



# TOWNSHIP OF MELANCTHON

## A G E N D A

Thursday, February 2, 2017 - 5:00 p.m.

1. **Call to Order**
2. **Announcements**
3. **Additions/Deletions/Approval of Agenda**
4. **Declaration of Pecuniary Interest and the General Nature Thereof**
5. **Approval of Draft Minutes - January 12, 2017**
6. **Business Arising from Minutes**
  1. Road Closure - Update from PSB Chair David Thwaites
7. **Point of Privilege or Personal Privilege**
8. **Public Question Period** (Please visit our website under Agendas and Minutes for information on Public Question Period)
9. **Road Business**
  1. Accounts
  2. Report - Recommendations from the January 12 & 23, 2017 Roads Sub-Committee Meetings
  3. Other
10. **Planning Matters**
  1. Applications to Permit
11. **Police Services Board Matters**
12. **Committee Reports**
13. **Correspondence**

### **\*Board & Committee Minutes**

1. Mulmur-Melancthon Fire Board - Meeting September 2, 2016
2. Shelburne & District Fire Board - Meeting November 6, 2016
3. St. Pauls Cemetery Board - Meeting December 5, 2016
4. Melancthon Township Strategic Planning Sub-Committee, Meeting November 15, 2016

### **\* Items for Information Purposes**

1. Copy of a resolution passed by the Township of Amaranth dated December 15, 2016, Re - Pan Am and Parapan Am Games Resolution
2. Copy of a resolution passed by the Township of Amaranth dated December 15, 2016, Re - Municipal Fire Service Resolution
3. Letter from Nancy Davy, Director of Resource Management, GRCA dated December 1, 2016, Re - GRCA Planning, Permit and Inquiry Revised Fees Effective January 1, 2017
4. Copy of a resolution passed by Fort Frances Boundless dated January 10, 2017, Re - The Inequity in Property Taxation on Railway Right-of-Way's Collected by Municipalities in Ontario
5. Email from MPAC, Municipal and Stakeholder Relations dated January 10, 2017, Re - 2016 Assessment Update Municipal Summary Report
6. Copy of a resolution passed by the Town of Bancroft dated December 13, 2016, Re - New Revenue Tools

**Correspondence - Items for Information Purposes - Cont.**

7. Letter from the Nottawasaga Valley Conservation Authority dated January 9, 2017, Re - NVCA 2017 Municipal Levy
8. GRCA Current - January, 2017 Volume 22 Number 1
9. AMO Communications - AMO Policy Update - Provincial Cabinet Shuffle
10. Copy of a resolution passed by the Township of Amaranth dated January 12, 2017, Re - Changes to the Conservation Authorities Act
11. Notice of Open House - Dufferin County's Forest Operation Review Committee is inviting the public to provide comment on the proposed Dufferin County Forest Recreational Use Policy - Wednesday February 8, 2017, 3:00 - 8:00 pm and Saturday February 11, 2017, 10:00 am - 4:00 pm - The Atrium - 55 Zina Street, Orangeville
12. Email from Randy Hillier dated January 16, 2017, Re - Bill 77, Kickstarting Public Participation Act, 2016
13. Email from Kevin Flood dated January 17, 2017, Re - Notification of Application for Permit to Take Water
14. Statement of the Treasurer of Remuneration and Expenses Paid as Required by Section 284(1) of the Municipal Act, 2001 for the Year 2016
15. Copy of a resolution passed by the City of Owen Sound dated January 16, 2017, Re - Gas Tax Funding Formula
16. Email from Tecia White, Whitewater Hydrogeology Ltd. dated January 6, 2017, Re - Strada 2016 groundwater compliance reports
17. Letter from R.J. Burnside & Associates Ltd. dated January 16, 2017, Re - Drainage Superintendent Services

**\* Items for Council Action**

1. Letter to Tracey Henderson, Appeal Tribunal dated January 11, 2017, Re - Late Filling of Section 65 (11) Appeal - McCue Drainage Works, Repair and Improvement, 1989
2. Email from Amanda Graham dated January 16, 2017, Re - Melancthon Winter Roads
3. Copy of a motion passed by the Mulmur-Melancthon Fire Board dated January 16, 2017, Re - Budget Approval
4. Email from Steve Murphy, Emergency Management & Communications Coordinator, Dufferin County dated January 19, 2017, Re - Multi-Year Accessibility Plan 2017-2021
5. Letter from the Grand River Conservation Authority dated January 23, 2017, Re - 2017 Budget and Levy Meeting
6. Report to Council from Denise Holmes dated January 24, 2017, Re - Strategic Plan - Recommendation for the Award of the Request for Proposal

**14. General Business**

1. Accounts
2. Notice of Intent to Pass the following By-laws:
  1. By-law to Authorize the Use of Alternative Voting Methods (Telephone and Internet) for the 2018 School Board and Municipal Election
  1. (a) Township of Melancthon - 2018 Municipal and School Board Elections - eVoting Options
  2. Petervale Farms Drainage Works (to be dealt with under Delegations)
  3. By-law to amend By-law 61-2014 - By-law to appoint a Board of Management for Horning's Mills Park
  3. (a) Application for Horning's Mills Park Board
  4. By-law to amend By-law 60-2014 - By-law to appoint a Board of Management for Horning's Mills Cemetery
  5. By-law to amend By-law 53-2016 - By-law to appoint a Board of Management for Horning's Mills Community Hall
3. New / Other Business / Additions
4. Unfinished Business
  1. Memorandum from Chris Jones, Planner to Mayor White and Members of Council dated December 8, 2016, Re - Draft OPA to Implement Source Protection Plans
  2. 2312439 Ontario Inc. (Dennis Martin) - Zoning By-law Amendment - Part Lot 16, Concession 7 SW
    1. 2312439 Ontario Inc. (Dennis Martin) - Consent Agreement

