsand Dose:	20 g	Hardness as CaCO3 (mg/L)		mg/L	189	
Specific Gravity	1.205	Aluminum (ug/L)		mg/L as CaCO3	13.1	
Conc. Of Alum (Al ₂ O ₃) (%)	10.40	Calcium (mg/L)		ug/L	58.9	
		Dissolved Organic Carbon (mg/L)			8	
		Total Organic Carbon (mg/L)			9	
JAR NUMBER	OP-P1	OP-P2	OP-P3	OP-P4	OP-P5	OP-P6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	85	85	85	85	85	85
Al ₂ O ₃ Conc. (mg/L)	10.65	10.65	10.65	10.65	10.65	10.65
Volume of 1:10 diluted Coagulant added (mL)	0.913	1.079	1.245	1.411	1.577	1.743
Microsand added (g)	20	20	20	20	20	20
Coagulant-Aid Dose (mg/L)	0.2	0.3	0.4	0.5	0.6	0.7
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	0.667	1.000	1.333	1.667	2.000	2.333
Remaining Volume of 1:10 diluted Polymer added (mL)	0.667	1.000	1.333	1.667	2.000	2.333
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	7.46	7.37	7.34	7.34	7.27	7.23
Temperature (°C)	7.3	8	8.5	9	9	9
Turbidity (NTU)	0.775	0.4	0.46	0.49	0.57	0.67
UVA	0.107	0.109	0.108	0.107	0.107	0.109
Alkalinity as CaCO3 (mg/L)	137	149	140	137	141	141
Colour (TCU)	4	6	4	3	4	4
Apparent Colour (CU)	11	12	11	12	11	14
Tottal Dissolved Solids (TDS)	340	291	314	317	326	317
Chloride	56	57	55	53	58	58
Sulphate	19	19	20	19	19	19
Hardness as CaCO3 (mg/L)	184	189	189	187	194	188
Aluminum (ug/L)	231	179	173	152	139	247
Calcium (mg/L)	56.8	58.8	58.3	58	60.2	58.1
Dissolved Organic Carbon (mg/L)	6	6	6	6	6	6
Total Organic Carbon (mg/L)	7	6	6	7	6	6

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet		Source Water:				
Date:	3/1/2017	pH				7.63
Time:	11:00 AM	(°C)	(°C)			5
Performed By:	Mazahir Alidina	Turbidity (NTU)	(NTU)			2.45
Coagulant Type: SternPAC	OPTIMIZE pH	UVA				0.314
		Alkalinity as CaCO ₃ (mg/L)	mg/L			
		Colour (TCU)	mg/L			
		Apparent Colour (CU)	(mg CaCO ₃ /L)			
		Total Dissolved Solids (TDS)				
Coagulant Dosage:	55 to 105 mg/L	Chloride				
Coagulant Aid Type:	Cationic Polymer	Sulphate				
Coagulant Aid Dosage:	0.3 mg/L	Hardness as CaCO ₃ (mg/L)	mg/L			
Coagulant Aid Conc.:	0.30%	Aluminum (ug/L)	mg/L as CaCO ₃			
Microsand Dose:	15 g	Calcium (mg/L)	ug/L			
Specific Gravity	1.205	Dissolved Organic Carbon (mg/L)				
Conc. Of Alum (Al ₂ O ₃) (%)	10.40	Total Organic Carbon (mg/L)				
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Acid/Base addition	0	0.3	0.6	0.9	1.2	1.5
Coagulant Dose (mg/L)	85	85	85	85	85	85
Al ₂ O ₃ Conc. (mg/L)	10.65	10.65	10.65	10.65	10.65	10.65
Volume of 1:10 diluted Coagulant added (mL)	1.411	1.411	1.411	1.411	1.411	1.411
Microsand added (g)	15	15	15	15	15	15
Coagulant-Aid Dose (mg/L)	0.3	0.3	0.3	0.3	0.3	0.3
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.000	1.000	1.000	1.000	1.000	1.000
Remaining Volume of 1:10 diluted Polymer added (mL)	1.000	1.000	1.000	1.000	1.000	1.000
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
Initial pH	7.63	7.16	6.93	6.73	6.54	6.28
Final pH	7.35	7.13	6.88	6.73	6.6	6.25
Temperature (°C)	6	6	6	6	6	6
Turbidity (NTU)	0.657	0.831	0.748	0.723	0.837	0.663
UVA	0.159	0.161	0.157	0.146	0.141	0.13
Alkalinity as CaCO ₃ (mg/L)	133	114	99	87	71	53
Colour (TCU)	11	11	10	10	9	8
Apparent Colour (CU)	16	20	17	15	14	13
Total Dissolved Solids (mg/L)	269	263	271	271	274	274
Chloride (mg/L)	31	31	31	31	31	31
Sulphate (mg/L)	31	45	58	72	87	110
Hardness as CaCO ₃ (mg/L)	211	202	200	198	210	205
Aluminum (ug/L)	337	714	360	325	580	356
Calcium (mg/L)	73.4	69.8	69.6	68.4	72.6	71
Dissolved Organic Carbon (mg/L)	5	5	4	4	4	4
Total Organic Carbon (mg/L)	5	5	5	5	4	4

Jar Test Data Sheet		Source Water:				
Date:	3/1/2017	pH			7.63	
Time:	1:00 PM	(°C)	(°C)		5	
Performed By:	Mazahir Alidina	Turbidity (NTU)	(NTU)		2.45	
Coagulant Type:	DeltaFloc-1118	UVA			0.314	
		Alkalinity as CaCO ₃ (mg/L)	mg/L		132	
OPTIMIZE pH		Colour (TCU)	mg/L		33	
Coagulant Dosage:	25 to 75 mg/L	Apparent Colour (CU)	(mg CaCO ₃ /L)		53	
Coagulant Aid Type:	Cationic Polymer	Total Dissolved Solids (TDS)			254	
Coagulant Aid Dosage:	0.3 mg/L	Chloride			24	
Coagulant Aid Conc.:	0.30%	Sulphate			29	
Microsand Dose:	20 g	Hardness as CaCO ₃ (mg/L)	mg/L		204	
Specific Gravity	1.3	Aluminum (ug/L)	mg/L as CaCO ₃		68.4	
Conc. Of Alum (Al ₂ O ₃) (%)	22.00	Calcium (mg/L)	ug/L		71.1	
		Dissolved Organic Carbon (mg/L)			8	
		Total Organic Carbon (mg/L)			8	
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Acid/Base addition (mL)	0	0.3	0.6	0.9	1.2	1.5
Coagulant Dose (mg/L)	37	37	37	37	37	37
Al ₂ O ₃ Conc. (mg/L)	10.58	10.58	10.58	10.58	10.58	10.58
Volume of 1:10 diluted Coagulant added (mL)	0.538	0.538	0.538	0.538	0.538	0.538
Microsand added (g)						
Coagulant-Aid Dose (mg/L)	0.3	0.3	0.3	0.3	0.3	0.3
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.000	1.000	1.000	1.000	1.000	1.000
Remaining Volume of 1:10 diluted Polymer added (mL)	1.000	1.000	1.000	1.000	1.000	1.000
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
Initial pH	7.64	7.24	6.89	6.66	6.47	6.26
Final pH	7.27	7.29	6.97	6.86	6.66	6.24
Temperature (°C)	5.5	5.5	5.5	5.5	5.5	5.5
Turbidity (NTU)	2.17	2.44	2.66	1.53	1.21	2.96
UVA	0.2	0.212	0.23	0.165	0.164	0.218
Alkalinity as CaCO ₃ (mg/L)	127	118	102	87	71	57
Colour (TCU)	10	10	10	9	9	9
Apparent Colour (CU)	32	28	46	18	28	33
Total Dissolved Solids (mg/L)	266	271	263	277	286	286
Chloride (mg/L)	27	27	27	27	27	27
Sulphate (mg/L)	44	44	60	77	92	100
Hardness as CaCO ₃ (mg/L)	202	201	203	204	200	199
Aluminum (ug/L)	1020	1440	1580	898	783	1090
Calcium (mg/L)	70.1	69.4	70.2	71	69.9	69
Dissolved Organic Carbon (mg/L)	6	6	5	5	4	5
Total Organic Carbon (mg/L)	5	5	5	5	5	5

Jar Test Data Sheet		Source Water:				
Date:	3/13/2017	pH			7.96	
Time:	11:00 AM	Temperature (°C)	(°C)		3.5	
Performed By:	Mazahir Alidina	Turbidity (NTU)	(NTU)		4.14	
Coagulant Type:	SternPAC	UVA			0.231	
		Alkalinity as CaCO ₃ (mg/L)	mg/L		152	
OPTIMIZE STERNPAC DOSE		Colour (TCU)	mg/L		18	
Coagulant Dosage:	55 to 105 mg/L	Apparent Colour (CU)	(mg CaCO ₃ /L)		60	
Coagulant Aid Type:	Cationic Polymer	Total Dissolved Solids (TDS)			263	
Coagulant Aid Dosage:	0.3 mg/L	Chloride			33	
	0.30%	Sulphate			19	
Microsand Dose:	15 g	Hardness as CaCO ₃ (mg/L)	mg/L		192	
Specific Gravity	1.205	Aluminum (ug/L)	mg/L as CaCO ₃		163	
Conc. Of Alum (Al ₂ O ₃) (%)	10.40	Calcium (mg/L)	ug/L		64.6	
		Dissolved Organic Carbon (mg/L)			7	
		Total Organic Carbon (mg/L)	(°C)		8	
JAR NUMBER	SP-D1	SP-D2	SP-D3	SP-D4	SP-D5	SP-D6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Acid/Base addition (mL)	1.3	1.3	1.3	1.3	1.3	1.3
Coagulant Dose (mg/L)	55	65	75	85	95	105
Al ₂ O ₃ Conc. (mg/L)	6.89	8.15	9.40	10.65	11.91	13.16
Volume of 1:10 diluted Coagulant added (mL)	0.913	1.079	1.245	1.411	1.577	1.743
Microsand added (g)	15	15	15	15	15	15
Coagulant-Aid Dose (mg/L)	0.3	0.3	0.3	0.3	0.3	0.3
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.000	1.000	1.000	1.000	1.000	1.000
Remaining Volume of 1:10 diluted Polymer added (mL)	1.000	1.000	1.000	1.000	1.000	1.000
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
Initial pH	6.51	6.47	6.49	6.49	6.5	6.48
Final pH	6.58	6.6	6.64	6.54	6.51	6.5
Initial Temperature (°C)	3.6	3.4	3.4	3.2	3.4	3.1
Final Temperature (°C)	6.9	7.2	6.7	6.4	6.5	6.7
Turbidity (NTU)	0.586	0.377	0.361	0.311	0.318	0.312
UVA	0.131	0.105	0.1	0.09	0.083	0.077
Alkalinity as CaCO ₃ (mg/L)	69	68	69	67	66	65
Colour (TCU)	7	6	6	5	5	5
Apparent Colour (CU)	14	11	13	8	8	8
Total Dissolved Solids (mg/L)	277	294	306	300	294	297
Chloride (mg/L)	38	39	40	41	42	42
Sulphate (mg/L)	86	89	89	86	85	86
Hardness as CaCO ₃ (mg/L)	193	195	196	202	195	198
Aluminum (ug/L)	338	197	185	173	138	157
Calcium (mg/L)	64.7	65.2	65.6	67.5	65.1	65.9
Dissolved Organic Carbon (mg/L)	6	5	4	4	4	4
Total Organic Carbon (mg/L)	6	5	5	5	4	4

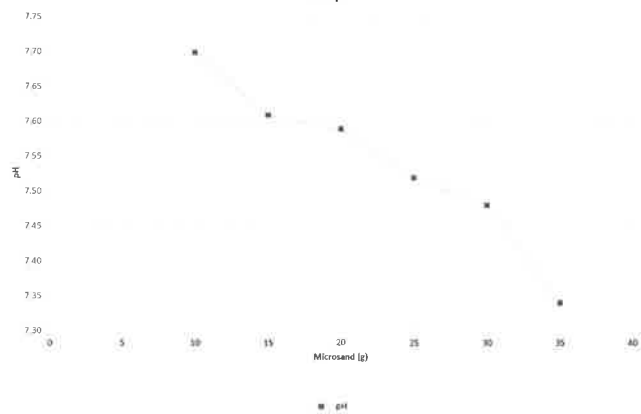
Jar Test Data Sheet		Source Water:				
Date:	3/13/2017	pH			7.96	
Time:	1:00 PM	Temperature (°C)	(°C)		3.5	
Performed By:	Mazahir Alidina	Turbidity (NTU)	(NTU)		4.14	
Coagulant Type:	DeltaFloc-1118	UVA			0.231	
		Alkalinity as CaCO ₃ (mg/L)	mg/L		152	
		Colour (TCU)	mg/L		18	
		Apparent Colour (CU)	(mg CaCO ₃ /L)		60	
OPTIMIZE DELTAFLOC-1118 DOSE		Total Dissolved Solids (TDS)				
Coagulant Dosage:	25 to 75 mg/L					
Coagulant Aid Type:	Cationic Polymer					
Coagulant Aid Dosage:	0.3 mg/L					
Coagulant Aid Conc.:	0.30%					
Microsand Dose:	20 g					
Specific Gravity	1.3					
Conc. Of Alum (Al ₂ O ₃) (%)	22.00					
		Dissolved Organic Carbon (mg/L)				
		Total Organic Carbon (mg/L)				
		(°C)				
JAR NUMBER	DF-D1	DF-D2	DF-D3	DF-D4	DF-D5	DF-D6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Acid/Base addition (mL)	1.3	1.3	1.3	1.3	1.3	1.3
Coagulant Dose (mg/L)	24	29	33	37	42	46
Al ₂ O ₃ Conc. (mg/L)	6.86	8.29	9.44	10.58	12.01	13.16
Volume of 1:10 diluted Coagulant added (mL)	0.369	0.446	0.508	0.569	0.646	0.708
Microsand added (g)	15	15	15	15	15	15
Coagulant-Aid Dose (mg/L)	0.3	0.3	0.3	0.3	0.3	0.3
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.000	1.000	1.000	1.000	1.000	1.000
Remaining Volume of 1:10 diluted Polymer added (mL)	1.000	1.000	1.000	1.000	1.000	1.000
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
Initial pH	6.45	6.43	6.44	6.45	6.44	6.44
Final pH	6.59	6.57	6.57	6.54	6.61	6.61
Initial Temperature (°C)	5.4	3.8	3.2	3.1	3.2	3.3
Final Temperature (°C)	9.4	7.8	7.4	7.4	7.5	7.6
Turbidity (NTU)	0.622	0.45	0.368	0.386	0.295	0.25
UVA	0.131	0.112	0.1	0.095	0.084	0.079
Alkalinity as CaCO ₃ (mg/L)	74	72	72	75	72	71
Colour (TCU)	7	5	5	6	5	5
Apparent Colour (CU)	10	8	7	8	6	7
Total Dissolved Solids (mg/L)	294	297	294	289	280	294
Chloride (mg/L)	35	35	36	36	37	37
Sulphate (mg/L)	87	88	88	88	87	87
Hardness as CaCO ₃ (mg/L)	192	194	194	197	196	195
Aluminum (ug/L)	232	131	104	157	133	146
Calcium (mg/L)	63.6	64.7	64.9	65.8	65	64.9
Dissolved Organic Carbon (mg/L)	5	5	4	4	4	4
Total Organic Carbon (mg/L)	6	5	4	5	4	4

Appendix 4

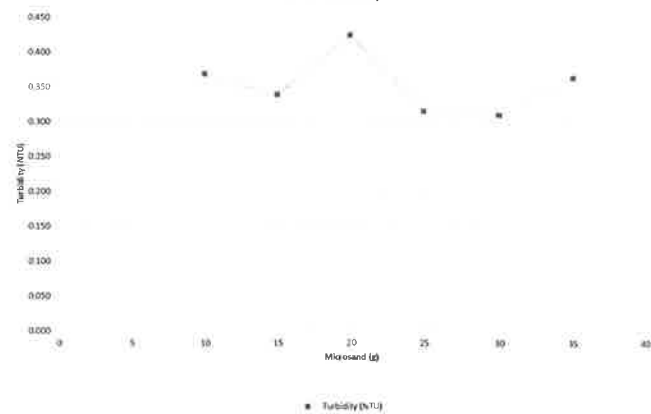
Result Graphs

1. Optimum Microsand Dose Jar Test

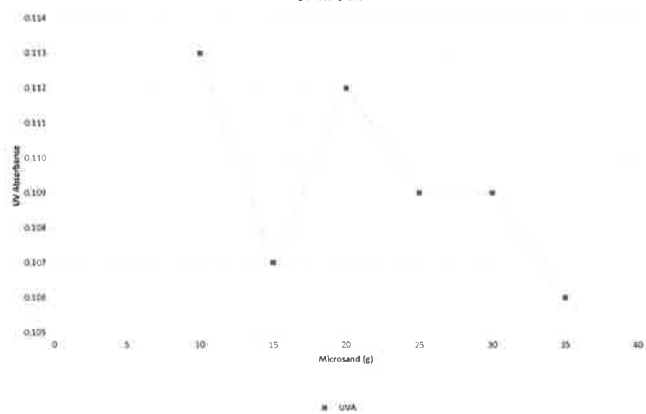
OP-M pH



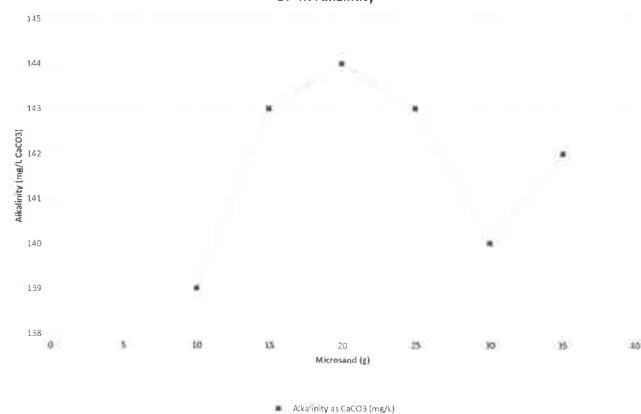
OP-M Turbidity



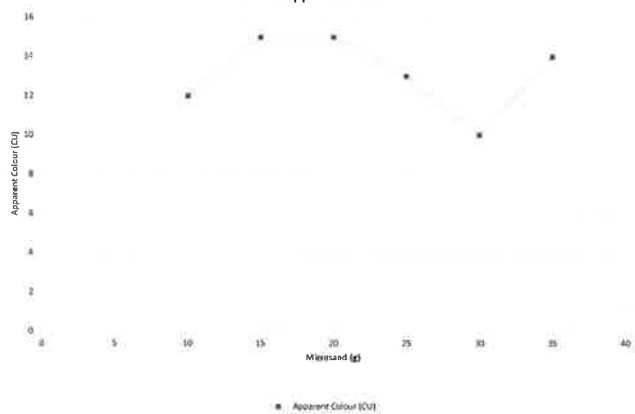
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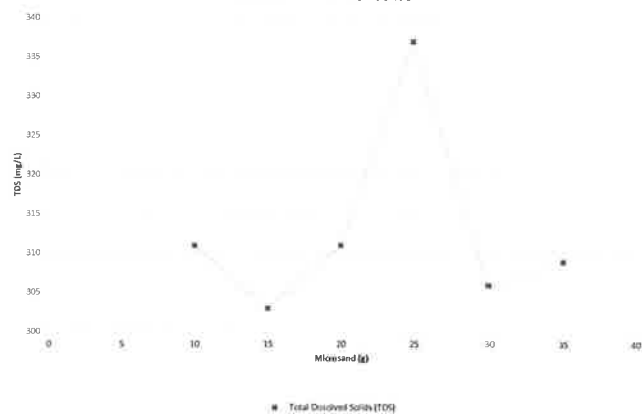
OP-M Alkalinity