4. Unfinished Business - Cont.
  3. County of Dufferin - 150 Fund Application
  4. Shelburne Agricultural Society - Sponsorship
  5. Amend Council Motion # 21 from the January 12, 2017 regarding supporting the Township of McKellar regarding fire department assets
15. **Delegations**
  1. 5:30 p.m. - Tom Pridham, P.Eng., Drainage Engineer & Natalie Connell, R.J. Burnside and Associates - Consideration of the Report on the Petervale Farms Drainage Works
16. **Closed Session (if required)**
17. **Third Reading of By-laws (if required)**
18. **Notice of Motion**
19. **Confirmation By-law**
20. **Adjournment and Date of Next Meeting** - Thursday, February 16, 2017 - 5:00 p.m.
21. **On Sites**
22. **Correspondence on File at the Clerk's Office**

## Denise Holmes

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**From:** David Thwaites  
**Sent:** Monday, January 23, 2017 12:34 PM  
**To:** dbesley@melancthontownship.ca  
**Cc:** Denise Holmes; Randall, Nicol (OPP)  
**Subject:** Road Closure

Dave:

I have followed up your information/concern of Council from the January 12, 2017 Council Meeting re Road Closures, specifically referencing the suggestion that the Dufferin OPP directed/condoned drivers driving around road closure signs during a recent road closure.

For context I understand the concern was that the Dufferin OPP had caused to be shared on Country 105 Radio that even though roads had been opened that it was okay to drive around road closure signs still present on the said roads.

It is my further information/understanding that the information shared was by an on-air radio personnel Not the Dufferin OPP direct.

As a result of my queries and follow-up with the Dufferin OPP (Det Comm Randall) I have learned the following:

- the Dufferin OPP did not communicate the information or direct/condone people driving around road closure signs;
- Paul Nancekivell, Dufferin OPP, was interviewed by the Radio station about information but he did not in any way suggest/condone driving around the signs; and
- the Radio station had apparently also been in contact with the OPP Communications Centre (not Dufferin OPP) and been advised that the roads were open (accurate) however the Communications Centre would have had no information on the still presence of Road Closure signs.

Paul was very concerned that there is any suggestion that he has given misinformation/direction out too the point he followed up with the Radio Station on learning of the concern of Council. As we know Paul is a very conscientious police officer and takes his role of community officer very seriously.

I am sharing this email with Denise as I understand that you won't be at the next Council meeting. She has undertaken to communicate this email to other Council members.

I am also copying Det Comm Randall of the OPP for her information.

In the course of my follow-up on this concern I did have several conversations with Nicol Randall, Acting Det Commander. Apart from taking the concern as expressed very seriously I can also advise that the Dufferin OPP (N Randall herself) was queried by an individual about driving on Hwy 124 during the storm as the individual was wishing to drive on the closed road. The driver was advised not too. DC Randall is very concerned that drivers even within Dufferin County (Melancthon), not just those driving through the Township, choose to ignore the road closures/signs.

I trust this is satisfactory and if Council has future concerns please have them address the matter with myself.



**David Thwaites**  
**Chair Melancthon Police Service Board**

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Total Control Panel

[Login](#)

To: [dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca)      [Remove](#) this sender from my allow list

From: !

*You received this message because the sender is on your allow list.*

**APPLICATIONS TO PERMIT FOR APPROVAL**  
**FEBRUARY 2, 2017 COUNCIL MEETING**

<b>PROPERTY OWNER</b>	<b>PROPERTY DESCRIPTION</b>	<b>TYPE OF STRUCTURE</b>	<b>DOLLAR VALUE</b>	<b>D.C.'s</b>	<b>COMMENTS</b>
GP Carpentry	East Part Lot 10, Concession 4 OS	New Dwelling 2,613 square feet	\$ 500,000.00	Yes	
Onias Martin	Lot 30, Concession 3 NE	Hoop Style Greenhouse 20' x 50' - 1,000 square feet	\$ 1,500.00	No	



**MINUTES**  
**MULMUR-MELANCTHON FIRE BOARD**  
**Monday September 12, 2016**  
**Fire Hall – 6:00 pm**

**Present:** Chair Paul Mills from Mulmur Township  
Vice Chair Darren White from Melancthon Township  
Member James Webster from Melancthon Township  
Member Earl Hawkins from Mulmur Township  
Fire Chief Jim Clayton  
Deputy Fire Chief Jeff Clayton  
Secretary Kerstin Vroom

**1. Call to order and Welcome New Member - Deputy Mayor Earl Hawkins**

Chair Mills called the meeting to order and welcomed Mulmur's new Deputy Mayor Earl Hawkins. Mayor Mills also welcomed Kerstin Vroom, Deputy-Clerk Treasurer, to the position of Secretary.

**2. Approval of the Agenda/Additions/Deletions**

**Motion #46-16: Webster-White:** THAT the agenda be approved as copied and circulated.

**Carried.**

**3. Declaration of Pecuniary Interests**

Chair Mills stated that if any member had a disclosure of pecuniary interest that they could declare the nature thereof now or at any time during the meeting.

**4. Approval of Previous Meeting's Minutes**

**Motion #47-16: Webster-Mills:** THAT the Monday, June 06, 2016 minutes are approved as copied and circulated.

**Carried.**

**5. Business Arising From Minutes – none**

**6. Correspondence (for information only)**

**i) Melancthon 2016 Budget Approval**

**7. Approval of Accounts & Financial Update**

**i) Approval of Accounts (Jun14 – Sept 09)**

**Motion #48-16: Webster-Hawkins:** THAT the accounts in the amount of \$59,994.28 (June 14 – September 08) be paid.

**Carried.**

## **ii) Report from Treasurer Heather Boston and 2017 Draft Budget**

The Board reviewed the 2017 Draft Budget and requested that Fire Building and Grounds Maintenance be reduced by \$1,000 and Fire Department Courses be increased by \$1,000.

It was noted that there were no revenues for 2016 fire calls as Dufferin OPP has stopped forwarding the Motor Vehicle Collision Reports (MVCR) and this information is needed for invoicing purposes. The Secretary advised that Mulmur is now an authorized requestor "for the purpose of invoicing for Emergency Services" and billing for 2016 should be completed within the year.

*Direction was given to the Secretary to speak with Mulmur's Director of Public Works, John Willmetts, about the possibility of Mulmur adding plowing of the front of the Fire Hall to the driver's plow route.*

## **iii) Application to the Municipal Emergency Readiness Fund**

The Board discussed the process and understood that typically the Board would have to put in 50% of the grant requested; however, if it was a County-wide initiative, the grant may cover 100% of the cost.

It was agreed that the Dufferin Fire Departments were in need of new radios.

*Direction was given to the Secretary to set up an information gathering session with the Mayors, Chiefs and Chairs of the Fire Boards Servicing Dufferin County, and Steve Murphy – Dufferin's Community Emergency Management Coordinator, to discuss radio equipment for the County Fire Departments.*

## **8. Chief's Call Report (on desk)**

Fire Chief Jim Clayton advised the board that fire calls as well as motor vehicle collision calls were down. The Fire Department was being proactive by implementing a fire ban. The Chief noted that medical calls have increased due to ambulance delays.

## **9. Health and Safety Issues**

### **i) Update on Fire Inspection Report for Arena**

Fire Chief Jim Clayton stated that the 'no cooking' signs were posted in the hall kitchen at the Arena and there would be a re-inspection of the Arena prior to its opening in the fall.

## **10. Closed Session pursuant to the Policy to Govern the Proceedings of the Board, Section 8(b) ii) personal matters about an identifiable individual(s), including municipal or local board employees, and approving the past closed meeting minutes.**

**Motion #49-16: White-Webster:** THAT the Mulmur-Melancthon Fire Board move into closed session pursuant to Section 239 of the *Municipal Act 2001, as amended* at 6:45 pm for the following reason(s): personal matters about an identifiable individual(s) including municipal or local board employees; and approval of past closed meeting minutes.

**Motion #50-16: Webster-White:** THAT the Mulmur-Melancthon Fire Board adjourn the closed session at 7:05 pm and return to the regular meeting.

**Motion #51-16: Hawkins-Webster:** THAT the Mulmur-Melancthon Fire Board, according to its hiring policy, ratifies the hiring of: Matt Waterfield and Kevin Campbell.

**Carried.**

## **11. Old/New Business**

### **i) Discussion on Communications Tower**

Chair Mills advised the Committee that County Council passed a motion approving the use of the Whitfield Tower for the Fire Department's communication use at no charge. Once approval is received from Industry Canada, the repeater can be installed. It appears that the insurance company is favourable to this solution as well.

**Motion #52-16: Webster-White:** THAT the Mulmur-Melancthon Fire Board hereby authorizes the Chair to sign the necessary agreements with Spectrum Communications and Dufferin County once Industry Canada has approved the frequency license which will enable the use of the Whitfield Tower for the Mulmur-Melancthon Fire Department's Communication System, which was destroyed in 2015.

**Carried.**

### **ii) Discussion on 911 Dispatch Services**

The Board reviewed the dispatch proposal from Northern 911. The Board discussed the ability to include reporting, two way radio communication, DTMF (dual tone micro frequency) technology and the inconsistency of using ROI (radio over internet). The Board requested that Fire Chief Jim Clayton and Deputy Chief write an outline of what is expected from the 911 Dispatch Service Provider.

*Direction was given to the Secretary to invite Jeff Balicki CD – Spectrum Communications to the next Board meeting to discuss communications.*

### **iii) Update on Tanker Repair**

Fire Chief Clayton told the Board that the tanker repairs were completed.

### **iv) Update on Fire Marshal's Public Fire Safety Council and Project Assist Grant**

Fire Chief Clayton advised the Board that this grant made by Enbridge, was for training and Fire Prevention materials. The Mulmur-Melancthon Fire Department will join up with the Shelburne & District Fire Department, who also received the \$5,000 grant, to build up a joint library of learning materials.

## **12. Confirming Motion**

**Motion #53-16: Hawkins-Webster:** THAT be it resolved that all actions of the Members and Officers of the Mulmur/Melancthon Fire Board of Management, with respect to every matter addressed and/or adopted by the Board on the above date are hereby adopted, ratified and confirmed; and each motion, resolution and other actions taken by the Board Members and Officers at the meeting held on the above date are hereby adopted, ratified and confirmed.

**Carried.**

## **13. Motion to Adjourn**

**Motion #54-16: White-Webster:** THAT we do now adjourn at 7:50 pm to meet again at the call of the Chair.

**Carried.**

**Approved by:**

*Paul Mills*

*Kerstin Vroom*

Chair

Secretary

## **SHELBURNE & DISTRICT FIRE BOARD**

November 6<sup>th</sup>, 2016

The Shelburne & District Fire Department Board of Management meeting was held at the Fire Hall on the above mentioned date at 7:00 P.M.