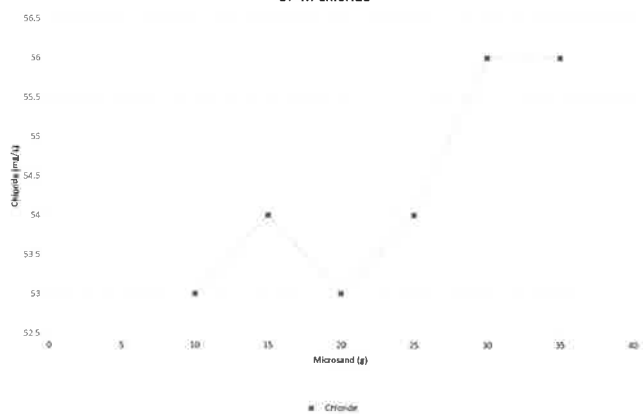
OP-M Apparent Colour



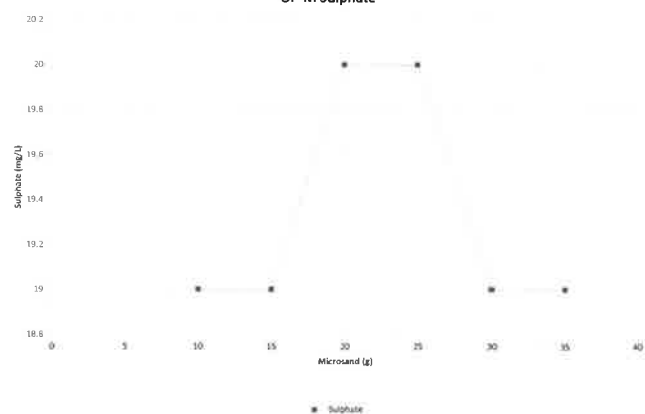
OP-M Total Dissolved Solids



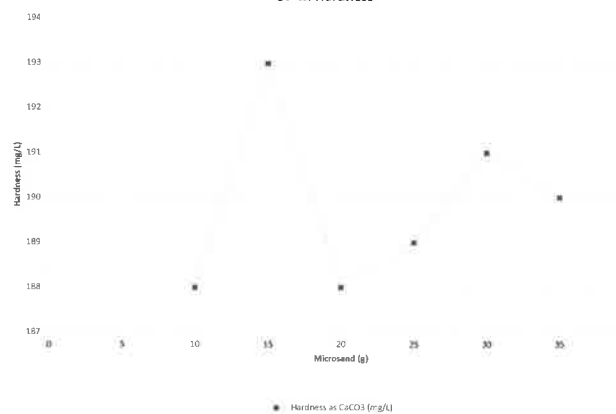
OP-M Chloride



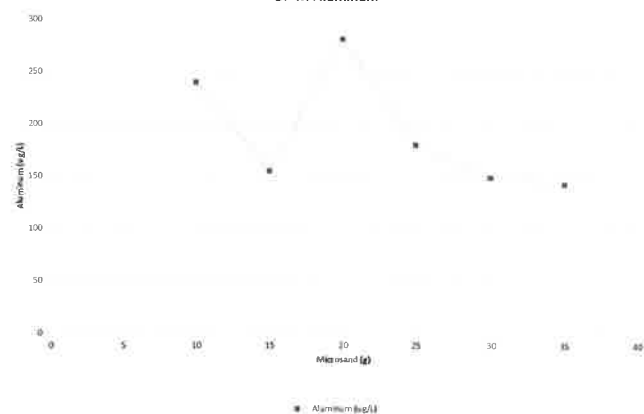
OP-M Sulphate



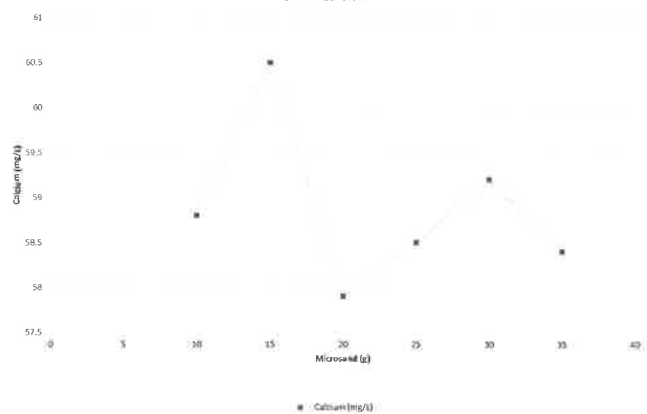
OP-M Hardness



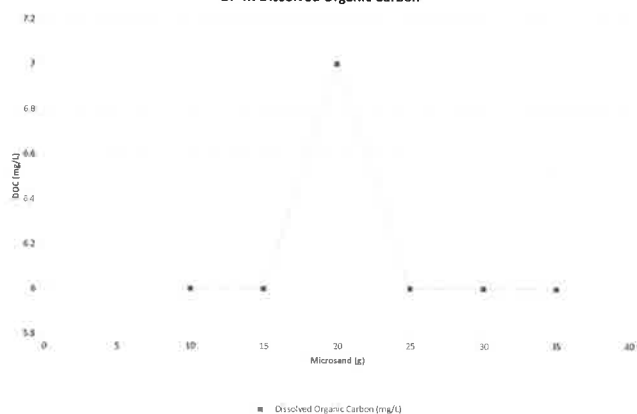
OP-M Aluminum

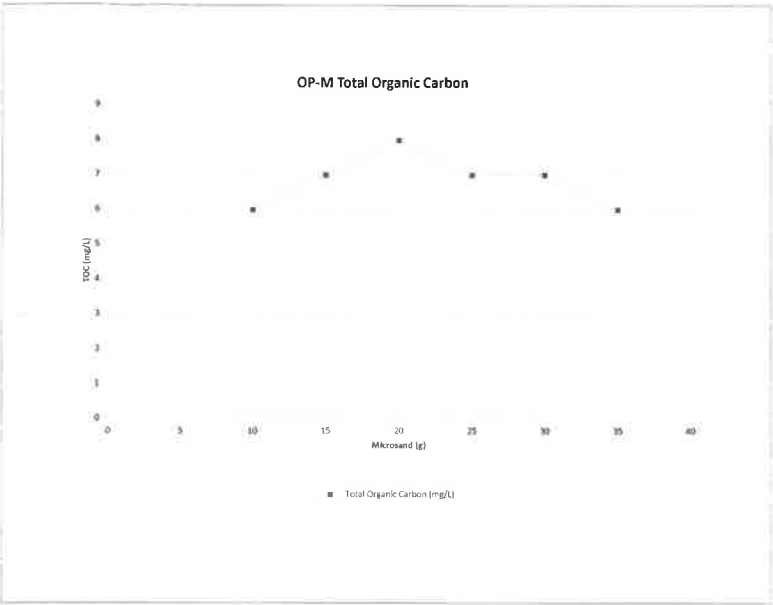


OP-M Calcium



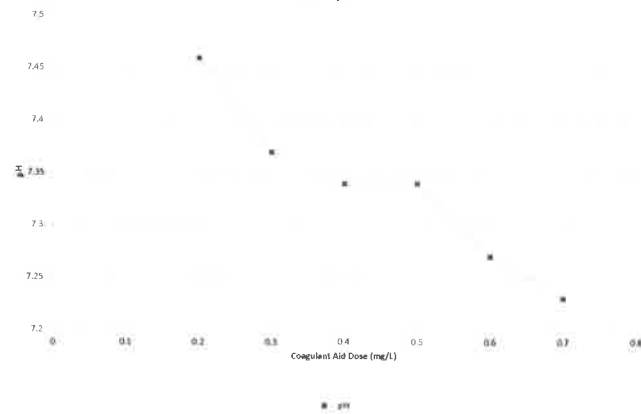
OP-M Dissolved Organic Carbon



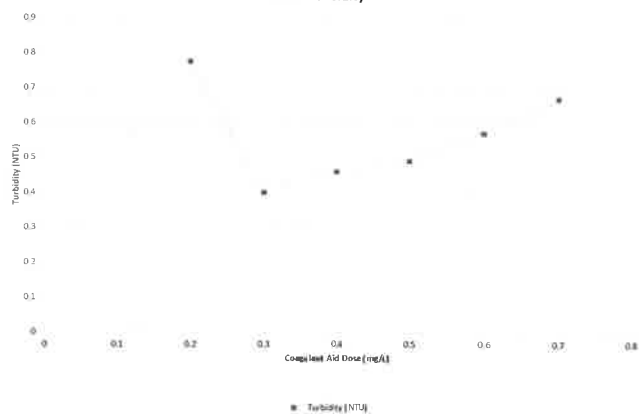


2. Optimum Polymer Dose Jar Test

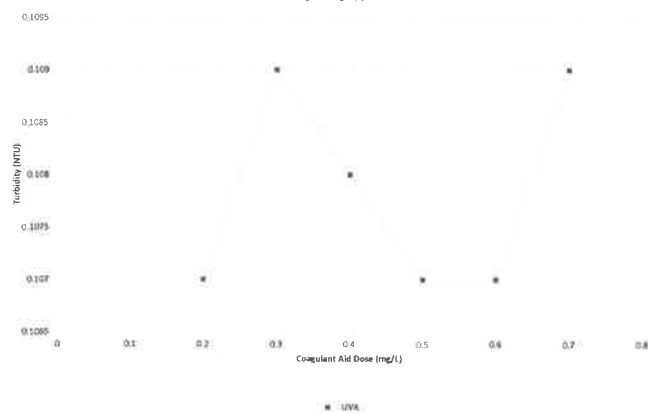
OP-P pH



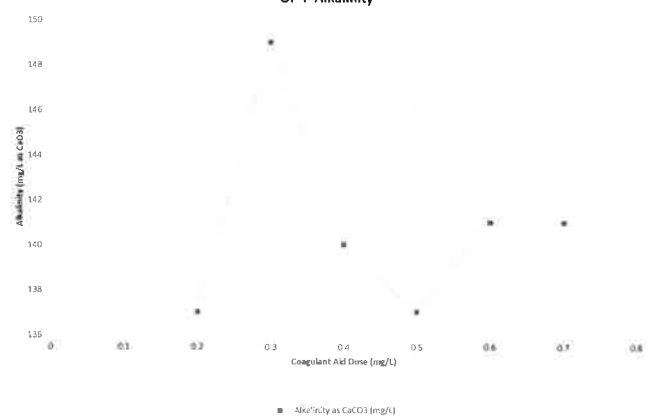
OP-P Turbidity

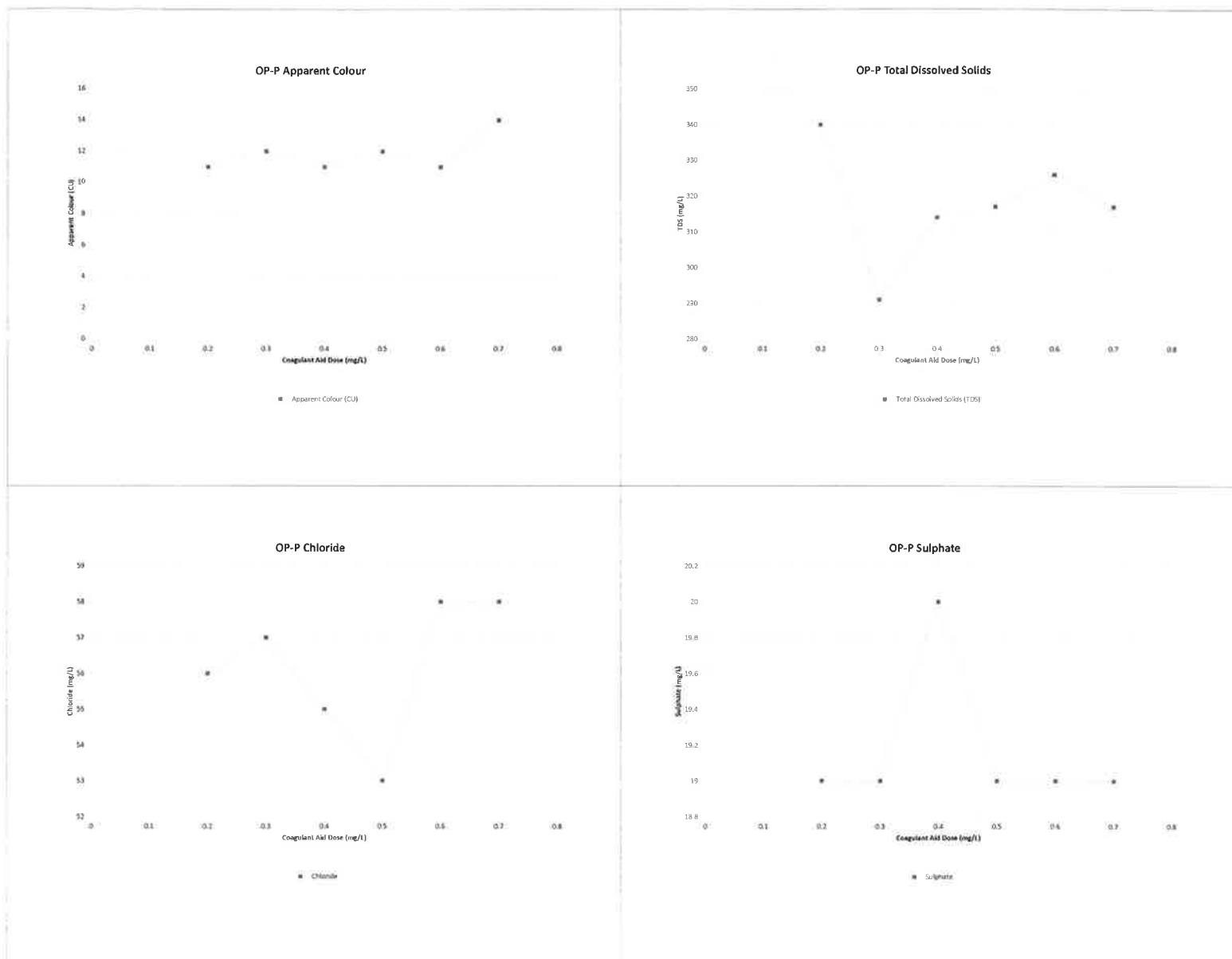


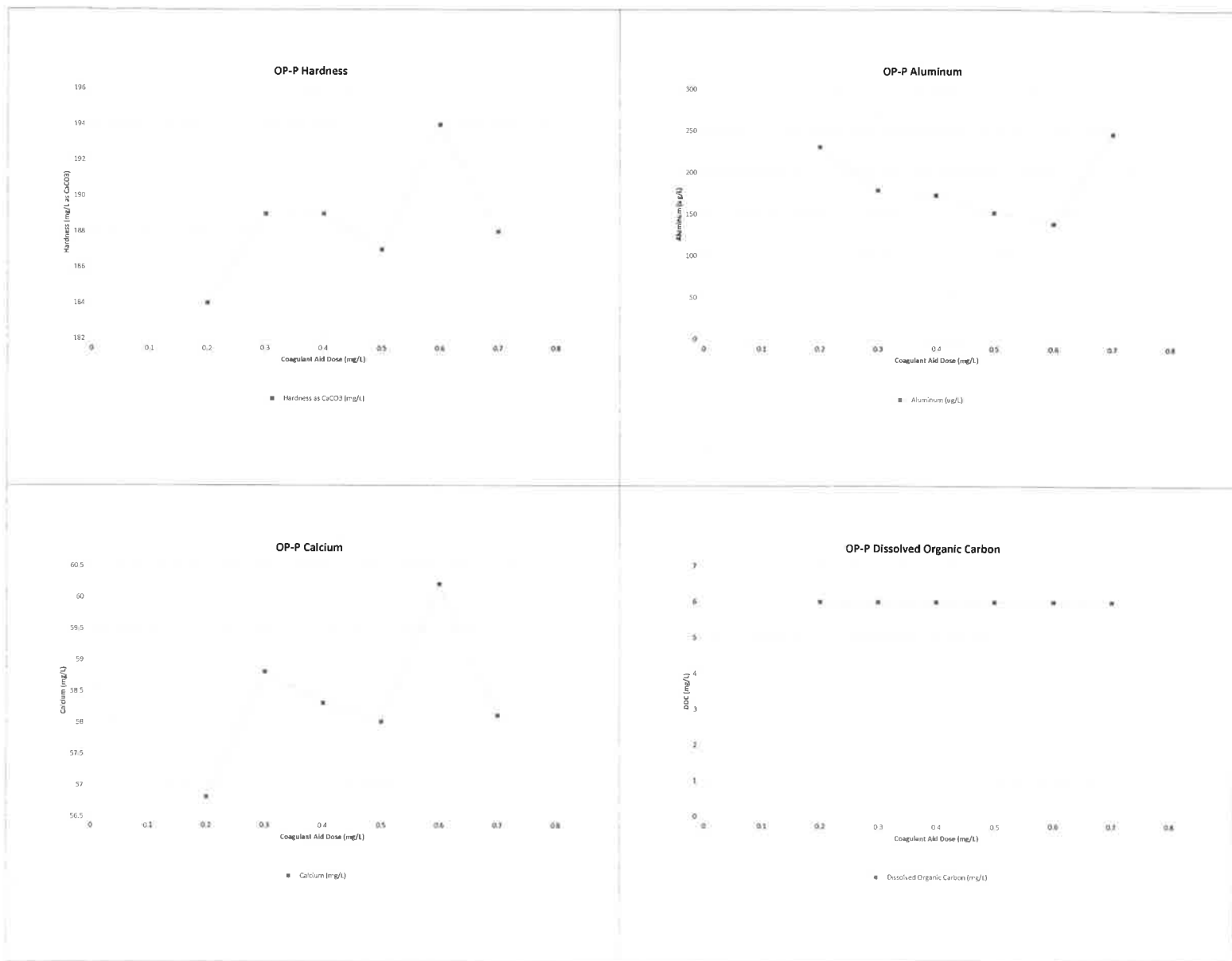
OP-P UVA

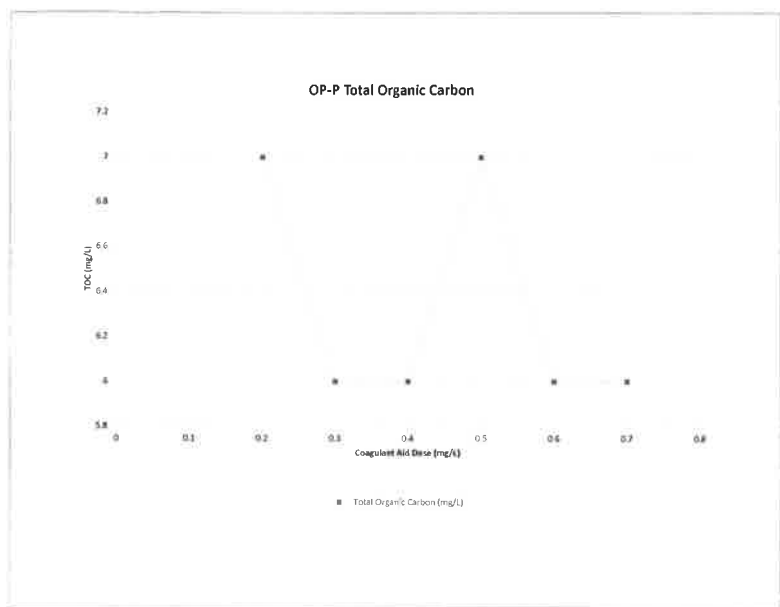


OP-P Alkalinity



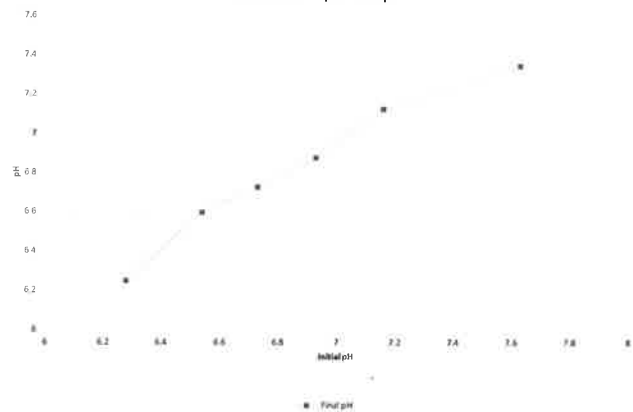




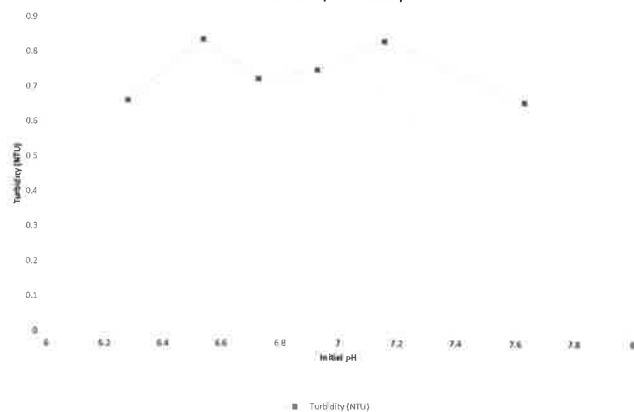


3. Optimum pH Jar Test

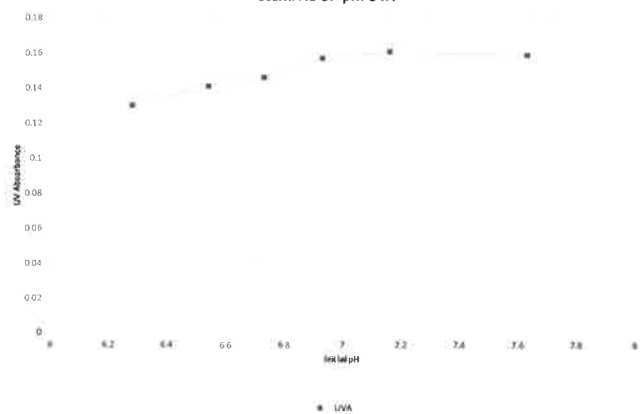
SternPAC OP-pH: Final pH



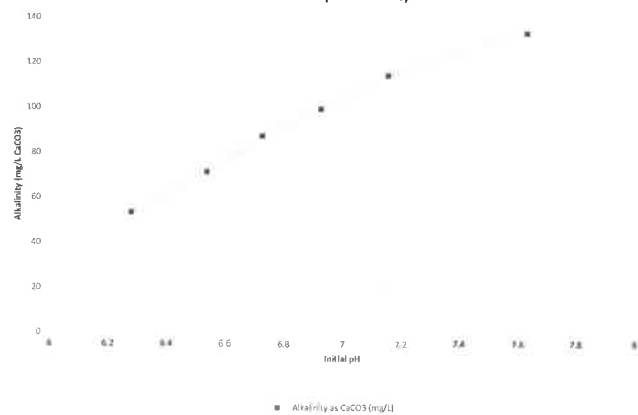
SternPAC OP-pH: Turbidity



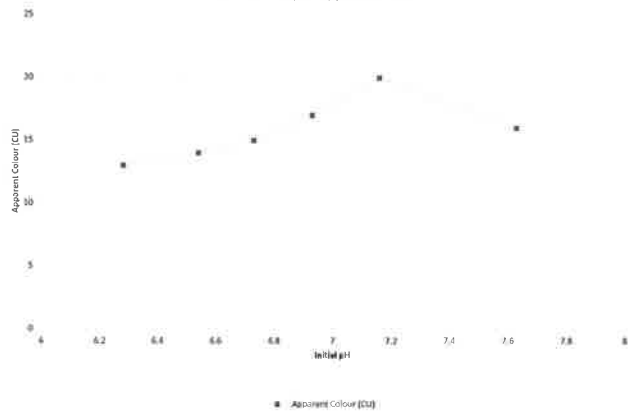
SternPAC OP-pH: UVA



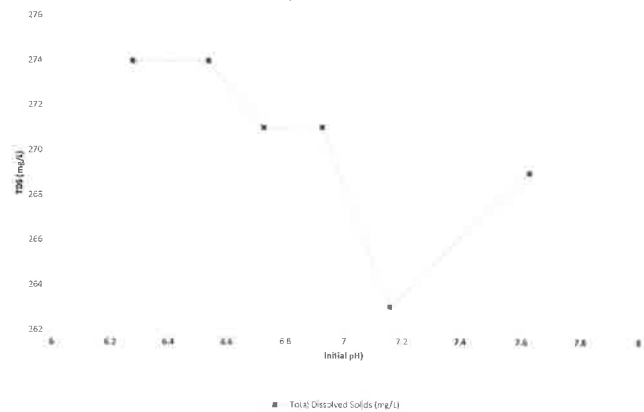
SternPAC OP-pH: Alkalinity



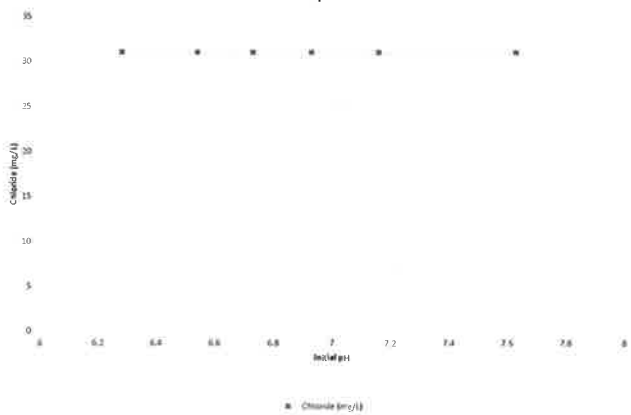
SternPAC OP-pH: Apparent Colour



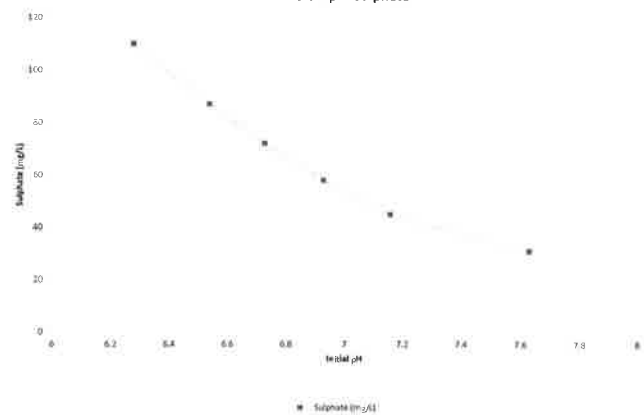
SternPAC OP-pH: Total Dissolved Solids



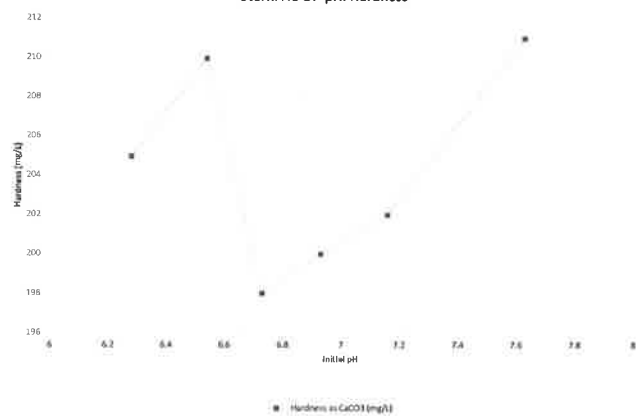
SternPAC OP-pH: Chloride



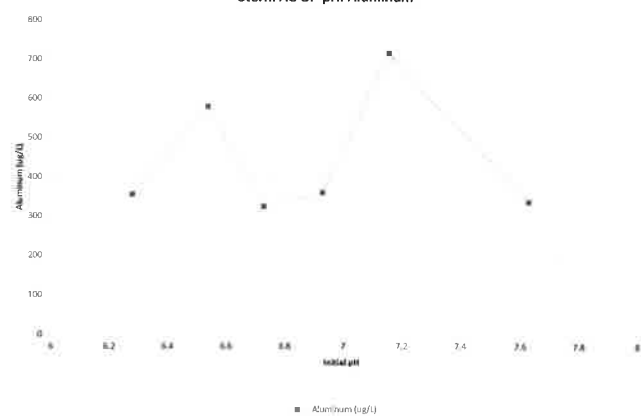
SternPAC OP-pH: Sulphate



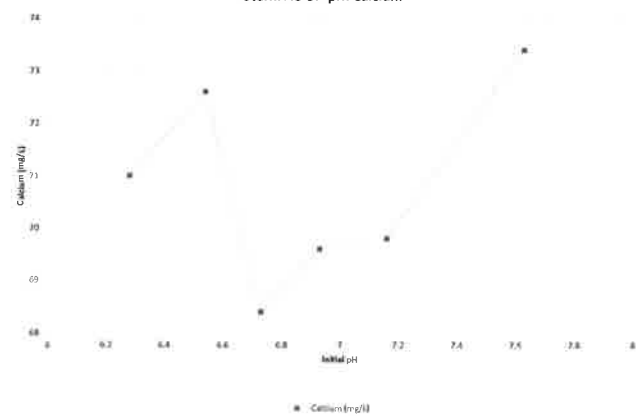
SternPAC OP-pH: Hardness



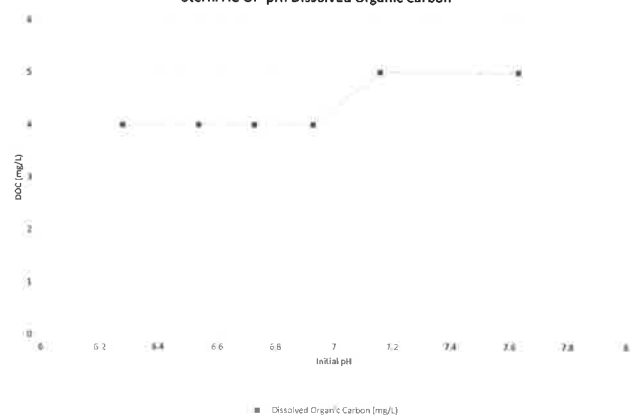
SternPAC OP-pH: Aluminum

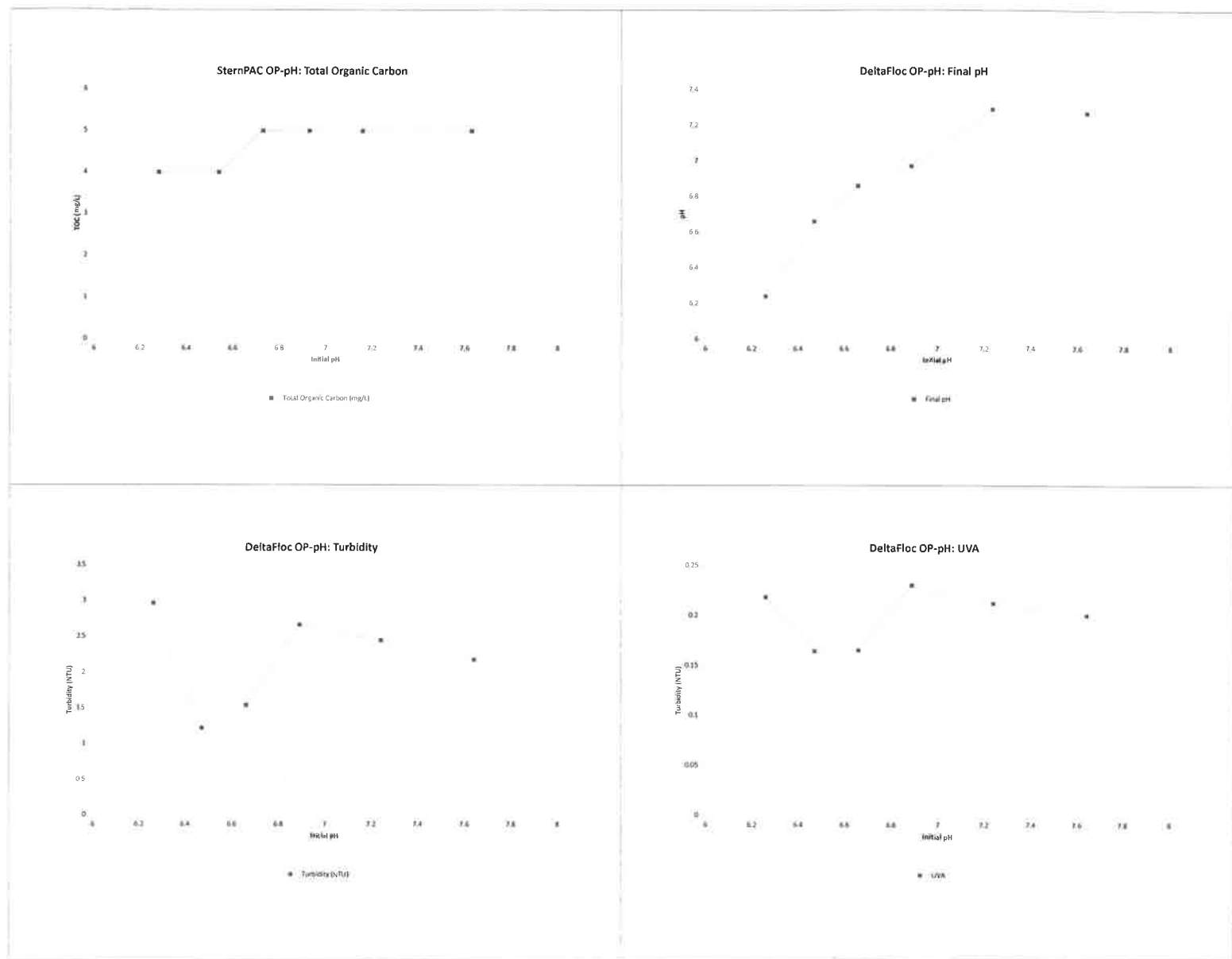


SternPAC OP-pH: Calcium

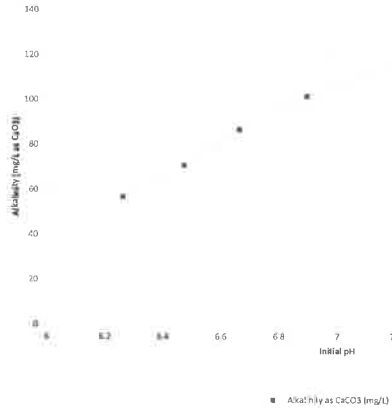


SternPAC OP-pH: Dissolved Organic Carbon

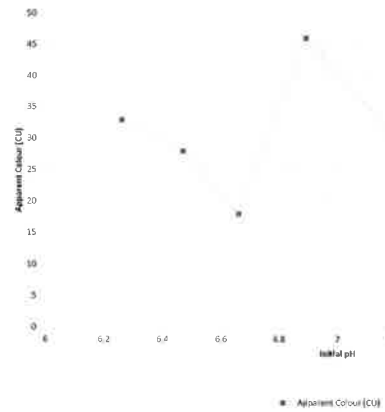




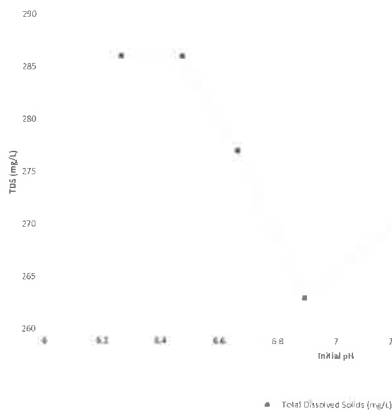
DeltaFloc OP-pH: Alkalinity



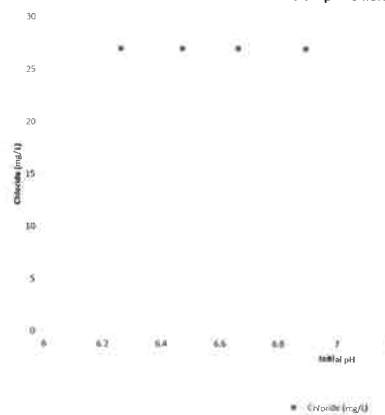
DeltaFloc OP-pH: Apparent Colour



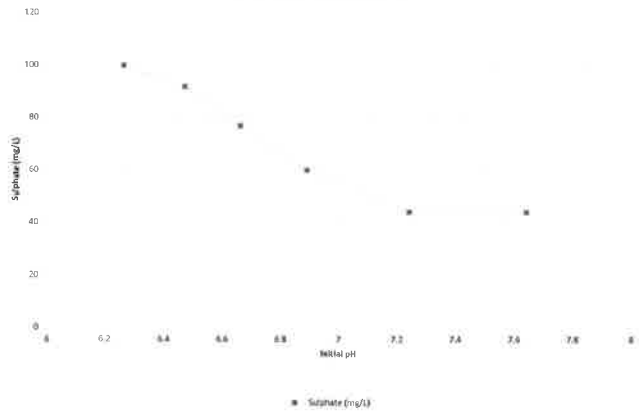
DeltaFloc OP-pH: Total Dissolved Solids



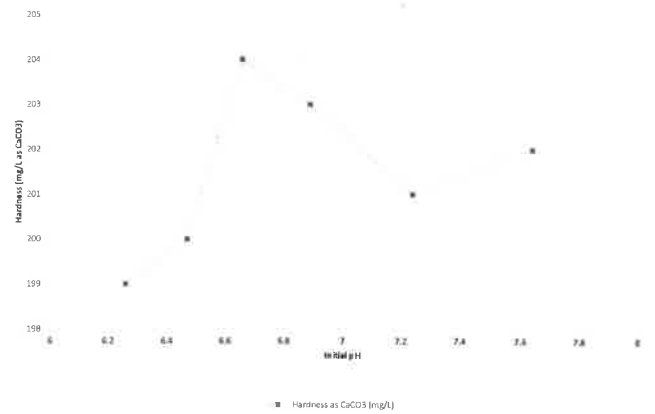
DeltaFloc OP-pH: Chloride



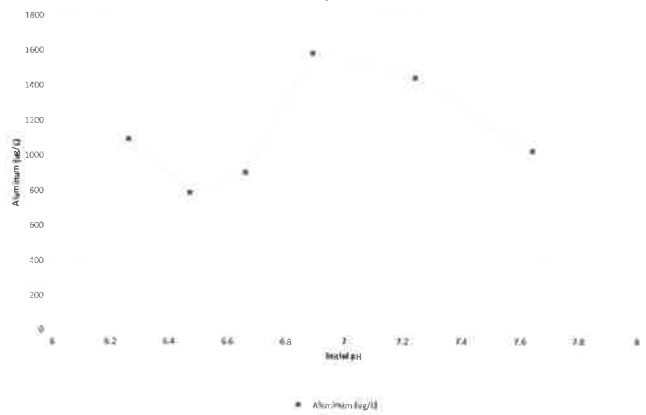
DeltaFloc OP-pH: Sulphate



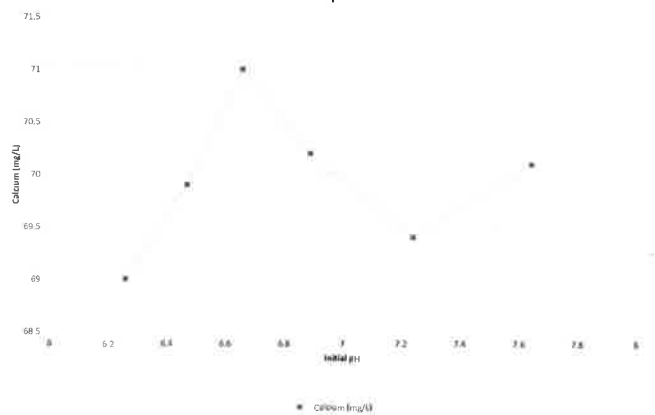
DeltaFloc OP-pH: Hardness

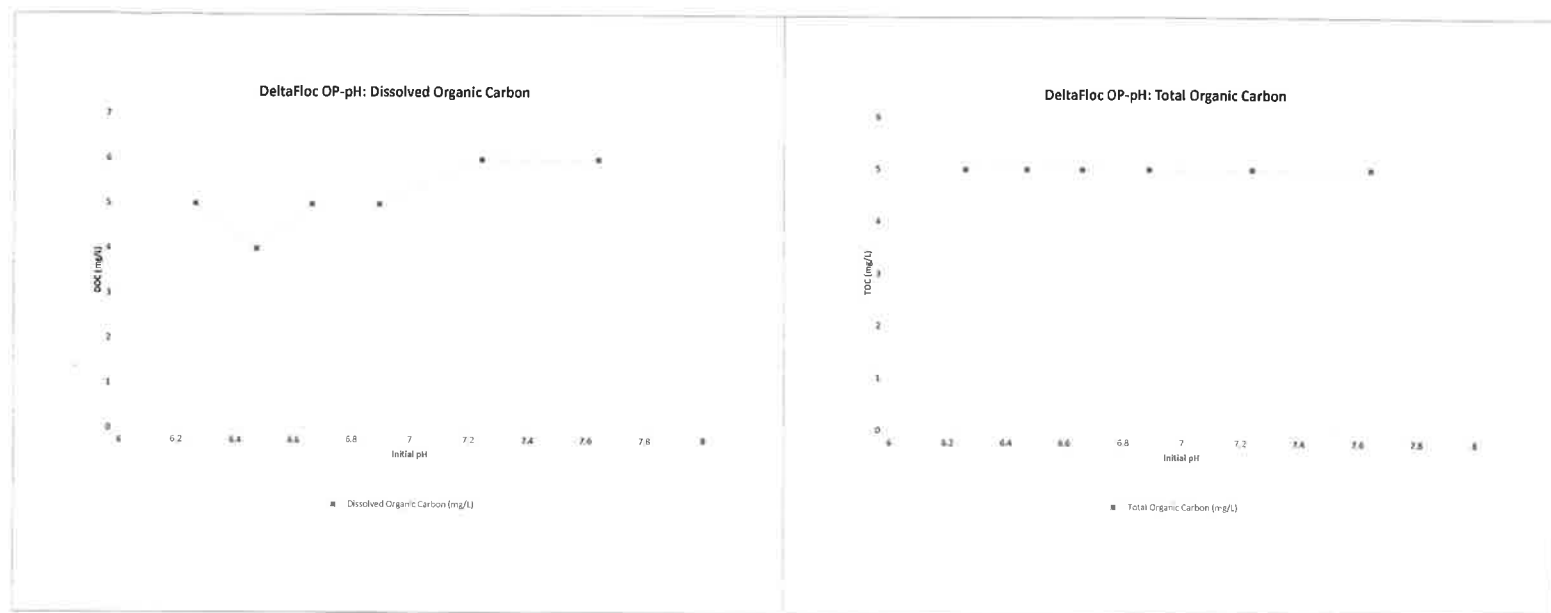


DeltaFloc OP-pH: Aluminum



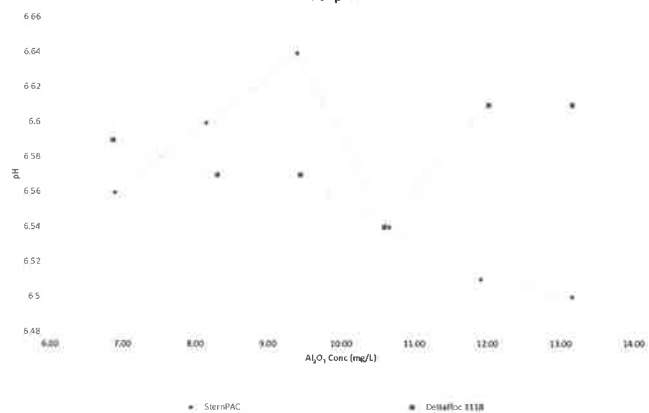
DeltaFloc OP-pH: Calcium



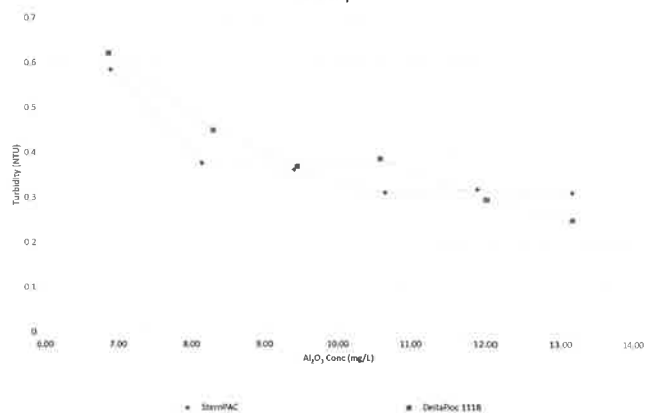


4. Optimum Coagulant Dose Jar Test

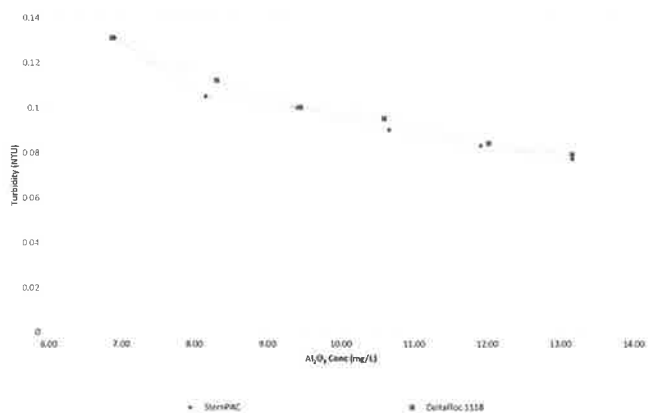
Final pH



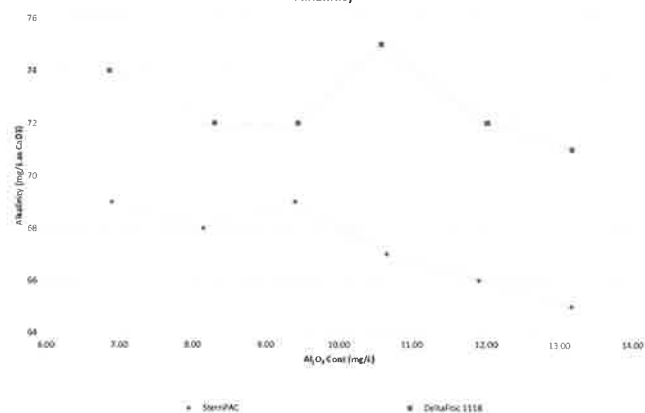
Turbidity



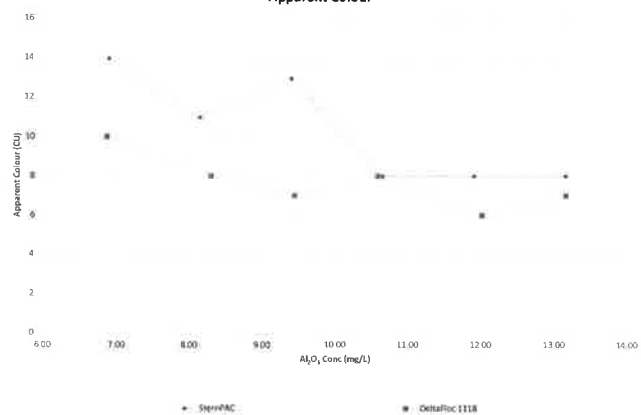
UVA



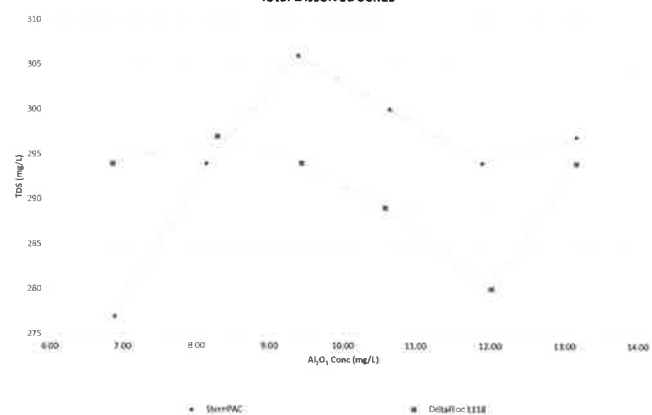
Alkalinity



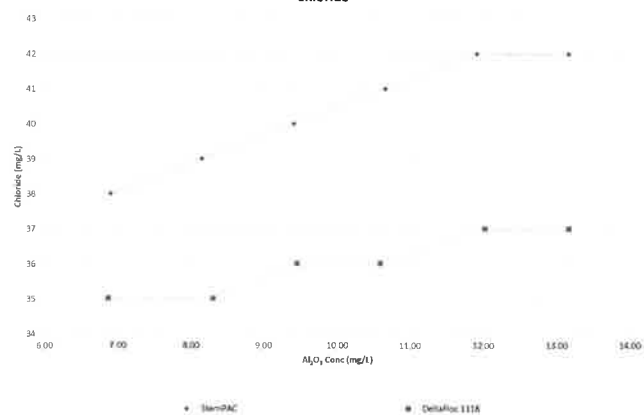
Apparent Colour



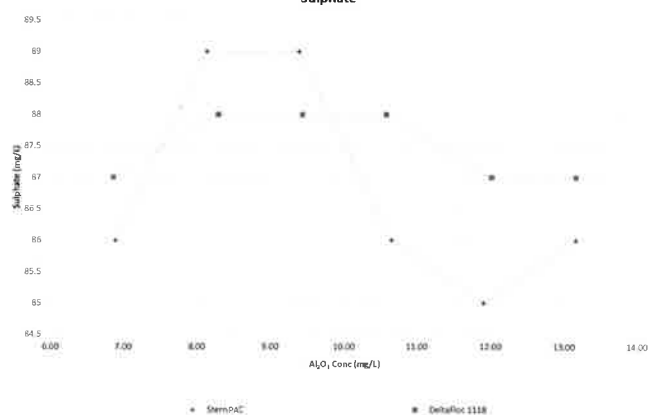
Total Dissolved Solids

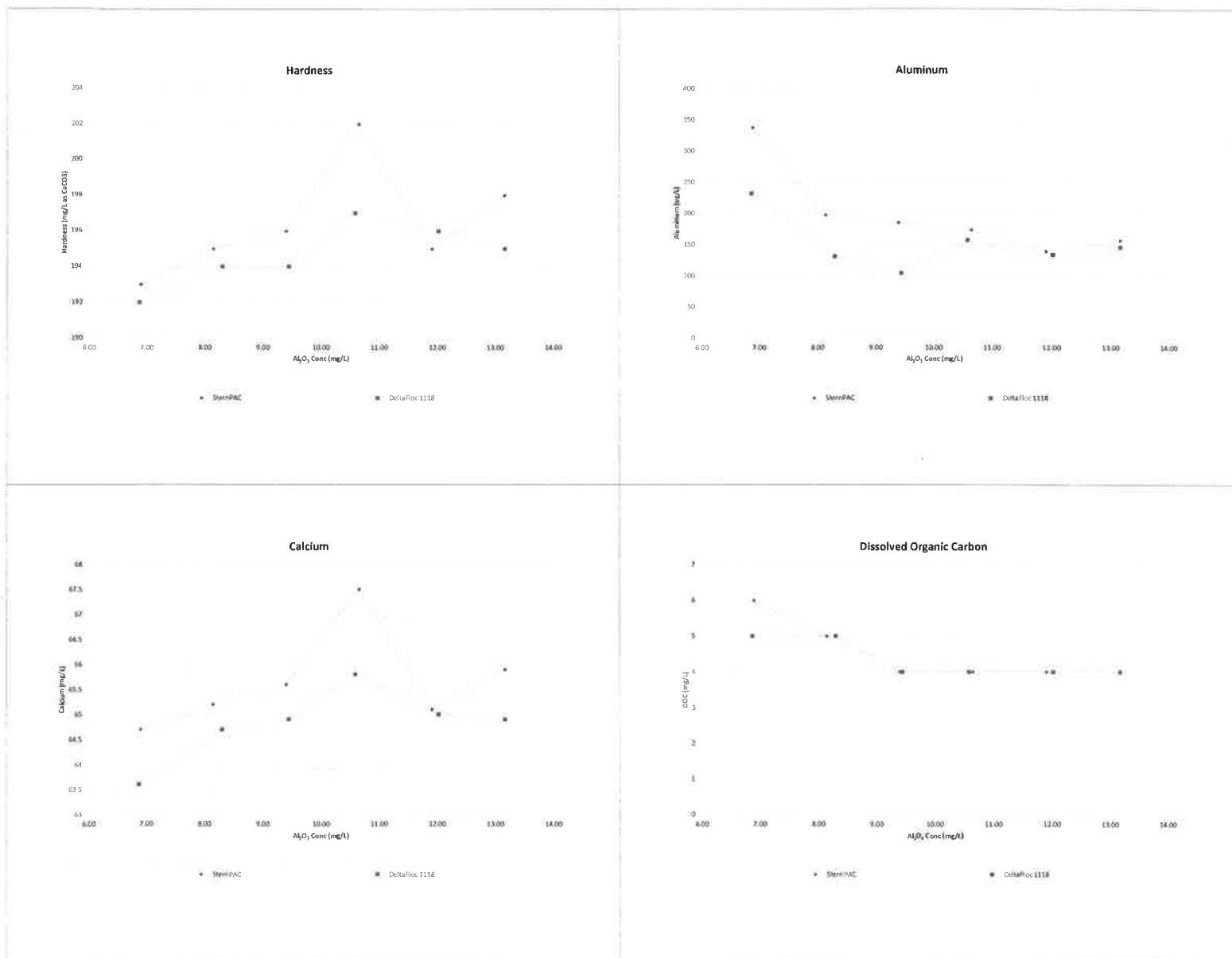


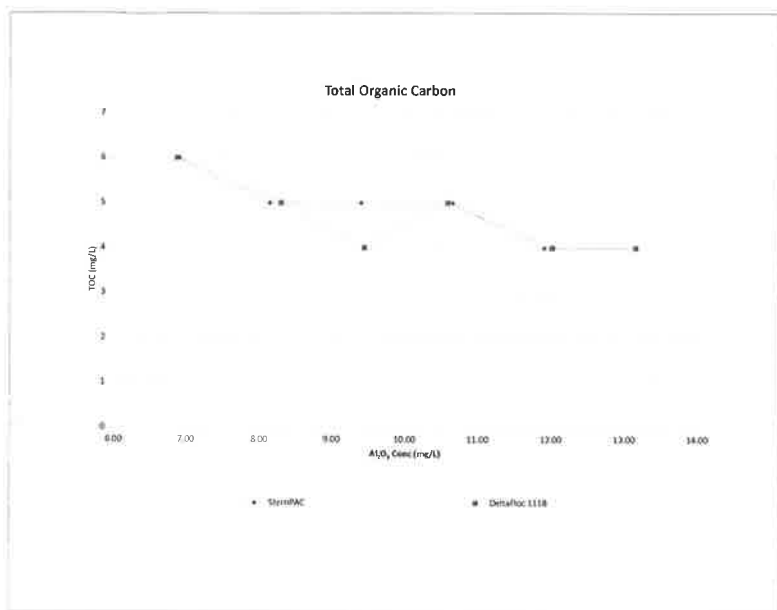
Chloride



Sulphate









Appendix # B
to
Report # WW2017-007

MEMORANDUM

Date: June 23, 2016
To: Shelley Durham. City of Kawartha Lakes
From: Mazahir Alidina, Maika Pellegrino. WSP
Project No.: 161-15613
Location: Lindsay Water Treatment Plant
Subject: Coagulant Testing for the Lindsay Water Treatment Plant

1. Introduction

The Lindsay Water Treatment Plant is a conventional (full) treatment plant with an ACTIFLO® System that consists of two (2) ballasted flocculation/clarification units, two (2) sedimentation tanks and five (5) multi-media filters to handle the plant rated flow of 22,730 m³/d.

The source water for the plant is the Scugog River where water temperatures range between 0 and 30°C. Currently polyaluminum chloride (PAC) is used when raw water is below 12°C and Alum is used above 12°C. Operational and raw water parameters provided by the Plant staff are summarized in Table 1 Plant Operational and Raw Water Parameters.

Table 1 Plant Operational and Raw Water Parameters

Parameter	Value		Comments
Flow Rate	80-185	L/s	
Surface Area Clarifier	21	m ²	From Drawing S-103 (4595 x 4595) mm ²
Surface loading rate (rise rate)	31.7	m/hr	(185 L/s)/21 m ²
Hydraulic Contact Time			
Coagulation tank	In-line		Flash Mixers are used
Injection Tank	2	min	
Maturation Tank	8	min	
Settling Tank	15	min	
Operational Parameters			
Polymer in Use	LT22S		Cationic in nature
Polymer Dose	0.03	mg/L	
SternPAC (Coagulant) Dose	85	mg/L	
CO ₂ (pH suppression) Dose			
Microsand Dose	20	mL/1000 mL	
Alum (Coagulant) Dose	120 - 180	Mg/L	
Actiflo® Influent pH range	6.8 - 7.0		
Raw Water Characteristics			
Raw water pH range	7.5 - 8.0		
Raw water Turbidity	1.5 - 2.0	NTU	
Raw water Alkalinity	160 - 190	mg/L	
Raw water Hardness	170 - 300	mg/L	
Raw water Colour	20 - 30	TCU	