### **Present**

As per attendance record.

### 1. **Opening of Meeting**

- 1.1 Chair, Tom Egan, called the meeting to order at 7:06 pm.

### 2. **Additions or Deletions**

- 2.1 None at this time.

### 3. **Approval of Agenda**

#### 3.1 **Resolution # 1**

Moved by J. Elliott – Seconded by F. Nix

**BE IT RESOLVED THAT:**

The Board of Management approves the agenda as presented.

**Carried**

### 4. **Approval of Minutes**

#### 4.1 **Resolution # 2**

Moved by F. Nix – Seconded by J. Elliott

**BE IT RESOLVED THAT:**

The Board of Management adopt the minutes under the date of October 4, 2016 as circulated.

**Carried**

### 5. **Pecuniary Interest**

- 5.1 No pecuniary interest declared.

6. **Public Question Period**

6.1 No public present.

7. **Delegations / Deputations**

7.1 No delegations present.

8. **Unfinished Business**

8.1 2017 Budget

The board discussed the budget and the need to update the Capital Plan. The Board discussed the need to develop a formula for dispersing the FPO wages between the municipalities.

**Resolution # 3**

Moved by J. Elliott – Seconded by F. Nix

**BE IT RESOLVED THAT:**

The SDFB create a reserve for any operating surplus for the purpose of stabilizing any future or unforeseen operating and or capital expenses.

**Carried**

9. **New Business**

9.1 Enhanced Radio Communication Opportunity

There is currently difficulty with communication between the fire stations and Dufferin County Emergency Management. Dufferin County will pay for 50% of the replacement hardware to remedy the issue however there is also a \$40,000 set up fee to which payment for has yet to be discussed.

10. **Chief's Report**

10.1 **Monthly Reports (October 2016)**

There were a total of 23 calls for the month of October and there were 2 Building Inspected and 3 follow ups, 1 Fire Safety Plan reviewed and no Site Plans reviewed.

10.2 **Update from Fire Chief**

The Chief installed the SDFD Training Resource Library and completed the SCBA final order.

11. **Future Business:**

11.1 None at this time.

12. **Accounts & Payroll – October 2016**

12.1 **Resolution # 5**

Moved by K. McGhee – Seconded by H. Foster

**BE IT RESOLVED THAT:**

The bills and accounts in the amount of \$26,256.75 for the period of September 27, 2016 to October 27, 2016 as presented and attached be approved for payment.

**Carried**

12.2 **Resolution # 6**

Moved by J. Elliott – Seconded by H. Foster

**BE IT RESOLVED THAT:**

Payroll for the following month(s) be approved for payment:

October 2016 - \$23,111.10

**Carried**

13. **Confirming and Adjournment**

13.1 **Resolution # 7**

Moved by K. McGhee – Seconded by F. Nix

**BE IT RESOLVED THAT:**

All actions of the Board Members and Officers of the Shelburne and District Fire Board of Management, with respect to every matter addressed and/or adopted by the Board on the above date are hereby adopted, ratified and confirmed; And each motion, resolution and other actions taken by the Board Members and Officers at the meeting held on the above date are hereby adopted, ratified and confirmed.

**Carried**



**13.2 Resolution # 8**

Moved by J. Elliott – Seconded by F. Nix

**BE IT RESOLVED THAT:**

The Board of Management do now adjourn at 8:45 pm to meet again on December 6, 2016 at 7:00 pm or at the call of the Chair.

**Carried**

Respectfully submitted by:

Approved:

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Nicole Hill  
Secretary-Treasurer

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Tom Egan  
Chairperson

## SHELBURNE & DISTRICT FIRE BOARD MEMBERS

### Meeting Attendance Record Under Date of November 1, 2016

<b>Municipality / Member</b>	<b>Present</b>	<b>Absent</b>
<b>Township of Amaranth</b>		
Heather Foster	X	
Gail Little	X	
<b>Town of Mono</b>		
Ken McGhee	X	
Fred Nix	X	
<b>Township of Melancthon</b>		
Janice Elliott	X	
Wayne Hannon	X	
<b>Town of Shelburne</b>		
Tom Egan	X	
Ken Bennington		X
<b>Township of Mulmur</b>		
Keith Lowry	X	
Janet Horner		X
<b>Staff</b>		
Brad Lemaich – Fire Chief	X	
Ed Walsh – Deputy Fire Chief	X	
Nicole Hill – Sec/Treas.	X	

(1)

St Pauls Cemetery Board Meeting  
December 5, 2016

Meeting held at CORC meeting Room

Members Present John E. Crowe  
Janice Elliott  
Doug Maxwell.

Absent Diane TRUDGON  
Nancy MALEK

Meeting called to Order at 6:02 P.M.

Member John Crowe was appointed chairperson and proceeded to conduct the meeting.  
See motion No 1. Moved by Janice ELLIOTT  
Seconded by Doug MAXWELL (attached)

The agenda was approved as circulated by show of hands.

The standard request for disclosure of pecuniary interest was made by The Chairperson. None given at any point during The meeting.

The minutes of the November 9, 2015 meeting were approved. See motion No 2. Moved by Doug MAXWELL, seconded by Janice ELLIOTT. (attached)

There was no business arising from the November 9, 2015 minutes.

(2)

Cont'd

There was no old or unfinished business.

The board ratified the payment of \$950.00 made to the cemetery caretaker for duties performed in 2016. This payment was made as per motion passed by the board on November 9, 2015. See motion No 3, moved by Janice ELLIOTT, seconded by Doug MAXWELL (attached).