Raw water UVT	50-Hi 60s		

2. Objectives

WSP was retained by The City of Kawartha Lakes to explore optimum coagulants for the Lindsay Water Treatment Plant during Raw Water cold temperature conditions.

The aim of the jar test was to simulate a full scale ACTIFLO® process in order to determine alternative coagulants for cold water use. The jar test simulates similar contact times in each basin of the ACTIFLO® process and by adding the chemicals and micro-sand along the same sequence used in the full-scale unit.

The coagulants to be tested were to be compatible with the following:

- Source water characteristics.
- Other treatment chemicals used at the Plant
- Water characteristics in clearwells
- Water characteristics in the distribution system

Suppliers who were contacted to provide coagulant samples were informed that the coagulants to be provided should meet the above criteria.

3. Methodology

3.1 Coagulants to be tested

WSP contacted several suppliers for samples of coagulants to use in the jar testing. A total of ten (10) coagulant samples were received from four (4) suppliers as outlined in Appendix 1. Suppliers were asked to provide data for optimum pH range, basicity, typical dose, concentration of Al_2O_3 and confirmation that the product met ANSI/NSF standard 60 and all Ontario regulations. Input was obtained from the City during the kick-off meeting regarding any previous experience with any of the procured coagulants as well as any operational issues perceived with use of any of the coagulants. The following is a summary of factors considered in shortlisting the coagulants selected for testing:

- The City currently uses SternPAC and this was to be one of the coagulants to be tested.
- The RFQ indicated that DelPAC 2020 would be one of the tested coagulants
- PAX-18 was used previously by the plant and had led to red water issues, and was hence excluded from further consideration.
- WC 620 Polydadmac, WC 530 Polyamine & WC 585 Polyamine were polymeric coagulants that required much lower dosage. Current plant equipment did not allow dosing at such low rates and these coagulants were hence excluded from further consideration.
- Insufficient information was provided by the supplier of Magnasol 4000G to qualify it.
- PAX-XL50 & PAX-XL-54 were similar in composition and hence only one of these was selected (PAX-XL50)
- DeltaFloc 1118 & DeltaFloc 1123 were similar in composition and hence only one of these was selected (DeltaFloc 1118)

The coagulant dose tested was calculated based on the actual average dose of SternPAC currently used at the plant. The specific doses of the coagulants varied in order to have the Al_2O_3 content proportional and allow a direct comparison based on Al_2O_3 dose.

3.2 Jar Testing Procedure

The jar testing was carried out in accordance with the industry standard "Actiflo® Jar Testing Procedure" (Appendix 2). Since insufficient washed microsand was available for use, the jar testing was carried out over the course of two days: April 28, 2016 and April 29, 2016. The test was performed using a Phipps & Bird PB-700™ Jar Test Apparatus (supplied by WSP, Figure 1) at the Lindsay Water Treatment Plant. The PB-700™ is a six-paddle model with regulated variable paddle speed control between a range of 1 – 300 rpm with a digital readout of the exact speed. The unit comes with six, square acrylic 2L jar testing jars and has a fluorescent lamp floc illuminator built into its base.

Figure 1 Jar Testing Apparatus used for testing the coagulants



The microsand to be used for the testing was washed thoroughly (by plant staff) until the supernatant was clear, in order to eliminate turbidity caused by micro-grains or any suspended particles that could be introduced into the water tested in the jar test. The micro-sand was laid out to dry overnight and stored in a plastic jar.

Raw water was collected from the raw water sampling tap located after the screens to the plant (Figure 2). Four (4) 18L pails were filled with water on the morning of April 28, 2016. The raw water temperature, pH and turbidity as read from the on-line meters during collection were as follows:

- Temperature: 12.1°C
- pH: 8.03
- Turbidity: 0.83

Polymer solution utilized in the jar tests was obtained (by plant staff) from the bulk solutions prepared for the full-scale unit in the plant. The concentration of the bulk polymer was calculated to be approximately: 0.003 kg/L (3000 mg/L). The polymer dose in the Actiflo® was calculated for April 27, 2016 to be 0.54 mg/L.

Figure 2 Raw Water Sampling Location



3.3 pH Control

It was initially anticipated that the pH of the raw water would need to be adjusted to an optimum theoretical pH (as provided by the manufacturer). It was envisioned that the minimum and maximum doses would be adjusted for pH by recording the volume of acid or caustic required to bring the pH of solution into the optimum pH range by conducting a small scale titration. Amounts to be added to intermediate coagulant doses would then be interpolated.

Upon review of the technical product information for each of the products, it was noted that the optimum pH ranges for all the products lied between the range of 6 – 8. Since the raw water pH range supplied by the Plant was 7.5 – 8, it was noted that all the tested coagulants operate optimally at the raw water pH and pH adjustment was hence not required.

3.4 Temperature Control

Ambient temperature in the lab was around 20°C. In order to maintain the tested water at a temperature below 12°C, water was stored in the refrigerator/freezer before testing (Figure 3). Ice packs were placed within the jars during the course of the test to prevent temperature rise above 12°C while the test was ongoing.

Due to space constraints only one pail could be stored in the refrigerator in the laboratory. The remaining three (3) pails of raw water were stored outside the water treatment plant. Ambient temperatures for Lindsay on the two days of the jar test are as follows:

- April 28, 2016: High: 10°C, Low: -4°C
- April 29, 2016: High: 13°C, Low: -2°C

Since the target was to carry out the jar test at temperatures below 12°C, storing the pails outside the water was deemed acceptable.

Figure 3 Raw Water Storage During Jar Testing



3.5 Jar Testing

Readings for the raw water pH, temperature, turbidity and UV absorbance were recorded. 2L of raw water was transferred into each of the square jars using a 1L measuring cylinder. The paddles were set a few centimetres from the bottom of the jars.

The respective coagulant to be tested was diluted in a ratio of 1:100 using a volumetric flask and transferred to a plastic bottle. The neat polymer was also diluted in a ratio of 1:100 using a volumetric flask and transferred to a plastic bottle. Each of these dilutions were prepared right before beginning the jar test. The required amount of coagulant to be added to jars 1 – 6 was measured using a micropipette and transferred to a glass vial. The amount of polymer to be added to each jar was divided equally into two glass vials. The amount of microsand to be transferred into each jar was placed into a plastic weigh boat in preparation for the beginning of the test.

The jar test apparatus was switched on and set to 150 ± 5 rpm. The coagulant was added to each of the jars and the timing started. At 2:40 mins the microsand followed by 50% of the polymer was added to each of the jars. At 5:20 mins, the remaining 50% of polymer was added to each of the jars. After 6 mins of maturation time, the stirring was stopped at 13:20 mins and the water was allowed to settle for 4 mins. At 17:20 mins, the supernatant from each of the jars were extracted using the tap for laboratory analysis and bottling for external analysis. Samples were kept cold before delivery to the lab. Images taken during jar testing of one of the coagulants are presented in Figure 4 below.

Figure 4 Time Lapse of Jar Test for one coagulant



The water quality parameters tested are summarized in Table 2 below:

Table 2 Water Quality Parameters Tested

WSP (In Lab)	Commercial Lab
pH	Alkalinity
Temperature	Apparent Colour
Turbidity	True Colour
UVA	Residual Aluminum
	Total Hardness
	Calcium Hardness
	DOC
	TOC

4. Results

4.1 Raw Water

The raw water quality results are summarized in Table 3 below.

Table 3 Raw Water Quality Parameters

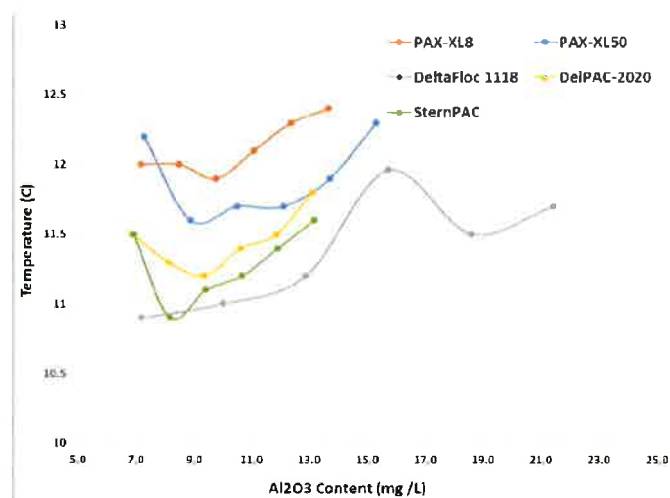
Parameter	Value	Unit
pH	8.09	
Temperature	10.28	(°C)
Turbidity	1.38	(NTU)
UVA	0.22	
DOC	7.4	mg/L
TOC	7.8	mg/L
Alkalinity	177	(mg CaCO ₃ /L)
True colour	20	
Apparent Colour	38	
Calcium Hardness	73.6	mg/L
Total Hardness	220	mg/L
Residual Aluminum	7.4	ug/L

4.2 Jar Test Results

Lab results from SGS Canada Inc. and data sheets summarizing the jar test results for each of the coagulants are included in Appendix 3. Graphs illustrating performance of each of the coagulants with regards to the different water quality parameters are included in Appendix 4.

The water temperature was measured in samples from each of the jars following completion of a test. It was noted that the final water temperature was always below 12.5°C as noted in Figure 5. This indicates that the objective of conducting the test at cold temperature was achieved. However since the jar test was carried out at the upper end of the cold water range, the results may not be the same at extreme cold water temperatures (2 - 4°C).