### New Business

The chair was contacted on Nov 27/15 by Mr Doug PATTERSON of Gravenhurst who was concerned about the condition of his Great Grandfathers grave stone. His brother Robert PATTERSON of Owen Sound was also concerned and they wanted permission to remove the marker and have it restored. On the 03 Dec 15 I met with them at the Cemetery and suggested that if they wanted to follow thru with the request that the grave site had to be left well marked, and when the stone was returned it had to comply with the standard set out in the bylaw. They have never followed up on this request. Doug PATTERSON was in the process of updating the family history and during this process he found that two of his long dead relatives, Robert PATTERSON who died in 1916 and his wife Sarah PATTERSON who died in 1929 were listed as buried in St Pauls,

(3)

Cont'd.

but are actually confirmed to be buried in ST ANDREW ST JAMES Cemetery in Orillia

The board discussed this situation, and considering that we have grave search results verifying Mr PATTERSON'S information it was decided that the two names in question be removed from our list. See motion No 4, with grave search records attached. Moved by Janice ELLIOTT and Seconded by ~~Janice~~ Doug MAXWELL (attached)

### Financial Report

The 2015 financial statement was received as presented. Accumulated surplus of \$44,814. The interest portion may be used against expenses at the discretion of the Township CAO/Clerk. See motion No 5, moved by Janice ELLIOTT, seconded by Doug MAXWELL (attached) financial statement (attached)

### Cemetery Condition

The cemetery grounds have been kept in very good condition again this year, and the board appreciates the work done by our caretaker.

The board adjourned at 6:38 P.M. to meet again in 2017, at the call of the chair. See motion No 6. Moved by Doug MAXWELL, Seconded by Janice ELLIOTT

## MELANCTHON TOWNSHIP STRATEGIC PLANNING SUB-COMMITTEE

The Melancthon Township Strategic Planning Sub-Committee held a meeting on Tuesday, November 15, 2016 at 4:30 p.m. at the Township of Melancthon Municipal Office in the Committee Room. The following members were present: Deputy Mayor Janice Elliott and Councillor James Webster. Mayor Darren White was absent. Denise Holmes, CAO/Clerk was also present. Chair Elliott called the meeting to order.

### General Business

#### *1. Develop a Request for Proposal for the Township of Melancthon Strategic Plan*

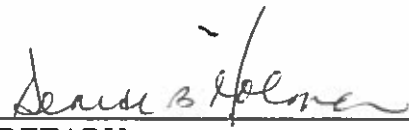
The Sub-Committee had received a few RFP's from Gerry Horst, OMAFRA, of Municipalities who have recently gone through this process. The ones that the Sub-Committee liked were from: Township of Tiny, Municipality of North Middlesex and Municipality of West Grey. Each of those RFP's were reviewed in great detail and the Sub-Committee took parts of each of those RFP's to develop one for Melancthon.

The CAO/Clerk was asked if she could compile the information from this meeting and have it ready for approval at the Committee of the Whole meeting for Thursday. If approved, the RFP will go out next week to have the proposals back for the January 12, 2017 Council meeting, with the Consultant being selected by March, 2017 to begin the Strategic Plan in April 2017 and the finished Strategic Plan to Council by September 2017.

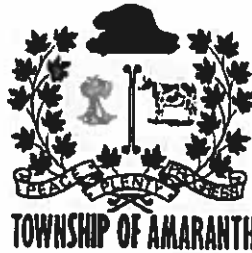
### Adjournment

6:15 p.m. Moved by Elliott, Seconded by Webster that we adjourn this meeting. Carried.

  
\_\_\_\_\_  
CHAIR

  
\_\_\_\_\_  
SECRETARY

BEN RYZEBOL, Director of Public Works  
PUBLIC WORKS - TELEPHONE: (519) 941-1065  
FAX: (519) 941-1802  
email: bryzebol@amaranth.ca



374028 6<sup>TH</sup> LINE, AMARANTH, ONTARIO  
L9W 0M6

SUSAN M. STONE, C.A.O./Clerk-Treasurer  
TELEPHONE: (519) 941-1007  
FAX: (519) 941-1802  
email: suestone@amaranth-eastgary.ca

December 15, 2016

Diane Francoeur  
Deputy Clerk-Treasurer  
Canton Bonfield Township  
365 Highway 531  
Bonfield ON POH 1E0

Dear Ms. Francoeur:

Re: Pan Am and Parapan Am Games Resolution

At the regular meeting of Council held December 14, 2016, the following resolution was set forth:

Moved by C. Gerrits – Seconded by H. Foster

Council of the Township of Amaranth do hereby support the resolution of the Township of Canton-Bonfield that the debt incurred from the 2015 Pan Am and Parapan Am Games should be funded by the City of Toronto. **Carried.**

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

Yours truly,

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

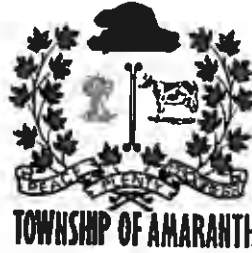
SMS/kp

cc: Dufferin County Municipalities

INFO 1 -

FEB 02 2017

BEN RYZEBOL, Director of Public Works  
PUBLIC WORKS - TELEPHONE: (519) 941-1065  
FAX: (519) 941-1802  
email: bryzebol@amaranth.ca



374028 6<sup>TH</sup> LINE, AMARANTH, ONTARIO  
L9W 0M6

SUSAN M. STONE, C.A.O./Clerk-Treasurer  
TELEPHONE: (519) 941-1007  
FAX: (519) 941-1802  
email: suestone@amaranth-eastgary.ca