Figure 5 Water Temperatures following jar tests



With increasing dose of SternPAC, DelPAC-2020 and PAX-XL50, the pH of the water was noted to decrease slightly (Appendix 4). The pH did not appear to change significantly with an increase in dosage of DeltaFloc-1118. It was unclear why the pH increased with increasing dose of PAX-XL8.

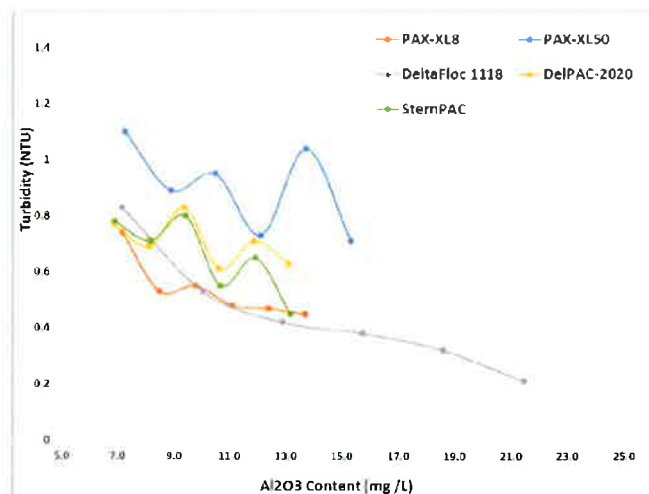
There were no identifiable trends in change of alkalinity, calcium hardness and total hardness between the coagulants tested (Appendix 4).

Apparent colour and true colour were both noted to decrease with increasing dose for all coagulants tested (Appendix 4). SternPAC and PAX-XL50 appeared to perform slightly better with regards to True colour removal, while DeltaFloc-1118 and SternPAC seemed to perform better with regards to Apparent colour removal.

UV absorbance, dissolved organic carbon and total organic carbon all decreased with increased coagulant dose (Appendix 4). Overall, all the coagulants performed very similar in regards to removal of these parameters. There appeared to be slightly better performance of SternPAC and PAX-XL50 regarding removal of total and dissolved organic carbon, and SternPAC and DeltaFloc-1118 regarding UVA. The differences noted between the coagulants however do not seem to be significant.

Turbidity was also noted to decrease with increasing coagulant dose as illustrated in Figure 6. PAX-XL50 exhibited significantly less turbidity removal than the other coagulants. PAX-XL8 and DeltaFloc-1118 exhibited slightly better turbidity removal than DelPAC-2020 and SternPAC.

Figure 6 Jar Test results for Turbidity



The aluminum residual was noted to be lowest with use of DeltaFloc-1118 as a coagulant (Appendix 4). The remaining coagulants resulted in similar residual aluminum generation.

5. Chemical Costs

The City of Kawartha Lakes issued a Request for Information (2016-46-RFI) seeking input from the suppliers of the five chemicals on estimated costs based on the 2015 consumption quantity of polyaluminum chloride of 630,000 kg. A summary of the responses received from the suppliers is presented in Table 4 below.

Table 4 Summary of Chemical Costs

Chemical	Supplier	Proposed Consumption (kg)	Cost
SternPAC	Kemira	630,000	\$277,000
PAX-XL8	Kemira	620,000	\$297,000
PAX-XL50	Kemira	510,000	\$250,000
DeIPAC 2020	Control Chem	-	\$300,000
DeltaFloc-1118	Control Chem	-	\$300,000

6. Conclusion

Based on the results, the following conclusions are drawn:

- PAX-XL50 exhibited significantly lower turbidity removal compared to the other coagulants. Since turbidity is a critical parameter for water quality, PAX-XL50 is not recommended for further testing.
- PAX-XL8 resulted in an increase in pH with increasing dose. An increase in pH could result in increased scaling and PAX-XL8 is hence not recommended for further testing.
- Whereas the performance of DeltaFloc-1118 and DeIPAC 2020 were noted to be similar for several parameters, DeltaFloc-1118 yielded better results compared to DeIPAC 2020 for turbidity, apparent colour and aluminum. DeIPAC 2020 is hence not recommended for further consideration.

Other than SternPAC which is currently used at the plant, the only other coagulant tested which may be considered further is DeltaFloc-1118. Under the conditions investigated in the current jar test, the results suggest that there is no obvious benefit in switching from SternPAC to DeltaFloc-1118.

It should be noted however that the jar test was carried out at a temperature between 11 and 12.5°C, so the results obtained are valid at this temperature. Since the same results may not hold true at extremely low temperatures, it is recommended that SternPAC and DeltaFloc-1118 be tested further at a temperature of 2 - 4°C, to investigate if DeltaFloc-1118 exhibits superior performance compared to SternPAC.

In the absence of any additional jar tests, since the plant is currently using SternPAC (and the staff are knowledgeable with its handling and use), our recommendation is that the Lindsay Water Treatment plant continue using SternPAC as the cold water coagulant.

Based on the cost estimates received from the chemical suppliers, DeltaFloc-1118 is more expensive than SternPAC. A switch in coagulant to DeltaFloc-1118 would hence imply a higher cost to the City. On the other hand, DeltaFloc-1118 consumed less alkalinity and resulted in a more stable pH, which could result in a lower consumption of carbon dioxide. The current results cannot hence determine the overall cost implication of switching coagulants. If the results for DeltaFloc-1118 are significantly better than SternPAC when re-tested at the extreme cold temperatures however, an increase in cost associated with a switch to DeltaFloc-1118 may be justified.

It is recommended that when SternPAC and DeltaFloc-1118 are re-tested at cold temperatures, the following additional parameters are included in the analysis to assess for corrosivity: chloride, sulphate and total dissolved solids (TDS). This will allow the calculation of the following corrosion indexes: Larsons-Skold Index, Langelier Index, Chloride to Sulphate Mass Ratio (CSMR) and their comparison with the full scale results. Additionally, before any change in coagulant is implemented, we recommend that an evaluation be carried out to highlight the effect of the change in coagulant on downstream processes.

Considering the current average dose of 80-85 mg/L SternPAC used at the plant (corresponding to an equivalent dose of 10 – 10.7 mg/L Al_2O_3), the dosage appears to be optimal. However, whether SternPAC continues to be used as the cold water coagulant or DeltaFloc-1118 is recommended to be adopted as an alternate coagulant, we recommend that an optimization jar test study be conducted to review the microsand dose, determine the optimum polymer dose and optimum pH since the current dosing ranges for these inputs do not seem to be optimized.

Appendix 1

Coagulant Options

Lindsay Water Treatment Plant Jar Testing for Alternative Coagulants



To be Tested	Name of Chemical	Constituent	Conc. Of Chemical	Supplier	Optimum pH Range	Basicity	Typical Dose	Conc. Of Al ₂ O ₃	ANSI/NSE Standard 60 certified and meets all Ontario Regulations (Y/N)	Comments
Y	DelPAC 2020	Aluminum Chloride Hydroxide Sulfate Solution	-	ControlChem Canada Ltd.	6 - 8	70%	90% SternPAC - depending on raw water	10.50%	Y	RFQ Indicated DelPAC 2020 to be tested
Y	Delta-Floc 1118	Aluminum Chloride Hydroxide, Aluminum chlorohydrate	-	ControlChem Canada Ltd.	6 - 8	83%	40% SternPAC - depending on raw water	22%	Y	Selected for Testing
N	Delta-Floc 1123	Aluminum Chloride Hydroxide Sulfate Solution, Blend	-	ControlChem Canada Ltd.	6 - 8	78%	40% SternPAC - depending on raw water	16.70%	Y	Similar to Delta-Floc 1118 which was selected
Y	PAX-XL8	Aluminum Chloride Hydroxide Sulfate	30-35%	Kemira	5.5 - 8	65 - 70	-	10.5	Y	Selected for Testing
Y	PAX-XL50	Aluminum Chloride Hydroxide Sulfate	33-40%	Kemira	5.5 - 8	60	-	13	Y	Selected for Testing
N	PAX-XL54	Aluminum Chloride Hydroxide Sulfate	40-43%	Kemira	5.5 - 8	75	-	19	Y	Similar to PAX-XL50 which was selected
N	PAX-18	Polyaluminum Chloride	30-40%	Kemira	5.5 - 8	42	-	17	Y	Previous Red water issues when used at plant
Y	SternPAC	Polyaluminum Chloride	-	Kemira (From Plant Supply)	5.5 - 8	50	-	10.4	Y	SternPAC currently used & to be tested
N	WC 620 Polyadmac	Diallyldimethylammonium chloride homopolymer	-	Wescor	6 - 9	-	0.7 - 5 ppm	-	Y	Plant does not have correct sized pumps to dose small qtys
N	WC 530 - Polyamine	Epichlorohydrin amine condensates polymer solution	-	Wescor	6 - 9	-	0.5 - 3 ppm	-	Y	Plant does not have correct sized pumps to dose small qtys
N	WC 585 - polyamine	Epichlorohydrin amine condensates polymer solution	-	Wescor	6 - 9	-	0.5 - 3 ppm	-	Y	Plant does not have correct sized pumps to dose small qtys
N	Magnasol 4000 G	Aluminum Salt	-	Canada Colors & Chemicals	-	-	-	-	-	Insufficient Information provided to make a decision

Appendix 2

Actiflo® Laboratory Jar Test Procedure

N° method		Revision date
Reference	ACTIFLO LABORATORY JAR TEST PROCEDURE	2015-07-02

In order to simulate the ACTIFLO® process, a modified Jar test procedure was developed. The procedure can be used to find the adequate coagulant and polymer dosages to obtain a clarified water with a low turbidity. Furthermore, the modified jar test procedure has the capability of evaluating or predicting process performances of an existing ACTIFLO® unit and bring accurate diagnosis on operation troubleshooting.

The simulation method reproduces results that are very close to full-scale unit results. Such reproduction is achieved by simulating the same contact times in each basin and adding the chemicals and micro-sand along the same sequence used in the full-scale unit.

At the designed flow rate, the surface loading rate in a typical ACTIFLO® unit is 40 m/hr. This loading rate corresponds to hydraulic contact times of respectively 2, 2, 6 and 3 minutes in the coagulation, injection, maturation and settling tanks.

A. Material

- Jar test apparatus
- Raw water
- Circulating open bath for temperature control (optional).
- Square glass beakers or round beakers (1 Liter)
- Washed micro-sand
- Polymer
- Coagulant
- Acid or alkali, to adjust the pH (optional)
- Measurement apparatus (turbidimeter, spectrophotometer, etc.)
- Stopwatch

B. Chemicals Preparation

- Prepare the microsand dedicated to Jar-Test.

This microsand has to be already washed with distilled or tap water to remove sand dust causing turbidity. To prepare the microsand, follow the procedure below:

Rinse the new or used micro-sand thoroughly 10 times or until the supernatant is clear, in order to eliminate turbidity caused by micro-grains or any suspended particles that could be introduced into the water tested in the jar test. Dry in a 104°C oven overnight. Place in a identified microsand plastic jar.

- Prepare a polymer solution in the laboratory or use the polymer solution prepared for the full-scale unit in the WTP.

From dry polymer powder:

Prepare a 0.1% solution. Weight 0.1 g of dry polymer and slowly add in a 0.25L beaker filled with 0.1 L of distilled water. The beaker has to be mixed to avoid eye fish in the solution. Add the dry polymer weight into the vortex formed by mixing. Mix the solution for approximately 1 hour until complete dissolution of the polymer. 0.1 mL of this



ACTIFLO® JARTEST PROCEDURE

solution corresponds to 1 mg/L. 1mL of this prepared solution added in a 1000 L beaker corresponds to 1 mg/L of polymer dosage.

For better accuracy, it is recommended to dilute this solution prior injecting in the jar test beakers if the dosages to apply are less than 1 mg/L. Measure 10 mL of prepared polymer solution and complete at 100 mL with distilled water. 1mL of this diluted solution corresponds to 0.1 mg/L of polymer dosage.

Caution: the 0.1% solution is efficient for 1 day. The diluted polymer solution is efficient for approximately 1 hour. Prepare new diluted solution after 1hour use.

From polymer preparation tank:

For polymer at 1 g/L (0.1%), sample polymer from polymer metering pump or polymer preparation tank at the WTP.

Dilution to obtain a 0.1 g/L solution:

Concentration in the tank (g/L)	Dilution factor	Volume to add in the 100 ml cylinder (mL)
1.5	15	6.7
2.0	20	5
2.5	25	4
3.0	30	3.3

Fill the cylinder to 100 mL mark with distilled water and stir.

Caution: The polymer solution as prepared is efficient for approximately 1 hour. Prepare new dilution after 1 hour use.

Caution: Polymer solution is viscous and very slippery if dropped on the floor.

Polymer volume to inject for 1L water during the jar test is as follow:

Plant polymer diluted at 1.0 g/L (0.01%), for 1 L jar test.			
Dosage required (mg/L)	Total Volume (mL)	Polymer volume to add (mL)	
		1st injection	2nd injection
0.5	0.5	0.25	0.25
0.75	0.75	0.375	0.375
1.25	1.25	0.625	0.625
1.5	1.5	0.75	0.75
2.0	2.0	1.0	1.0
3.0	3.0	1.5	1.5

- Coagulant

Use coagulant from manufacturer bottle or sample coagulant metering pump skid in the WTP.

Caution: Dilution is not necessary if a micropipette is available (0-200 µL).

Caution: Change your tip or pipette between each jar tests series (risk of coagulant precipitation in the tip)

Caution: Never dilute PAC or PASS coagulants (risk of precipitation)

If no micropipette available, the following dilution

For organic coagulant, a dilution factor of 10 is recommended. Dilute 10 mL of neat coagulant into a 100 mL graduated cylinder using distilled water for dilution.

For inorganic coagulant, a dilution factor of 10 or 50 can be used.

The coagulant dosage may be expressed in different ways:

Volumetric dosage (µL /L)

mg/L of commercial product as sold = volume (µL /L) x specific gravity

mg/L of active ingredient = volume (µL /L) x specific gravity x concentration (%)

mg Fe or Al/L (recommended but not common)= volume (µL /L) x specific gravity x % Fe or Al

mg/L solid product (not recommended but very common in WTP) = volume (µL /L) x specific gravity x dry solids content (%)

To validate the calculation, please refer to the chemical technical specifications sheet.

C. Test Method

The optimal results will be achieved using the following jar test steps:

Step 1: Perform a series of jar test at fix coagulant dosage, fix polymer dosage and different pH (pH curve).

Step 2: Perform a series of jar tests at fix pH and using different coagulant dosages and fix polymer dosage (coagulant curve). You may review the pH curve at the optimal coagulant dosage found (optional).

Step 3: Perform a series of jar tests at different polymer dosage, with the optimal pH and coagulant found in the previous steps (polymer curve).

The Actiflo jar test method may be executed as follow:

Times given in the test method below are specific to a rise rate of 40 m/h.

Set the circulating bath to desired temperature (optional).

Measure the raw water parameters (pH, alkalinity, true and apparent colour, turbidity, UV absorbance, temperature). Measure parameters according to protocol and test objectives.

Fill up the 1-Liter beakers with raw water.

Set the beakers on the bench.

Make sure raw water temperature corresponds with the desired temperature (optional).

Set the paddle between 0.5 and 1.0 cm from the bottom of the beaker.

Start mixing and adjust speed at 150 RPM.

Add the acid or the alkali to adjust the pH (optional).

Add the coagulant (see timeline below).

Start the stopwatch or the sequential run in the Jar tester.

Two minutes after adding coagulant, add micro-sand (8-10 g/L of water) and 50% of the polymer dosage.

Two minutes (cationic polymer) or 5 minutes (anionic polymer) after adding the micro-sand and first polymer dosage, inject the remaining 50 % polymer dosage.

After a supplementary maturation contact time of 6 minutes (cationic polymer) or 3 minutes (anionic polymer), stop stirring and allow the water to settle for the next 3 minutes.

Use a 25-100 mL syringe, pipet or a pipe under vacuum to collect the supernatant (NOT collect the surface, due to microsand and microflocs that may float). Sample the clarified water.

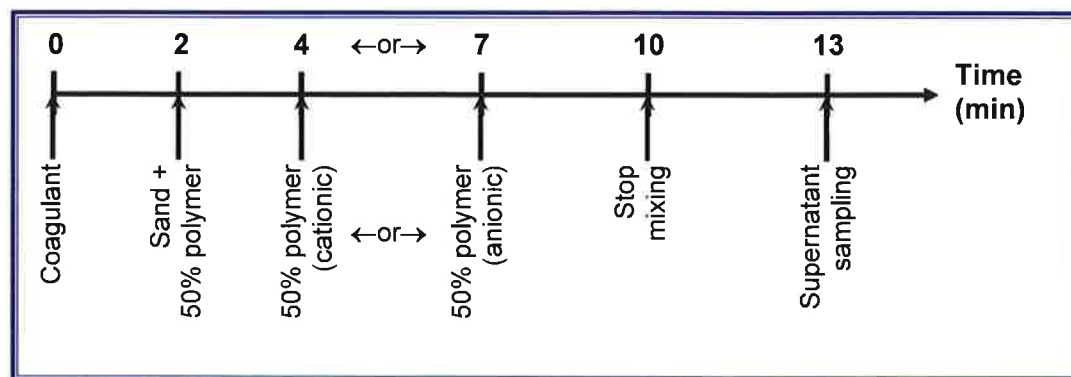
Measure the clarified water parameters important for the test objectives.

Note all the results and parameters on the ACTIFLO® jar test log sheet.

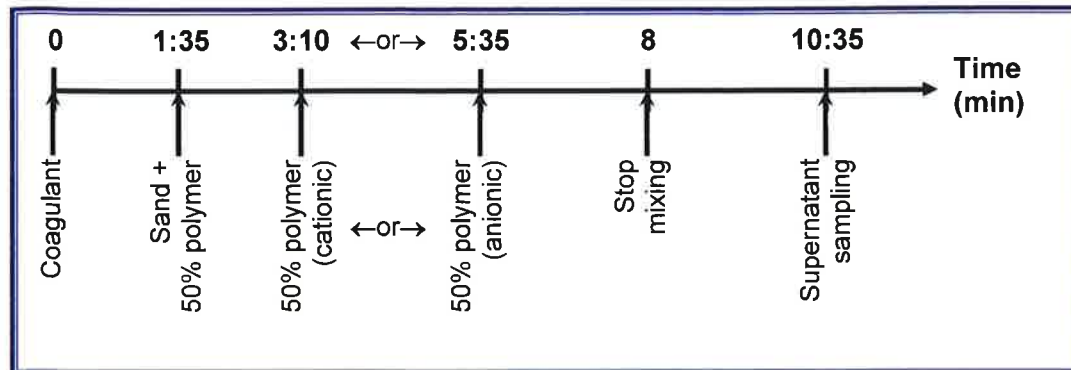
TIMELINE FOR SELECTED RISE RATES

20 m/h: twice the time for 40 m/h

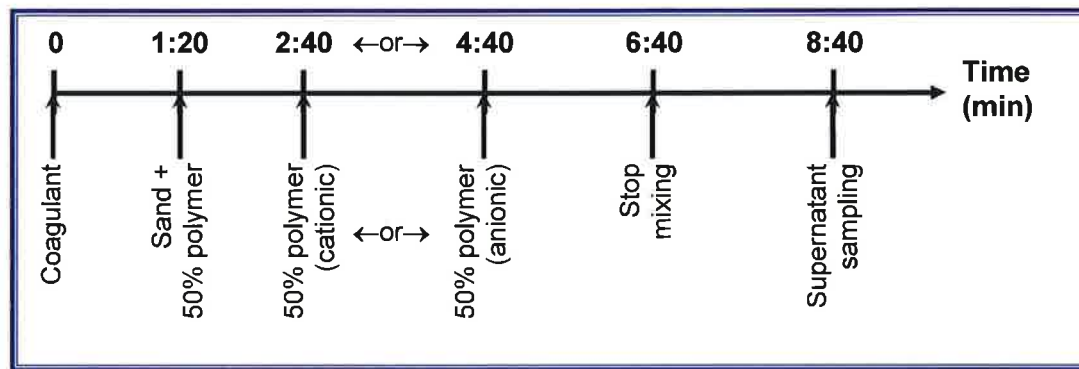
40 m/h



50 m/h



60 m/h



80 m/h: half the time for 40 m/h

C. Waste

Do not throw the sand in the wash bin. Collect sand and discard as stated by site regulation.

Date de révision : 2015-07-02

Révisé par : CDM

Approuvé par : SV

Appendix 3

Result Data Sheets



SGS Canada Inc.
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12 Peel Street
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Works #: 220000175

10-May-2016

Date Rec. : 29 April 2016
LR Report: CA14580-APR16

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Alkalinity mg/L as CaCO ₃	Colour TCU	Apparent Colour CU	Hardness mg/L as CaCO ₃	Aluminum ug/L	Calcium mg/L	Dissolved Organic Carbon mg/L	Total Organic Carbon mg/L
1: Analysis Start Date		---	29-Apr-16	02-May-16	02-May-16	03-May-16	03-May-16	03-May-16	29-Apr-16	29-Apr-16
2: Analysis Start Time		---	21:44	15:12	13:53	09:11	09:11	07:48	22:19	22:19
3: Analysis Approval Date		---	06-May-16	03-May-16	02-May-16	04-May-16	04-May-16	04-May-16	10-May-16	10-May-16
4: Analysis Approval Time		---	12:32	11:29	15:25	10:18	10:18	10:19	13:05	13:05
7: AO/OG		---	30-500	5		80-100	100	---	5	---
8: MDL		---	2	3		0.05	0.3	0.01	0.2	0.2
9: NR DP-2020-T1	29-Apr-16	11.0	181	10	20	211	289	70.2	6.2	6.0
10: NR DP-2020-T2	29-Apr-16	11.0	180	9	18	215	257	71.3	5.0	5.6
11: NR DP-2020-T3	29-Apr-16	11.0	178	8	16	209	368	68.8	4.8	5.4
12: NR DP-2020-T4	29-Apr-16	11.0	178	8	16	213	267	70.6	5.4	5.8
13: NR DP-2020-T5	29-Apr-16	11.0	172	10	13	206	304	67.7	5.1	5.0
14: NR DP-2020-T6	29-Apr-16	11.0	172	7	12	218	231	72.6	5.1	5.1
15: NR PAX-XL50-T1	28-Apr-16	11.0	177	11	20	211	313	69.3	6.3	6.0
16: NR PAX-XL50-T2	28-Apr-16	11.0	185	9	18	213	296	70.9	5.1	6.0
17: NR PAX-XL50-T3	28-Apr-16	11.0	175	8	17	209	394	68.7	5.0	5.7
18: NR PAX-XL50-T4	28-Apr-16	11.0	172	7	17	217	286	72.2	4.9	5.5
19: NR PAX-XL50-T5	28-Apr-16	11.0	177	7	13	217	307	71.2	4.8	4.8
20: NR PAX-XL50-T6	28-Apr-16	11.0	180	6	12	213	250	70.5	4.1	4.4
21: NR SPAC-T1	29-Apr-16	11.0	177	11	21	214	301	71.3	5.7	5.9

Page 1 of 2

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Test method information available upon request. "Temperature Upon Receipt" is representative of the whole shipment and may not reflect the temperature of individual samples.



SGS Canada Inc.
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Phone: 705-652-2000 FAX: 705-652-6365

Works #: 220000175

LR Report : CA14580-APR16

Sample ID	Sample Date & Time	Temperature Upon Receipt °C	Alkalinity mg/L as CaCO ₃	Colour TCU	Apparent Colour CU	Hardness mg/L as CaCO ₃	Aluminum ug/L	Calcium mg/L	Dissolved Organic Carbon mg/L	Total Organic Carbon mg/L
22: NR SPAC-T2	29-Apr-16	11.0	190	9	18	215	266	71.5	5.4	5.9
23: NR SPAC-T3	29-Apr-16	11.0	177	10	17	216	393	71.7	5.6	5.6
24: NR SPAC-T4	29-Apr-16	11.0	188	8	14	213	196	70.0	5.0	5.0
25: NR SPAC-T5	29-Apr-16	11.0	167	8	15	213	247	70.3	4.7	5.2
26: NR SPAC-T6	29-Apr-16	11.0	173	7	12	211	224	69.6	5.2	4.8
27: NR DF1118-T1	29-Apr-16	11.0	182	14	23	213	211	70.1	5.7	6.0
28: NR DF1118-T2	29-Apr-16	11.0	181	8	14	209	83.1	69.2	5.4	6.0
29: NR DF1118-T3	29-Apr-16	11.0	187	9	10	210	65.8	69.4	5.0	5.0
30: NR DF1118-T4	29-Apr-16	11.0	182	8	9	212	77.2	70.2	4.6	4.6
31: NR DF1118-T5	29-Apr-16	11.0	190	6	7	214	50.8	71.4	3.8	4.2
32: NR DF1118-T6	29-Apr-16	11.0	193	4	6	210	57.3	69.8	4.1	4.0
33: NR PAX-XL8-T1	28-Apr-16	11.0	185	12	22	215	316	71.7	5.1	6.0
34: NR PAX-XL8-T2	28-Apr-16	11.0	174	10	17	215	250	71.1	5.5	5.4
35: NR PAX-XL8-T3	28-Apr-16	11.0	203	10	17	210	264	69.3	5.8	6.0
36: NR PAX-XL8-T4	28-Apr-16	11.0	173	10	15	213	210	70.9	5.1	5.5
37: NR PAX-XL8-T5	28-Apr-16	11.0	179	9	15	214	235	70.6	5.7	5.7
38: NR PAX-XL8-T6	28-Apr-16	11.0	175	7	14	210	197	69.7	4.8	5.2
39: NR Raw Water	29-Apr-16	11.0	177	20	38	220	7.4	73.6	7.4	7.8

AO/OG - Aesthetic Objective / Operational Guideline

MDL - SGS Method Detection Limit

NR - Not reportable under applicable Provincial drinking water regulations as per client.

Patti Stark

Project Specialist Environmental Services, Analytical

Coagulant	Sample	Al ₂ O ₃ Dose	pH	Temp. (°C)	Turbidity (NTU)	UVA	Alkalinity mg/L as CaCO ₃	True Colour TCU	Apparent Colour CU	Hardness mg/L as CaCO ₃	Aluminum ug/L	Calcium Hardness mg/L	Dissolved Organic Carbon mg/L	Total Organic Carbon mg/L
PAX-XL8	NR PAX-XL8-T1	7.15	7.41	12	0.74	0.161	185	12	22	215	315	71.7	5.1	6
	NR PAX-XL8-T2	8.48	7.55	12	0.53	0.137	174	10	17	215	250	71.1	5.5	5.4
	NR PAX-XL8-T3	9.77	7.62	11.9	0.55	0.138	203	10	17	210	264	69.3	5.8	6
	NR PAX-XL8-T4	11.07	7.63	12.1	0.46	0.126	173	10	15	213	210	70.9	5.1	5.5
	NR PAX-XL8-T5	12.37	7.69	12.3	0.47	0.127	179	9	15	214	235	70.6	5.7	5.7
	NR PAX-XL8-T6	13.67	7.68	12.4	0.45	0.116	175	7	14	210	197	69.7	4.8	5.2
PAX-XL50	NR PAX-XL50-T1	7.25	8.08	12.2	1.1	0.162	177	11	20	211	313	69.3	6.3	6
	NR PAX-XL50-T2	8.57	8.01	11.6	0.89	0.147	185	9	18	213	296	70.9	5.1	6
	NR PAX-XL50-T3	10.48	7.94	11.7	0.95	0.138	175	8	17	209	394	68.7	5	5.7
	NR PAX-XL50-T4	12.09	7.92	11.7	0.73	0.127	172	7	17	217	286	72.2	4.9	5.5
	NR PAX-XL50-T5	13.70	7.88	11.9	1.04	0.122	177	7	13	217	307	71.2	4.8	4.8
	NR PAX-XL50-T6	15.31	7.8	12.3	0.71	0.109	180	6	12	213	250	70.9	4.1	4.4
DeltaFloc 1118	NR DF1118-T1	7.15	7.67	10.9	0.83	0.181	182	14	23	213	211	70.1	5.7	6
	NR DF1118-T2	10.01	7.95	11	0.53	0.134	181	8	14	209	83.1	69.2	5.4	6
	NR DF1118-T3	12.87	7.95	11.2	0.42	0.11	187	9	10	210	65.8	69.4	5	5
	NR DF1118-T4	15.73	7.89	11.96	0.38	0.1	182	8	9	212	77.2	70.2	4.8	4.8
	NR DF1118-T5	18.59	7.91	11.3	0.32	0.087	190	6	7	214	50.8	71.4	3.8	4.2
	NR DF1118-T6	21.45	7.88	11.7	0.21	0.075	193	4	6	210	57.3	69.6	4.1	4
DelPAC-2020	NR DP-2020-T1	6.86	8.09	11.5	0.77	0.156	181	10	20	211	289	70.2	6.2	6
	NR DP-2020-T2	8.11	7.95	11.3	0.59	0.144	180	9	18	215	257	71.3	5	5.6
	NR DP-2020-T3	9.36	7.92	11.2	0.83	0.138	178	8	16	209	368	68.8	4.8	5.4
	NR DP-2020-T4	10.61	7.89	11.4	0.61	0.128	178	8	16	213	267	70.6	5.4	5.8
	NR DP-2020-T5	11.86	7.85	11.5	0.71	0.125	172	10	13	206	304	67.7	5.1	5
	NR DP-2020-T6	13.70	7.79	11.8	0.83	0.113	172	7	12	218	231	72.6	5.1	5.1
SternPAC	NR SPAC-T1	6.89	8.07	11.3	0.78	0.157	177	11	21	214	301	71.3	5.7	5.9
	NR SPAC-T2	8.15	7.93	10.9	0.71	0.147	190	9	18	215	266	71.5	5.4	5.9
	NR SPAC-T3	9.40	7.85	11.1	0.6	0.143	177	10	17	216	353	71.7	5.6	5.8
	NR SPAC-T4	10.65	7.75	11.2	0.55	0.126	188	8	14	213	196	70	5	5
	NR SPAC-T5	11.91	7.75	11.4	0.65	0.123	187	8	15	213	247	70.3	4.7	5.2
	NR SPAC-T6	13.16	7.69	11.6	0.45	0.112	173	7	12	211	224	69.6	5.2	4.8
	NR Raw Water		8.59	10.28	1.36	0.24	171	20	38	220	73	13.6	7.9	7.3

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet		Source Water:				
Date:	4/28/2016	pH			7.61	
Time:	12:15 PM	Temperature		(°C)	9.8	
Performed By:	Mazahir Alidina	Turbidity		(NTU)	1.41	
Coagulant Type:	PAX-XL8	UVA			0.227	
		DOC		mg/L	7.4	
		TOC		mg/L	7.8	
		Alkalinity		(mg CaCO3/L)	177	
Coagulant Dosage:	55 to 105 mg/L	True colour			20	
Coagulant Aid Type:	Cationic Polmer	Apparent Colour			38	
Coagulant Aid Dosage:	0.54 mg/L	Calcium Hardness		mg/L	73.6	
Microsand Dose:	20 g	Total Hardness		mg/L as CaCO3	220	
Specific Gravity	1.24	Residual Aluminum		ug/L	7.4	
Conc. Of Alum (Al ₂ O ₃) (%)	10.50					
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	55	65	75	85	95	105
Al ₂ O ₃ Conc. (mg/L)	7.16	8.46	9.77	11.07	12.37	13.67
Volume of 1:10 diluted Coagulant added (mL)	0.887	1.048	1.210	1.371	1.532	1.694
Microsand added (g)	20	20	20	20	20	20
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.667	1.667	1.667	1.667	1.667	1.667
Remaining Volume of 1:10 diluted Polymer added (mL)	1.667	1.667	1.667	1.667	1.667	1.667
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	7.41	7.55	7.62	7.65	7.69	7.68
Temperature (°C)	12	12	11.9	12.1	12.3	12.4
Turbidity (NTU)	0.74	0.53	0.55	0.48	0.47	0.45
UVA	0.161	0.137	0.139	0.126	0.127	0.116
Alkalinity as CaCO3 (mg/L)	185	174	203	173	179	175
Colour (TCU)	12	10	10	10	9	7
Apparent Colour (CU)	22	17	17	15	15	14
Hardness as CaCO3 (mg/L)	215	215	210	213	214	210
Aluminum (ug/L)	316	250	264	210	235	197
Calcium (mg/L)	71.7	71.1	69.3	70.9	70.6	69.7
Dissolved Organic Carbon (mg/L)	5.1	5.5	5.8	5.1	5.7	4.8
Total Organic Carbon (mg/L)	6	5.4	6	5.5	5.7	5.2

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet		Source Water:				
Date:	4/28/2016	pH			7.81	
Time:	2:45 PM	Temperature	(°C)		11.4	
Performed By:	Mazahir Alidina	Turbidity	(NTU)		1.41	
Coagulant Type:	PAX-XL50	UVA			0.227	
		DOC	mg/L		7.4	
		TOC	mg/L		7.8	
		Alkalinity	(mg CaCO3/L)		177	
Coagulant Dosage:	45 to 95 mg/L	True colour			20	
Coagulant Aid Type:	Cationic Polmer	Apparent Colour			38	
Coagulant Aid Dosage:	0.54 mg/L	Calcium Hardness	mg/L		73.6	
Microsand Dose:	20 g	Total Hardness	mg/L as CaCO3		220	
Specific Gravity	1.24	Residual Aluminum	ug/L		7.4	
Conc. Of Alum (Al ₂ O ₃) (%)	13.00					
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	45	55	65	75	85	95
Al ₂ O ₃ Conc. (mg/L)	7.25	8.87	10.48	12.09	13.70	15.31
Volume of 1:10 diluted Coagulant added (mL)	0.726	0.887	1.048	1.210	1.371	1.532
Microsand added (g)	20	20	20	20	20	20
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.667	1.667	1.667	1.667	1.667	1.667
Remaining Volume of 1:10 diluted Polymer added (mL)	1.667	1.667	1.667	1.667	1.667	1.667
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	8.08	8.01	7.94	7.92	7.88	7.8
Temperature (°C)	12.2	11.6	11.7	11.7	11.9	12.3
Turbidity (NTU)	1.1	0.89	0.95	0.73	1.04	0.71
UVA	0.162	0.147	0.138	0.127	0.122	0.108
Alkalinity as CaCO3 (mg/L)	177	185	175	172	177	180
Colour (TCU)	11	9	8	7	7	6
Apparent Colour (CU)	20	18	17	17	13	12
Hardness as CaCO3 (mg/L)	211	213	209	217	217	213
Aluminum (ug/L)	313	296	394	286	307	250
Calcium (mg/L)	69.3	70.9	68.7	72.2	71.2	70.5
Dissolved Organic Carbon (mg/L)	6.3	5.1	5	4.9	4.8	4.1
Total Organic Carbon (mg/L)	6	6	5.7	5.5	4.8	4.4

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet		Source Water:				
Date:	4/29/2016	pH			8.4	
Time:	9:20 AM	Temperature		(°C)	11.2	
Performed By:	Mazahir Alidina	Turbidity		(NTU)	1.25	
Coagulant Type:	DeltaFloc-1118	UVA			0.223	
		DOC		mg/L	7.4	
		TOC		mg/L	7.8	
		Alkalinity		(mg CaCO3/L)	177	
Coagulant Dosage:	25 to 75 mg/L	True colour			20	
Coagulant Aid Type:	Cationic Polmer	Apparent Colour			38	
Coagulant Aid Dosage:	0.54 mg/L	Calcium Hardness		mg/L	73.6	
Microsand Dose:	20 g	Total Hardness		mg/L as CaCO3	220	
Specific Gravity	1.3	Residual Aluminum		ug/L	7.4	
Conc. Of Alum (Al ₂ O ₃) (%)	22.00					
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	25	35	45	55	65	75
Al ₂ O ₃ Conc. (mg/L)	7.15	10.01	12.87	15.73	18.59	21.45
Volume of 1:10 diluted Coagulant added (mL)	0.385	0.538	0.692	0.846	1.000	1.154
Microsand added (g)	20	20	20	20	20	20
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.667	1.667	1.667	1.667	1.667	1.667
Remaining Volume of 1:10 diluted Polymer added (mL)	1.667	1.667	1.667	1.667	1.667	1.667
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	7.87	7.95	7.95	7.89	7.91	7.88
Temperature (°C)	10.9	11	11.2	11.96	11.5	11.7
Turbidity (NTU)	0.83	0.53	0.42	0.38	0.32	0.21
UVA	0.181	0.134	0.11	0.1	0.087	0.075
Alkalinity as CaCO3 (mg/L)	182	181	187	182	190	193
Colour (TCU)	14	8	9	8	6	4
Apparent Colour (CU)	23	14	10	9	7	6
Hardness as CaCO3 (mg/L)	213	209	210	212	214	210
Aluminum (ug/L)	211	83.1	65.8	77.2	50.8	57.3
Calcium (mg/L)	70.1	69.2	69.4	70.2	71.4	69.8
Dissolved Organic Carbon (mg/L)	5.7	5.4	5	4.6	3.8	4.1
Total Organic Carbon (mg/L)	6	6	5	4.6	4.2	4

161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant



Jar Test Data Sheet			Source Water:			
Date:	4/29/2016	pH				8.31
Time:	11:20 AM	Temperature	(°C)			9.5
Performed By:	Mazahir Alidina	Turbidity	(NTU)			1.41
Coagulant Type:	DeIPAC 2020	UVA				0.223
		DOC	mg/L			7.4
		TOC	mg/L			7.8
		Alkalinity	(mg CaCO3/L)			177
Coagulant Dosage:	55 to 105 mg/L	True colour				20
Coagulant Aid Type:	Cationic Polmer	Apparent Colour				38
Coagulant Aid Dosage:	0.54 mg/L	Calcium Hardness	mg/L			73.6
Microsand Dose:	20 g	Total Hardness	mg/L as CaCO3			220
Specific Gravity	1.2	Residual Aluminum	ug/L			7.4
Conc. Of Alum (Al ₂ O ₃) (%)	10.40					
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	55	65	75	85	95	105
Al ₂ O ₃ Conc. (mg/L)	6.86	8.11	9.36	10.61	11.86	13.10
Volume of 1:10 diluted Coagulant added (mL)	0.917	1.083	1.250	1.417	1.583	1.750
Microsand added (g)	20	20	20	20	20	20
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.667	1.667	1.667	1.667	1.667	1.667
Remaining Volume of 1:10 diluted Polymer added (mL)	1.667	1.667	1.667	1.667	1.667	1.667
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	8.09	7.99	7.92	7.89	7.85	7.79
Temperature (°C)	11.5	11.3	11.2	11.4	11.5	11.8
Turbidity (NTU)	0.77	0.69	0.83	0.61	0.71	0.63
UVA	0.156	0.144	0.138	0.128	0.125	0.113
Alkalinity as CaCO3 (mg/L)	181	180	178	178	172	172
Colour (TCU)	10	9	8	8	10	7
Apparent Colour (CU)	20	18	16	16	13	12
Hardness as CaCO3 (mg/L)	211	215	209	213	206	218
Aluminum (ug/L)	289	257	368	267	304	231
Calcium (mg/L)	70.2	71.3	68.8	70.6	67.7	72.6
Dissolved Organic Carbon (mg/L)	6.2	5	4.8	5.4	5.1	5.1
Total Organic Carbon (mg/L)	6	5.6	5.4	5.8	5	5.1

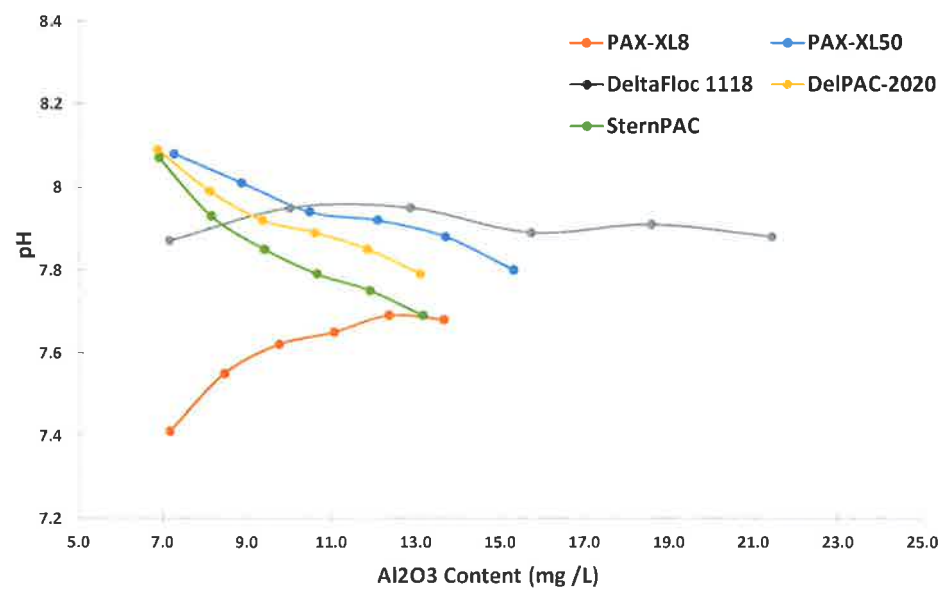
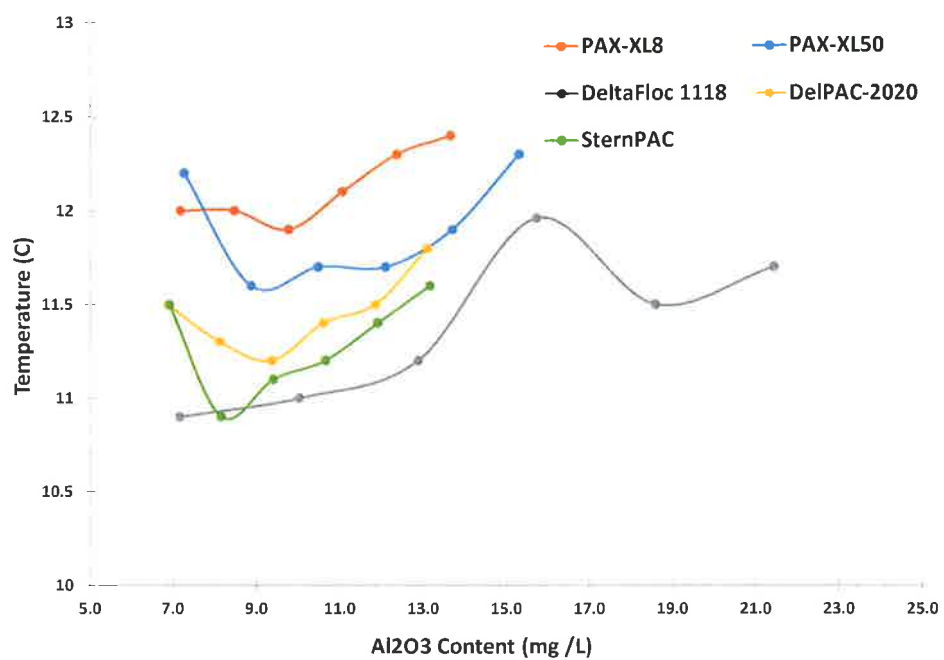
161-05613-00 Coagulant Testing for Lindsay Water Treatment Plant