December 15, 2016

Shawn Boggs, Clerk Administrator  
Township of McKellar  
PO Box 69  
McKellar ON P0G 1C0

Dear Mr. Boggs:

**Re: Municipal Fire Service Resolution**

At the regular meeting of Council held December 14, 2016, the following resolution was set forth:

Moved by J. Aultman – Seconded by G. Little

Council of the Township of Amaranth do hereby support the resolution of the Township of McKellar calling on the Provincial government to recognize municipal fire service as critical infrastructure and include funding for fire service as part of the Provincial government's infrastructure strategy to move Ontario forward. **Carried.**

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

Yours truly,

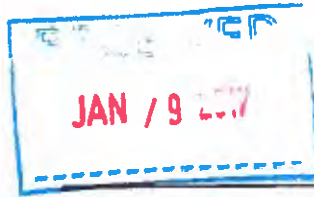
Susan M. Stone, A.M.C.T.  
CAO/Clerk-Treasurer  
Township of Amaranth

SMS/kp

cc: Dufferin County Municipalities

Info 2 - FEB 02 2017





400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

Phone: 519.621.2761 Toll free: 866.900.4722 Fax: 519.621.4844 Online: [www.grandriver.ca](http://www.grandriver.ca)

**TO:** Municipal Clerks, Planning, Building and Engineering Staff  
Adjacent CA's

**FROM:** Nancy Davy, Director of Resource Management  
Fred Natolochny, Supervisor of Resource Planning  
Beth Brown, Supervisor of Resource Planning

**DATE:** December 1, 2016

**SUBJECT:** GRCA Planning, Permit and Inquiry Revised Fees  
Effective January 1, 2017

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The General Membership of the Grand River Conservation Authority has approved a revised GRCA fee schedule for Plan Review, GRCA Permit and Inquiry services. The fees will be implemented throughout the Grand River watershed effective **January 1<sup>st</sup>, 2017**.

We have attached the revised fee schedules. Please ensure that copies of the attached fee schedule are available to municipal staff and prospective applicants.

**Announcement** A free, web based mapping tool, is available to the public to review GRCA maps of areas regulated under Ontario Regulation 150/06. We note that the text of Ontario Regulation 150/06 defines the areas that are regulated. However, this mapping tool will provide municipal staff and the public with some guidance on the areas regulated by the Conservation Authority. To use this mapping tool please go to [www.grandriver.ca](http://www.grandriver.ca) On the home page click on "Map Your Property" under the Planning and Permits heading.

Proposed activities or works within the areas regulated by the GRCA will require a permit from the GRCA, in addition to a building permit from the municipality.

The policies regarding Ontario Regulation 150/06 and a series of checklists that will aid the public and development industry to prepare satisfactory reports and plans for applications or inquiries can be found under the planning and regulations section of our website at [www.grandriver.ca](http://www.grandriver.ca). The Plan Review and GRCA permit fees are also posted on the GRCA website under the planning and regulation section.

Please note that GRCA [GIS data access](#) is available to download or order data for use with your GIS directly off of the GRCA website.

If you have any questions or concerns regarding the Plan Review or Permit Service Fees please contact Fred (ext. 2229) or Beth (ext. 2307) at (519) 621-2761.

A handwritten signature in black ink that reads "Nancy Davy".

Nancy Davy  
Director of Resource Management  
621-2763, ext. 2235  
[ndavy@grandriver.ca](mailto:ndavy@grandriver.ca)

**JANUARY 1<sup>st</sup>, 2017 FEE SCHEDULE**  
**GRCA Permit, Plan Review, Title Clearance and Inquiry Fee Schedule**

**Permit Fee Schedule**

<b>Category of Permit Application</b>	<b>Fee for Development Applications</b>	<b>Fee for Alterations or Interference with Wetlands, Shorelines and Watercourses Applications</b>
Minor - <i>No technical reports required.</i>	\$390	\$390
Standard - <i>Detailed report and/or plans required.</i>	\$570	\$1010
Major - <i>Requires one or more reports with high potential for impacts on flooding, pollution, conservation of land or shoreline processes.</i>	\$8,695	\$5,700 Culvert/Bridge replacement \$8,695 All other applications
Large Fill – over 1,000m <sup>3</sup>	\$8,695 plus \$0.50/m <sup>3</sup>	
Works initiated prior to GRCA approval	2 times the fee for the category	
Rural Water Quality Programs or GRCA projects	\$75	
Expired Permit	\$75	
Plans amended to an approved permit	\$75	

**Inquiry Schedule**

<b>Category of Application</b>	<b>Fee</b>
Title Clearance and Inquiry Fee	\$220/property

### **Plan Review Fee Schedule**

<b>Category of Application</b>	<b>Fee</b>
<b>Subdivision and Vacant Land Condominium</b>	
Base fee	\$2,130
• per net hectare	\$1,110/hectare
Applicant driven modification or Red line Revision	\$1,420
Final clearance for registration of each stage: technical review required	\$5,700
Final clearance Processing Fee: no reports or review required	\$220
<b>Official Plan and/or Zoning Bylaw Amendment</b>	
Major	\$2,130
Minor	\$390
<b>Consent</b>	
Major	\$1010
Minor	\$390
<b>Minor Variances</b>	
Major	\$570
Minor	\$255
<b>Site Plan Approval Applications</b>	
Major	\$2,985
Minor	\$390
<b>Complex Applications</b>	\$8,695
<b>Below Water Table Aggregate Applications</b>	
No features of interest within 120 metres of licence limit	\$8,695
Features of interest within 120 metres of licence limit	\$37,145
<b>Above Water Table Aggregate Applications</b>	
No Features of interest within 120 metres of licence limit	\$390
Features of interest within 120 metres of licence limit	\$8,695

When reading the Permit and Planning fee schedule, please refer to the **Fee Notes** outlined below.