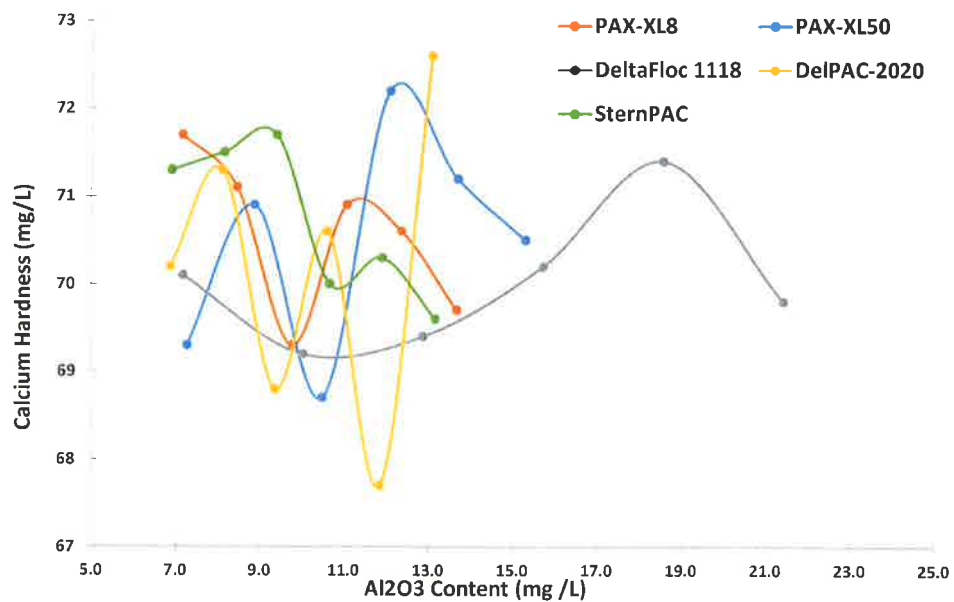
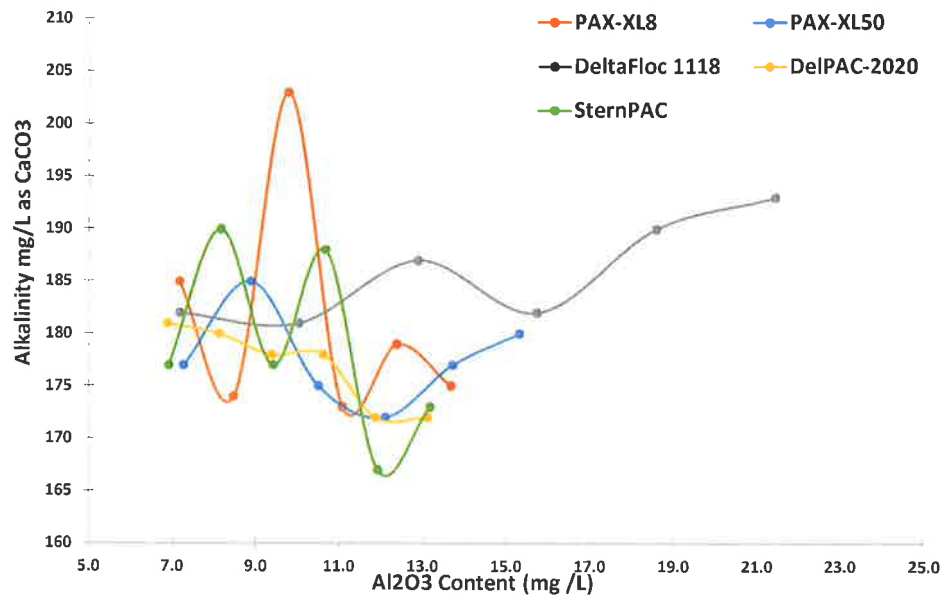


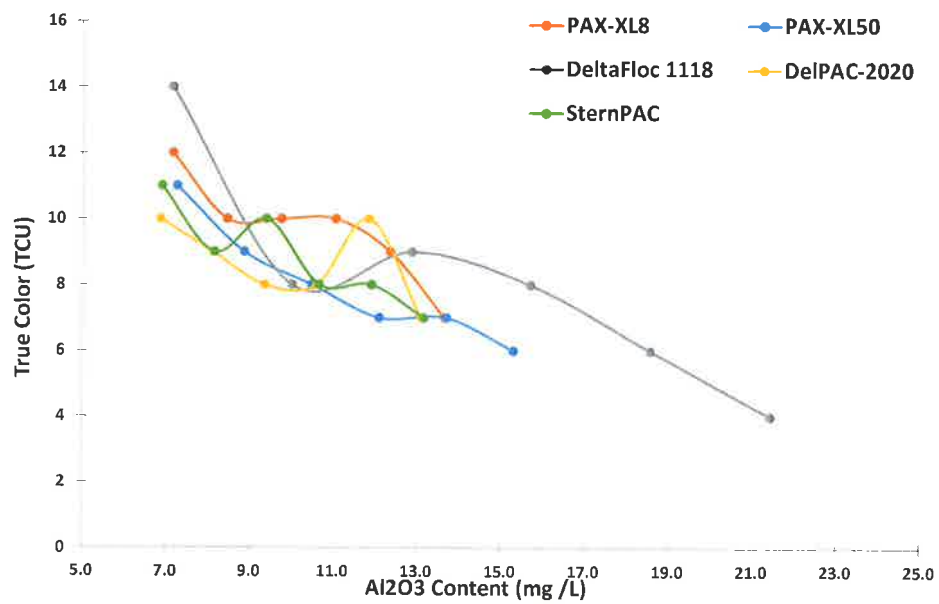
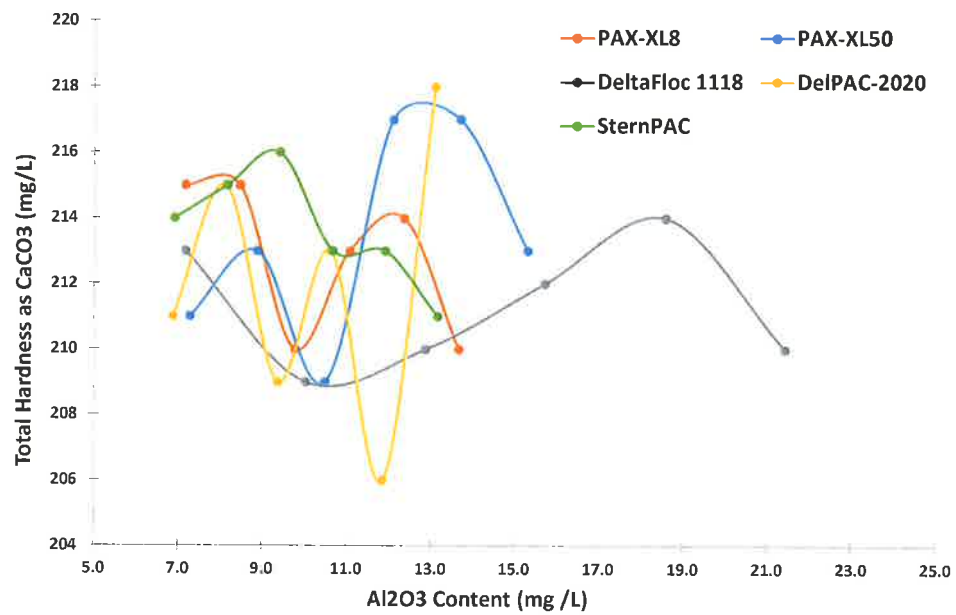
Jar Test Data Sheet			Source Water:			
Date:	4/29/2016	pH				8.31
Time:	12:50 PM	Temperature	(°C)			9.5
Performed By:	Mazahir Alidina	Turbidity	(NTU)			1.43
Coagulant Type:	SternPAC	UVA				0.224
		DOC	mg/L			7.4
		TOC	mg/L			7.8
		Alkalinity	(mg CaCO3/L)			177
Coagulant Dosage:	55 to 105 mg/L	True colour				20
Coagulant Aid Type:	Cationic Polmer	Apparent Colour				38
Coagulant Aid Dosage:	0.536 mg/L	Calcium Hardness	mg/L			73.6
Microsand Dose:	20 g	Total Hardness	mg/L as CaCO3			220
Specific Gravity	1.205	Residual Aluminum	ug/L			7.4
Conc. Of Alum (Al ₂ O ₃) (%)	10.40					
JAR NUMBER	T1	T2	T3	T4	T5	T6
DOSAGES						
Raw Water Volume (mL)	2000	2000	2000	2000	2000	2000
Coagulant Dose (mg/L)	55	65	75	85	95	105
Al ₂ O ₃ Conc. (mg/L)	6.89	8.15	9.40	10.65	11.91	13.16
Volume of 1:10 diluted Coagulant added (mL)	0.913	1.079	1.245	1.411	1.577	1.743
Microsand added (g)	20	20	20	20	20	20
Initial Volume of 1:10 diluted Polymer added with microsand (mL)	1.667	1.667	1.667	1.667	1.667	1.667
Remaining Volume of 1:10 diluted Polymer added (mL)	1.667	1.667	1.667	1.667	1.667	1.667
FLOCCULATION (0 - 2:40 mins)						
Duration (min)	2:40	2:40	2:40	2:40	2:40	2:40
Speed (rpm)	150	150	150	150	150	150
MATURATION (2:40 - 13:20 mins)						
Duration (min)	10:40	10:40	10:40	10:40	10:40	10:40
Speed (rpm)	150	150	150	150	150	150
SETTLING (13:20 - 17:20 mins)						
Duration (min)	4:00	4:00	4:00	4:00	4:00	4:00
Speed (rpm)	0	0	0	0	0	0
FINAL RESULTS						
pH	8.07	7.93	7.85	7.79	7.75	7.69
Temperature (°C)	11.5	10.9	11.1	11.2	11.4	11.6
Turbidity (NTU)	0.78	0.71	0.8	0.55	0.65	0.45
UVA	0.157	0.147	0.143	0.126	0.123	0.112
Alkalinity as CaCO3 (mg/L)	177	190	177	188	167	173
Colour (TCU)	11	9	10	8	8	7
Apparent Colour (CU)	21	18	17	14	15	12
Hardness as CaCO3 (mg/L)	214	215	216	213	213	211
Aluminum (ug/L)	301	266	393	196	247	224
Calcium (mg/L)	71.3	71.5	71.7	70	70.3	69.6
Dissolved Organic Carbon (mg/L)	5.7	5.4	5.6	5	4.7	5.2
Total Organic Carbon (mg/L)	5.9	5.9	5.6	5	5.2	4.8

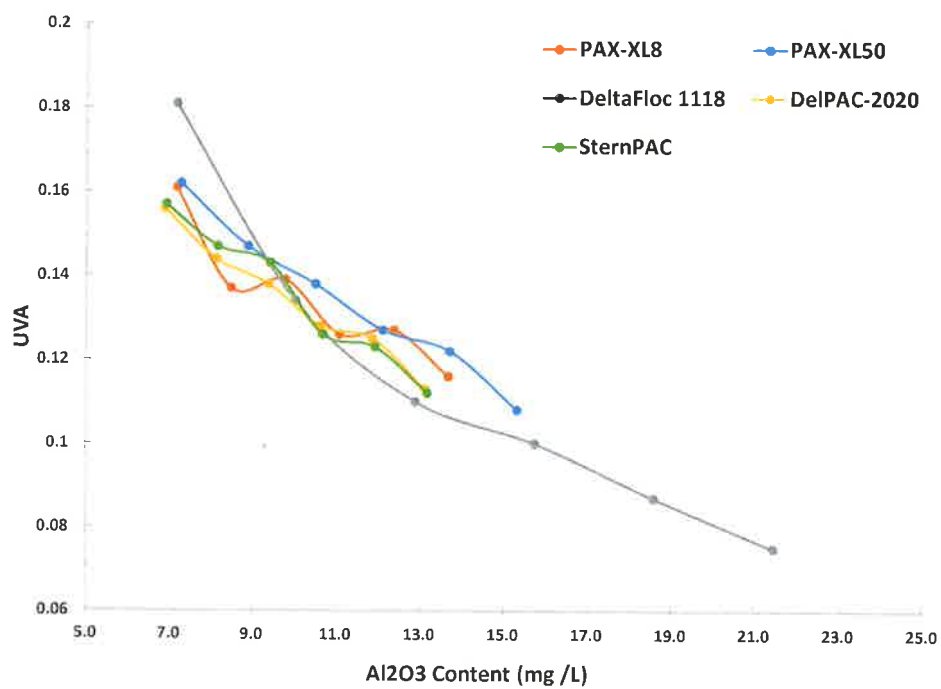
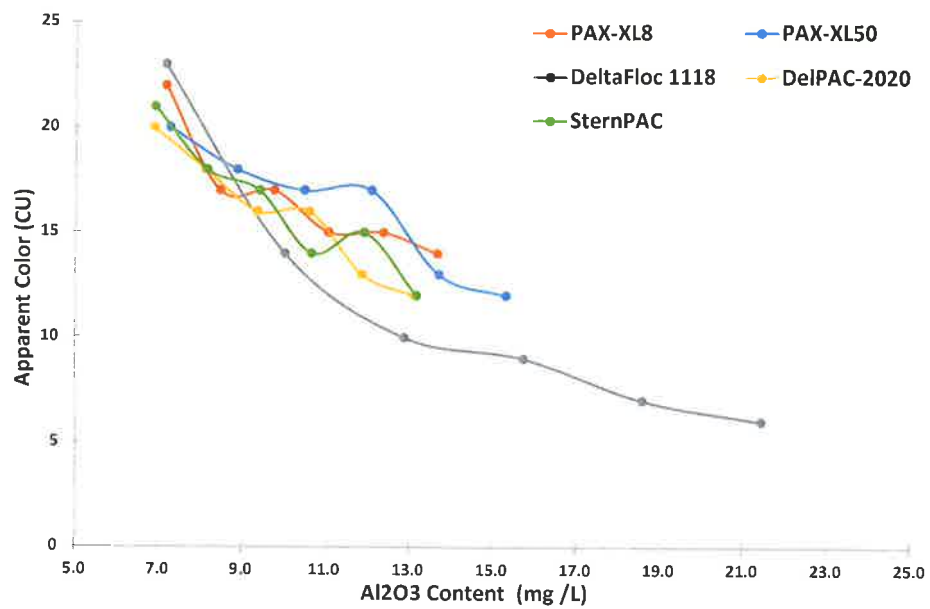
Appendix 4

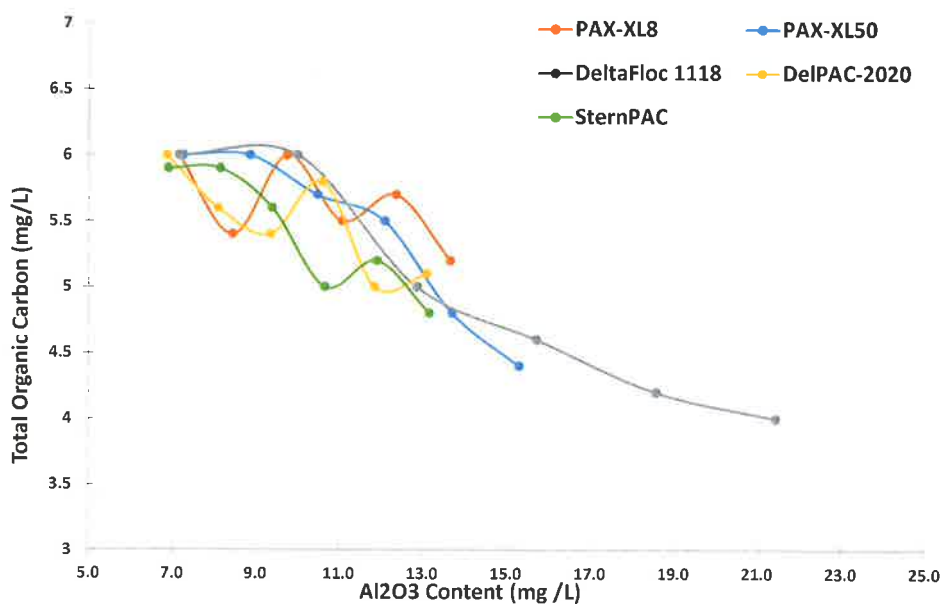
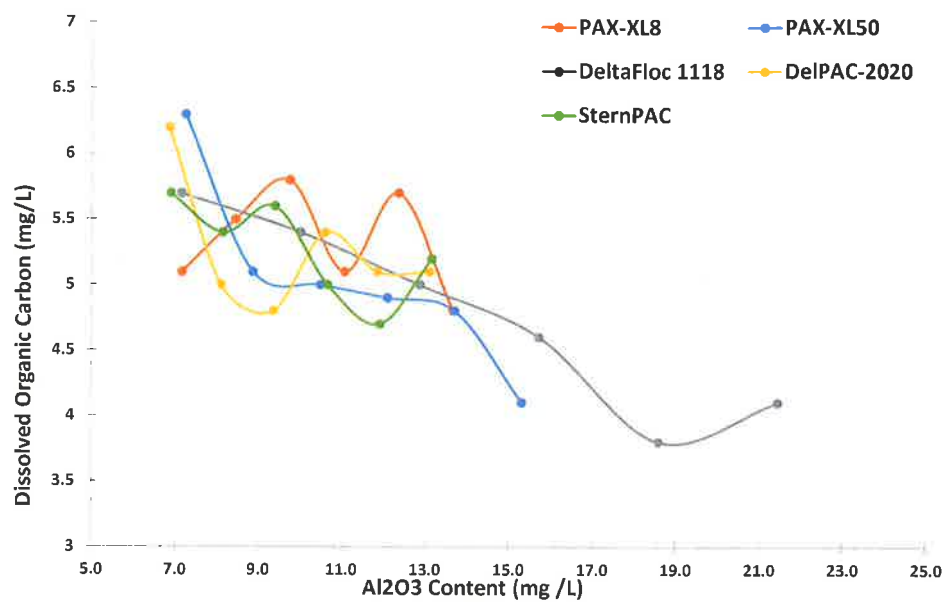
Result Graphs

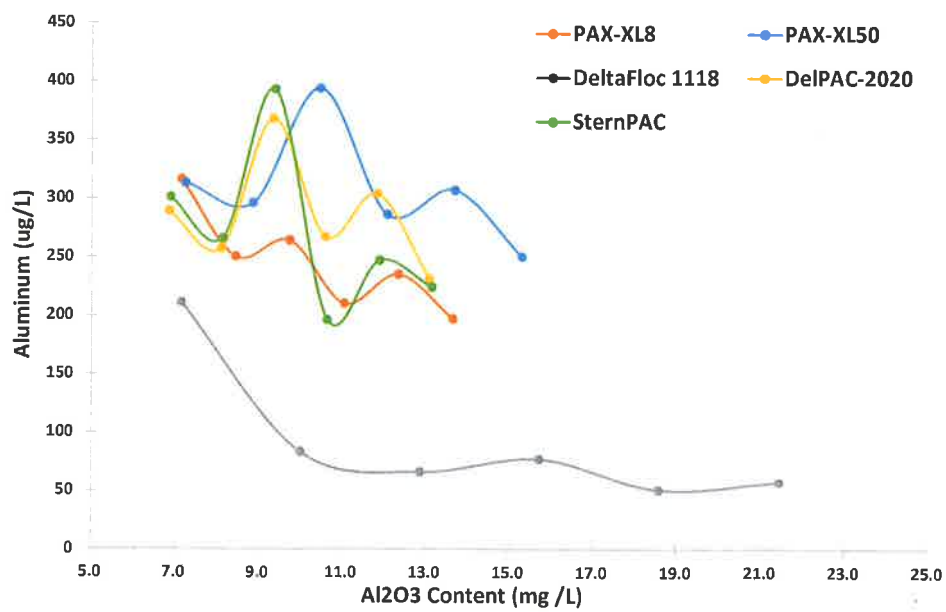
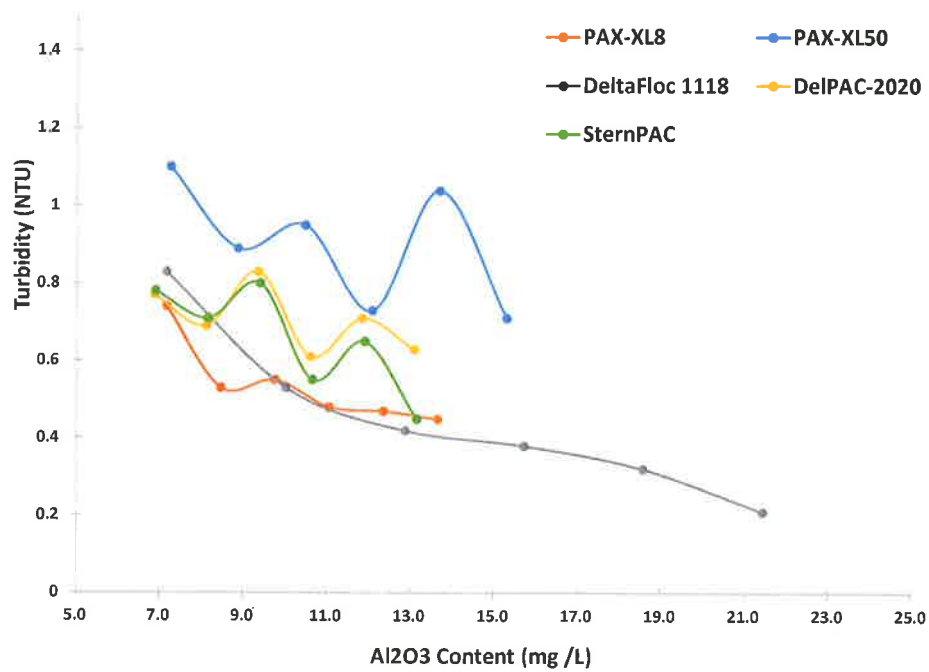












The Corporation of the City of Kawartha Lakes

By-Law 2017-

A By-law to Amend By-law 2016-206, the Consolidated Fees By-law in the City of Kawartha Lakes

Recitals

1. By-law 2016-206, a By-law to establish and require payment of fees for information, services, activities and use of City property in the City of Kawartha Lakes was adopted by Council on November 8, 2016.
2. At the September 26, 2017 Regular Council Meeting, Council approved Resolution CR2017-813 for updates to Waste Management Fees.
3. This by-law amends By-law 2016-206 to reflect that decision.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017- .