#### **Fee Notes**

1. All fees are made payable and submitted directly to Grand River Conservation Authority.
2. Applicants are encouraged to consult with staff prior to submission of all applications to determine the extent and nature of the information required to accompany the application, and to determine the appropriate fee.
3. Permit applications that fall into one or more categories will be charged one fee, at the highest rate.
4. Plan review applications that fall into one or more categories will be charged one fee, at the highest rate.
5. The Conservation Authority may provide a refund or require the applicant submit additional funds for a permit or plan review fee if it is found that an incorrect fee has been submitted.
6. *Minor Categories* – Low risk of impact on natural hazards or natural features. Plans required. No technical reports required.

7. *Standard Permit Category* – Moderate hazard risk and/or potential impact on natural hazards or natural features. Detailed plans required. Scoped technical reports required.
8. *Major Permit Category*– High hazard risk and/or potential impact to natural hazards or natural features. Detailed plans required. One or more technical report required (Environmental Impact Study, Hydraulic Analysis, Storm Water Management, Geotechnical, etc.). Development permit applications for: golf courses, trailer parks, campgrounds, lifestyle communities will be considered as a major permit.
9. *Major Plan Review Category*– High or Moderate hazard risk and/or potential impact on natural hazards or natural features. Detailed plans required. One or more technical reports (may be scoped) are required.
10. *Complex Plan Review Category*- Planning Act (e.g. OPA/ZC) and/or Site plan applications for: golf courses, trailer parks, campgrounds, lifestyle communities.
11. *Large Fill* - The fee is applicable to material placed within the Conservation Authority's regulated areas. Grading associated with *Planning Act* approvals is not considered a large fill application.
12. Major permit applications that have previously paid application or clearance plan review fees to the GRCA will be charged fees under the Minor or Standard category.
13. Permit fees are non-refundable, except where review indicates that no permit is necessary.
14. *Expired permit* - After a permit has expired, a new application must be submitted. For applications to replace a prior permit received within one year of expiry a fee of \$75 is required. Any changes to the plans or a lapse of more than one year will require a full review and the Schedule of Fees in effect at the time will apply.
15. The subdivision or vacant land condominium base fee including per net hectare fee will be capped at \$25,000.
16. The net hectare fee will be based on the initial submission and will exclude lands outside of the development limit (e.g. natural hazard, natural heritage areas and buffers). Stormwater management facilities and other open space or park uses are to be included in the net hectare fee calculation.
17. At the submission of a subdivision or vacant land condominium application, 70% of the base fee and per net hectare is required. Prior to issuance of conditions of draft plan approval, the remaining 30% of the fee is required.
18. A Processing Fee will apply for a clearance letter for a subdivision or condominium application where no technical review/reports (e.g. no Erosion and Sediment Control plan, SWM brief, etc.) are required.
19. For Aggregate Applications, features of interest include all Natural Heritage, Natural Hazard and surface water features.

Administration & Finance Division  
Planning & Development Division  
Phone: 807-274-5323  
Fax: 807-274-8479

Mailing Address for All Divisions:  
Civic Centre  
320 Portage Avenue  
Fort Frances, ON  
P9A 3P9



## FORTFRANCES BOUNDLESS

Operations & Facilities Division  
Phone: 807-274-9893  
Fax: 807-274-7360

Community Services Division  
Phone: 807-274-4561  
Fax: 807-274-3799

email: [town@fortfrances.com](mailto:town@fortfrances.com)  
[www.fort-frances.com](http://www.fort-frances.com)

January 10, 2017

Kathleen Wynne, Premier  
Legislative Building  
Queen's Park  
Toronto ON M7A 1A1  
via e-mail

Dear Premier Wynne:

**Re: Resolution to Address the Inequity in Property Taxation on Railway Right-of-Way's Collected by Municipalities in Ontario.**

At the recent meeting of Council held on Monday, January 9, 2017, the following resolution was approved:

"WHEREAS it has been identified that Railway Companies in the province of Ontario, do not pay a proportionate share of municipal property tax as compared to other properties in their class, or compared to any other municipal tax class; and;

WHEREAS in other provinces and jurisdictions the railway companies do remit a more equitable share of taxes to the local tax base; and;

WHEREAS taxes in other jurisdictions for railway properties are calculated using a ton-mile concept; and;

WHEREAS said fees are reviewed and adjusted on a regular basis according to inflation and ongoing current conditions; and;

WHEREAS the Province of Ontario has continued to fall further and further behind in their approach to railroad property taxation over the past 112 plus years;

THEREFORE BE IT RESOLVED THAT the Town of Fort Frances call upon the Minister of Finance for the Province of Ontario to implement a new system of municipal property taxation for railroad right-of-way properties based on utilizing a per ton-mile concept; and;

FURTHER BE IT RESOLVED THAT the new tax system when implemented, be reviewed on a regular basis, similar to the MPAC four-year assessment cycle; and;

FURTHER BE IT RESOLVED THAT this resolution be sent to every Municipal Council within the Province of Ontario seeking their support, the Premier of Ontario, the Minister of Finance of Ontario, Ontario MPPs, Local MPs, RRDMA, NOMA, AMO and FONOM."