Section 1.00: Definitions and Interpretation

Definitions:

All defined terms in the amending By-law take their meaning from By-law 2016-206 of the City of Kawartha Lakes.

Section 2.00: Amendment Details

- 2.01 **Amendment:** Schedule F to By-law 2016-206 is deleted in its entirety and replaced with Schedule F, attached to and forming part of this by-law.

Section 3.00: Administration and Effective Date

- 3.01 **Administration of the By-law:** The Director of the City Departments are responsible for the administration of the respective department fees as approved in Schedules A to H of By-law 2016-206.
- 3.02 **Effective Date:** This By-law shall come into force on the date it is finally passed.

By-law read a first, second and third time, and finally passed, this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk



By-law2016-206AsA
mendedScheduleF.doc

Schedule F – Waste Management						
<i>Note: Administration charges outlined in Schedule A may apply to transactions contained in this schedule. See Schedule A for details.</i>						
F – 1 Waste Management Fees						
Service Description	Unit	Additional Fees	Fee	Fee Effective March 30, 2017	Fees Effective January 1, 2018	Reference
Solid Waste Tipping Fees shall always be based on weight unless there is a failure of the scale system and then fees will be based on rates described below. The only exception shall be when bagged garbage is tagged and then it shall be received at no charge.						
Residential Recyclable Materials (Blue/Comingle & Green/ Paper Box Recycling)	each		Free	Free	Free	By-law 2016-144
Residential Household Hazardous Waste (at designated landfill sites only)	each		Free	Free	Free	By-law 2016-144
Residential Waste Electronic & Electrical Equipment	each		Free	Free	Free	By-law 2016-144
Scrap Metal (including appliances without Freon)	each		Free	Free	Free	By-law 2016-144
Tires (with or without rims)	each		Free	Free	Free	By-law 2016-144
Ashes (must be cold to be accepted)	each		Free	Free	Free	By-law 2016-144
Curbside Bag Tags	each		\$3.00	\$3.00	\$3.00	By-law 2016-144
Mattresses and Box Springs	each		\$5.00	\$15.00	\$15.00	By-law 2016-144
Appliances Containing Freon (refrigerators, air conditions, dehumidifiers, freezers, etc.)	item		\$20.00	\$20.00	\$20.00	By-law 2016-144
Residential/ Commercial Containers						
Apartment/ Desk-side 4 gallon blue and green boxes	each		\$5.00	\$5.00	\$5.00	
Standard 16 gallon blue and 14 gallon green boxes	each		\$7.00	\$7.00	\$7.00	

Extra large 22 gallon blue boxes (for containers only)	each		\$9.00	\$9.00	\$9.00	
Commercial Recycling Carts (not available for residential collection)						
65 gallon blue and green carts	each		\$80.00	\$80.00	\$80.00	
95 gallon blue carts (for container recycling only)	each		\$95.00	\$95.00	\$95.00	
Rain Barrels						
Flat-back model (205L)	each		\$75.00	\$75.00	\$75.00	
Composters						
Backyard composters (80 gallons)	each		\$45.00	\$45.00	\$45.00	
Kitchen compost pails (2 gallons)	each		\$3.00	\$3.00	\$3.00	
Digesters	each			\$60.00	\$70.00	
Weight Based Tipping Fees						
Minimum charge Sorted Material (Waste)	Visit			\$5.00	\$5.00	By-law2017-081
Minimum charge Mixed Load (Waste and Leaf & Yard Materials)	Visit			\$7.00	\$7.00	By-law2017-081
Sorted Waste over \$5 by weight	Tonne			\$100.00	\$105.00	By-law2017-081
Sorted Leaf & Yard Material over 150kg	Tonne			\$100.00	\$105.00	By-law2017-081
Mixed Loads (more than 20% by volume of recyclable materials and/or opaque bags)	tonne		N/A	\$200.00	\$205.00	By-law 2016-144
Contaminated Soil (suitable for daily cover)	tonne		\$45.00	\$50.00	\$50.00	By-law 2016-144
Contaminated Soil (not suitable for daily cover)	tonne		\$95.00	\$100.00	\$105.00	By-law 2016-144
Boat and Bale Wrap (Clean)	tonne		\$45.00	\$50.00	\$50.00	By-law 2016-144
Boat and Bale Wrap (Contaminated)	tonne		Free	\$50.00	\$105.00	By-law 2016-144
Asbestos	tonne		\$95.00	\$250.00	\$250.00	By-law 2016-144
Construction and Demolition Waste	tonne		\$95.00	\$100.00	\$105.00	By-law 2016-144

Residential, Industrial, Commercial and Institutional Waste	tonne		\$95.00	\$100.00	\$105.00	By-law 2016-144
Fees When Scales are inoperative or for Freon Removal						
Minimum charge Sorted Material (Waste)	Visit			\$5.00	\$5.00	By-law 2017-081
Minimum Charge Mixed Load (Waste and Leaf & Yard Material)	Visit			\$7.00	\$7.00	By-law 2017-081
Sorted Waste Material over \$5.00 by cubic yard	Cubic yard			\$12.50	\$15.00	By-law 2017-081
Sorted Leaf & Yard Material over 1.0 cubic yard	Cubic yard			\$12.50	\$15.00	By-law 2017-081
Mixed Loads (more than 20% by volume of recyclable materials and/or opaque bags)	cubic yard		N/A	\$25.00	\$30.00	By-law 2016-144
Asbestos per cubic yard	Cubic yard			\$125.00	\$125.00	
RV Disposal per visit at Lindsay Ops Only	per visit			\$5.00	\$5.00	
Vac Trucks	per load				\$200.00	
Boats	per foot		\$3.00	\$3.00	\$3.00	By-law 2016-144
Residential, Industrial, Commercial and Institutional Waste	cubic yard		\$10.00	\$12.50	\$15.00	By-law 2016-144
Commercial Boat and Bale Wrap (Clean)	cubic yard		Free	\$6.25	\$6.25	By-law 2016-144
Boat and Bale Wrap Contaminated	cubic yard		\$10.00	\$12.50	\$15.00	By-law 2016-144
Construction and Demolition Waste	cubic yard		\$45.00	\$50.00	\$50.00	By-law 2016-144
Contaminated Soil (suitable for cover material)	cubic yard		\$20.00	\$25.00	\$30.00	By-law 2016-144
Contaminated Soil (not suitable for cover material)	cubic yard		\$45.00	\$50.00	\$55.00	By-law 2016-144

The Corporation of the City of Kawartha Lakes

By-Law 2017-

A By-law to Amend By-law 2016-144, being A By-Law for Collection and Management of Waste and Recyclables Within The City of Kawartha Lakes

Recitals

1. Council adopted Resolution CR2017-819 on September 26, 2017 directing amendments to By-law 2016-144, being A By-Law for Collection and Management of Waste and Recyclables Within The City of Kawartha Lakes.
2. An amendment is required to implement for the 2018 season a 1 year pilot project to exempt all City of Kawartha Lakes residents from tipping fees identified within By-law 2016-206, Consolidated Fees By-law, as amended, related to bringing compliant clear bag residential waste and compliant leaf and yard residential waste to City Landfills for a period of 2 weeks in spring and 2 weeks in fall.
3. These changes require an amendment to the original by-law.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017- .

Section 1.00: Definitions and Interpretation

Definitions:

All defined terms in the amending By-law take their meaning from By-law 2016-144, as amended, of the City of Kawartha Lakes.

Section 2.00: Amendment Details

- 2.01 **Amendment:** Section 5.02 of By-law 2016-144 is amended by adding:

Section 5.02 a)(v): Notwithstanding section 5.01, no fees shall be payable with respect to:

(v) Compliant clear bag residential waste and compliant leaf and yard residential waste received for disposal at designated City landfills for a designated Pilot Project period of 2 weeks in the spring (May 14-May 27) and 2 weeks in the fall (Oct 1-Oct 14) of 2018.

Section 3.00: Administration and Effective Date

- 3.01 **Administration of the By-law:** The Director of Public Works is responsible for the administration of this by-law.
- 3.02 **Effective Date:** This By-law shall come into force on the date it is finally passed.

By-law read a first, second and third time, and finally passed, this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

The Corporation of the City of Kawartha Lakes

BY-LAW 2017-

A By-Law to Authorize the Sale Of Municipally Owned Property Legally Described as Lot 3 Registered Plan 508, in the Geographic Township of Eldon, City of Kawartha Lakes Described as Part 1 on Plan 57R-10503 Being All of PIN: 63170-0227 (LT)

Recitals

1. The subject land was declared to be surplus to municipal needs by City Council on the 24th day of September, 2013 by the adoption of Report LM2013-009 by CR2013-848.
2. Notice of the intention of City Council to pass this by-law was given by notice duly published in the Kawartha Lakes This Week newspaper in the City of Kawartha Lakes on the 22nd and 29th days of September, 2016 and the 6th day of October, 2016, in accordance with the provisions of the *Municipal Act* and By-laws 2008-065 and 2010-118, as amended.
3. The proposed by-law came before Council for consideration at its regular meeting on the 10th day of October, 2017 at 2:00 p.m. and at that time no person objected to the proposed by-law nor claimed that his land would be prejudicially affected.
4. The sale of this land was approved by the City Council on the 24th day of September, 2013 by the adoption of Report LM2013-009 by CR2013-848.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017- .

Section 1.00: Definitions and Interpretation

1.01 Definitions: In this by-law,

“City”, “City of Kawartha Lakes” or “Kawartha Lakes” means The Corporation of the City of Kawartha Lakes and includes its entire geographic area;

"City Clerk" means the person appointed by Council to carry out the duties of the clerk described in section 228 of the *Municipal Act*, 2001;

“Council” or “City Council” means the municipal council for the City;

“Mayor” means the Chief Executive Officer of the City.

1.02 Interpretation Rules:

(a) The Schedules attached to this by-law form part of the by-law, and are enforceable as such.

(b) The words “include” and “including” are not to be read as limiting the meaning of a word or term to the phrases or descriptions that follow.

1.03 Statutes: References to laws in this by-law are meant to refer to the statutes, as amended from time to time, that are applicable within the Province of Ontario.

1.04 Severability: If a court or tribunal of competent jurisdiction declares any portion of this by-law to be illegal or unenforceable, that portion of this by-law shall be considered to be severed from the balance of the by-law, which shall continue to operate in full force and effect.

Section 2.00: Sale of Surplus Property and Easement

2.01 **Sale:** Lot 3 Registered Plan 508, in the Geographic Township of Eldon, City of Kawartha Lakes described as Part 1 on Plan 57R-10503 being all of PIN: 63170-0227 (LT) is hereby authorized to be sold to James Manthau for Forty-Nine Thousand Six Hundred Fifty-Four Dollars and Twenty-Eight Cents (\$49,654.28), plus HST, if applicable, inclusive of all additional costs associated with this transaction.

Section 3.00: Effective Date

3.01 **Effective Date:** This By-law shall come into force and take effect when it has been finally passed by Council.

By-law read a first, second and third time, and finally passed, this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

The Corporation of the City of Kawartha Lakes

By-Law 2017-_____

A By-Law To Deem Part of a Plan of Subdivision, Previously Registered For Lands Within Kawartha Lakes, Not To Be A Registered Plan Of Subdivision In Accordance With The Planning Act PIN # 63200-0583(LT), Described As Lot 20, Plan 260, Geographic Township Of Ops, Now City Of Kawartha Lakes

File D30-17-006, Report PLAN2017-059, respecting 89 Loon Street – Betts and Wanyura.

Recitals:

1. Section 50(4) of the Planning Act, R.S.O. 1990, c.P.13 authorizes Council to deem any plan of subdivision, or part of a plan of subdivision, that has been registered for eight years or more, not to be a registered plan of subdivision for the purposes of Subsection 50(3) of the Planning Act, R.S.O. 1990, c.P.13.
2. The Committee of Adjustment has required, as a condition of minor variance approval that the land described in Section 1 of this By-law be the subject of a deeming by-law.
3. A duplicate of this By-law shall be registered in the Land Registry Office in accordance with the Planning Act, R.S.O. 1990, c.P.13.
4. Notice of the passing of this By-law shall be mailed to the owner(s) of the land described in Section 1 of this By-law.
5. Council considers it appropriate to enact the requested By-law.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017-_____.

Section 1:00 Details

- 1.01 **Property Affected:** PIN # 63200-0583(LT). The Property affected by this By-law is described as Lot 20, Registered Plan 260 geographic Township Of Ops, City of Kawartha Lakes.
- 1.02 **Deeming Provision:** The Property is deemed not to be part of a Registered Plan of Subdivision of the purposes of Subsection 50(3) of the Planning Act, R.S.O. 1990, c.P.13.

Section 2:00 General Terms

- 2.01 **Force and Effect:** This By-law shall come into force on the date it is finally passed, subject to the provisions of Sections 50(26), 50(28), and 50(29) of the Planning Act, R.S.O. 1990, c.P.13.

By-law read a first, second and third time, and finally passed, this _____ day of _____, 2017.

Andy Letham, Mayor

Ron Taylor, Acting Clerk

**The Corporation of the City of Kawartha Lakes
By-law 2017 -**

**A By-law to Amend the Village of Bobcaygeon Zoning By-law 16-78 to
Remove the Holding (H) Symbol from a zone category on property
within the City of Kawartha Lakes**

[File D06-17-027, Report PLAN2017-060 respecting Part Lot 10, Plan 70, being Parts 1 and 2, Plan 57R-10004, former Village of Bobcaygeon, - Savic/Milosevic and Tom Grimes Construction Ltd.]

Recitals:

1. Section 36 of the *Planning Act* authorizes Council to place a Holding (H) symbol on any zoning category assigned to property. The purpose of the Holding (H) symbol is to restrict the use of the property until conditions imposed by Council have been met.
2. The Council of the City of Kawartha Lakes enacted By-law No. 2008-141, which contained a Holding (H) symbol relating to the use of the property.
3. Council has received a request to remove the Holding (H) symbol from the Urban Residential Type Two Special Ten Holding (R2-S10)(H) Zone.
4. The conditions imposed by Council and shown in By-law No. 2008-141 have been met.
5. Council deems it appropriate to remove the Holding (H) symbol.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017-.**

Section 1.00: Zoning Details

- 1.01 **Property Affected:** The Property affected by this By-law is described as Part Lot 10, Plan 70, being Parts 1 and 2, Plan 57R-10004, former Village of Bobcaygeon, now in the City of Kawartha Lakes.
- 1.02 **Schedule Amendment:** Schedule 'A' to By-law No. 16-78 for the former Village of Bobcaygeon is further amended to remove the Holding (H) symbol from the "Urban Residential Type Two Special Ten Holding (R2-S10)(H)" Zone for the land referred to as 'R2-S10', as shown on Schedule 'A' attached to this By-law.

Section 2.00: General Terms

- 2.01 **Force and Effect:** This By-law shall come into force and take effect on the date it is finally passed, subject to the provisions of Section 34 and 36 of the *Planning Act*.

By-law read a first, second and third time, and finally passed, this ** day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk

THE CORPORATION OF THE CITY OF

KAWARTHA LAKES

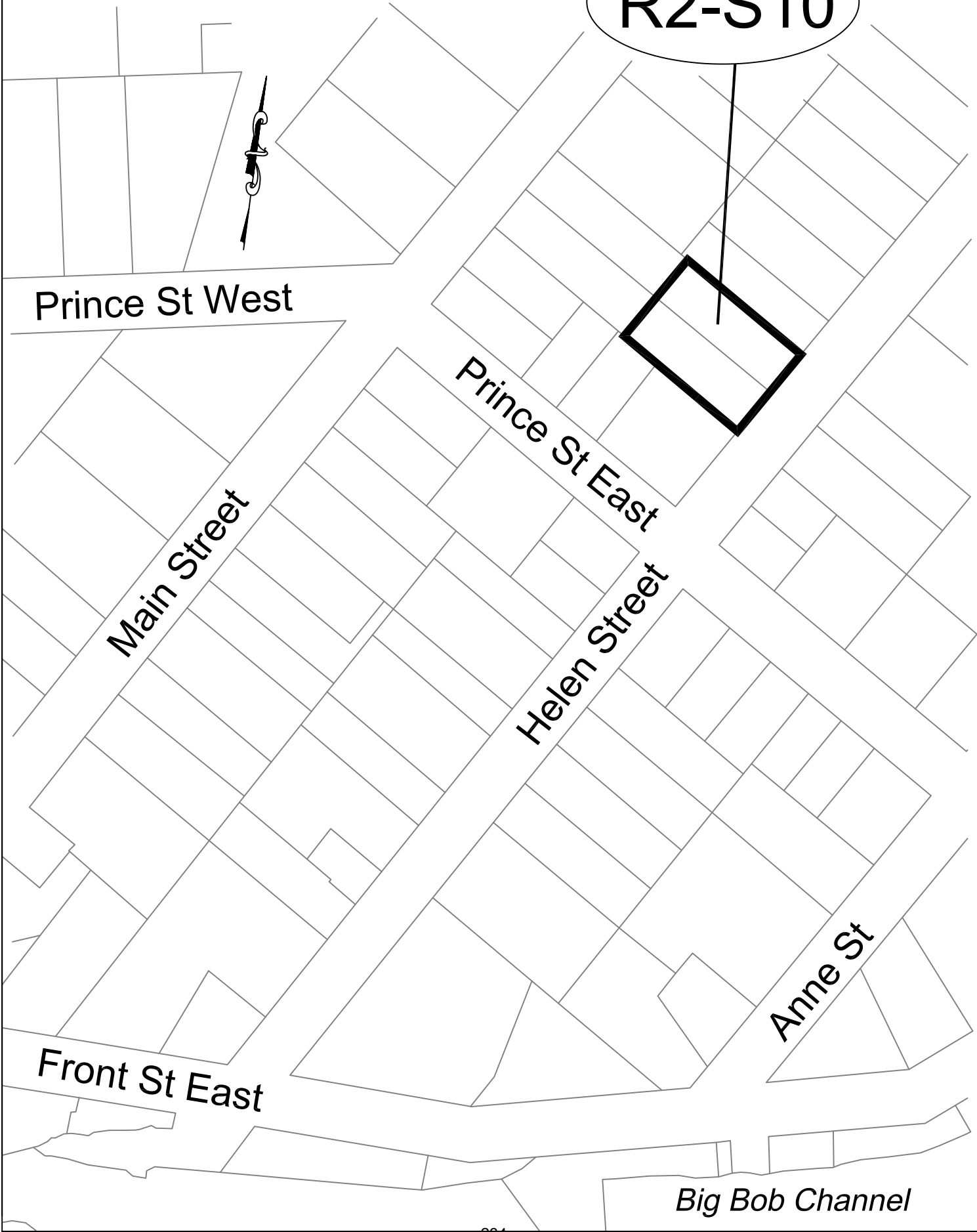
THIS IS SCHEDULE 'A' TO BY-LAW _____ PASSED
THIS _____ DAY OF _____ 2017.

MAYOR _____

CITY CLERK _____

'BOBCAYGEON'

R2-S10



The Corporation of the City of Kawartha Lakes

By-Law 2017-

A By-law to Amend By-law 2016-206, being A By-Law to Establish and Require Payment of Fees for Information, Services, Activities and Use of City Property in The City of Kawartha Lakes

Recitals

- 1. Council adopted Resolution CR2011-359 on March 22, 2011 authorizing the implementation of various fees and charges.
- 2. A fee for Additions to the Tax Roll for Collection Purposes was approved by Council Resolution CR2011-359.
- 3. This approval requires an amendment to the existing by-law 2016-206, being A By-Law to Establish and Require Payment of Fees for Information, Services, Activities and Use of City Property in The City of Kawartha Lakes.

Accordingly, the Council of The Corporation of the City of Kawartha Lakes enacts this By-law 2017- .

Section 1.00: Definitions and Interpretation

Definitions:

All defined terms in the amending By-law take their meaning from By-law 2016-206 of the City of Kawartha Lakes.

Section 2.00: Amendment Details

- 2.01 Amendment: Schedule A-2 of By-law 2016-206 is amended by adding the following line:

Service Description	Unit	Additional Fees	Fee Effective January 1, 2017	Fee Effective March 1, 2017	Reference
Addition to Tax Roll for Collection Purposes	minimum	Or 5% of the fee or charge (minimum \$50)	\$50.00	\$50.00	Council Resolution CR2011-359

Section 3.00: Administration and Effective Date

- 3.01 Administration of the By-law: The Director of the City Departments are responsible for the administration of the respective department fees as approved in Schedules A to H of By-law 2016-206.
- 3.02 Effective Date: This By-law shall come into force on the date it is finally passed.

By-law read a first, second and third time, and finally passed, this 10th day of October, 2017.

Andy Letham, Mayor

Ron Taylor, Acting City Clerk