Yours very truly,

ADMINISTRATION & FINANCE DIVISION

Elizabeth Slomke, Clerk

ES/kl

INFO 4.

FEB 02 2017



c.c. (via e-mail)  
Hon. Charles Sousa, Minister of Finance  
Ontario MPP's  
Local MPP's  
RRDMA  
NOMA  
AMO  
FONOM  
Mayor and Council  
D. Brown, CAO

**From:** MR21Enquiry [<mailto:MR21Enquiry@mpac.ca>]  
**Sent:** Tuesday, January 10, 2017 4:38 PM  
**To:** [dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca)  
**Cc:** [dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca); [watkinson@melancthontownship.ca](mailto:watkinson@melancthontownship.ca)  
**Subject:** 2016 Assessment Update Municipal Summary Report

Good Afternoon,

On behalf of Amanda Macdougall, Regional Manager- Municipal and Stakeholder Relations, we are pleased to share the attached memo from Carla Y. Nell, together with the attached 2016 Assessment Update Municipal Summary Report and municipal level snapshots. We have prepared the Report for municipal administration and elected officials to provide an Executive Summary of the 2016 Assessment Update and a summary of the property class changes unique to your municipality.

This Report has been previously provided to those copied on this email and we are requesting your assistance to share it with Municipal Council. Please feel free to contact us if you have any questions or would like to discuss the report.

*Jon and Hollie*

Waterloo Region, Guelph, Dufferin County and Wellington County  
MPAC Municipal and Stakeholder Relations

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From: [mr21enquiry@mpac.ca](mailto:mr21enquiry@mpac.ca)

INFO5

FEB 02 2017



MUNICIPAL PROPERTY ASSESSMENT CORPORATION

January 10, 2017

To: Municipal Clerks

From: Carla Y. Nell, Vice-President  
Municipal and Stakeholder Relations

Subject: **2016 Assessment Update Municipal Summary Report**

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The return of 2016 assessment rolls to Ontario municipalities marks a key milestone in the organization's delivery of the province-wide 2016 Assessment Update.

2016 was a year of many firsts for MPAC's delivery of updated assessments. We made a number of changes to our operations and the products and services we deliver to property owners and stakeholders. Our goal was to undertake an Assessment Update that demonstrated a greater focus on roll stability, transparency and collaboration.

We have developed the enclosed report for municipal administration and elected officials to provide an Executive Summary of the work performed by MPAC in support of the 2016 Assessment Update, which includes municipal level snapshots of the property class changes unique to your area.

A copy of this report has been provided to the Chief Administrative Officers, Finance Officers, Treasurers and Tax Collectors. I would like to request your assistance to share the attached report with municipal councils. Please contact your Regional Manager or Account Manager Municipal and Stakeholder Relations if you have any questions about the report.

Yours truly,

A handwritten signature in dark ink, appearing to read "Carla Y. Nell", is positioned above the printed name.

Carla Y. Nell  
Vice-President, Municipal and Stakeholder Relations

cc: Treasurers and Tax Collectors



# 2016 Assessment Update

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## Municipal Summary Report

December 2016



MUNICIPAL  
PROPERTY  
ASSESSMENT  
CORPORATION

## **C O N T E N T S**

### **Delivering the 2016 Assessment Update**

About This Report .....	3
Introduction .....	3
Disclosure .....	4

### **2016 Assessment Update Rollout**

Residential Properties .....	5
Farm Properties .....	7
Business Properties .....	10
Large and Special Purpose Business Properties .....	16

### **Our Approach to Value**

The Municipal Experience .....	18
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<b>Conclusion .....</b>	<b>19</b>
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### **Assessment Change Summary**

<b>by Property Class.....</b>	<b>Appendix 1</b>
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### **Assessment Base Distribution**

<b>Summary by Property Class.....</b>	<b>Appendix 2</b>
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# Delivering the 2016 Assessment Update

## About This Report

The following report has been developed to provide municipal administration and elected officials with an executive summary of the work undertaken by Municipal Property Assessment Corporation (MPAC) in delivering assessed values for the 2016 Assessment Update.

MPAC is committed to providing property owners, municipalities and all its stakeholders with the best possible service. Our goal is a stable assessment base through greater transparency, shared understanding and accuracy in property values.

## Introduction

In Ontario, property assessments are updated every four years. The 2016 Assessment Update reflects a legislated valuation date of January 1, 2016, for the 2017-2020 property tax years.

MPAC's work to deliver the 2016 Assessment Update began in 2015—nearly two years earlier than previous Assessment Updates. As part of our efforts, we introduced some of the most significant reforms to Ontario's property assessment system since 1998, and recognized early engagement and openness as keys to our success.

The following report summarizes the initiatives that MPAC has undertaken to:

- Deliver on our commitment to engage with and provide greater access to information for property owners, municipalities and stakeholders
- Improve our valuation analysis, methods and models
- Increase our assessment quality through stringent data cleansing, quality checks and testing our work through third parties

## Our 2013-2016 Strategic Plan

MPAC provided property owners, municipalities and stakeholders with the best possible service through transparency, predictability and accuracy—and works with municipalities and property owners and industry associations to identify potential opportunities to further refine Ontario's property tax system.

## Disclosure

MPAC has launched disclosure initiatives to inform property owners and municipalities about how accurate property values are established. MPAC's approach to disclosure varies by property type. The disclosure initiatives include ongoing consultations with property owners and municipalities to determine appropriate valuation methodology and valuation parameters.



**Three levels of Disclosure documentation were established:**

### 1 Methodology Guides



33 guides that explain assessment methodology, and reflect appraisal industry standards and best practices.

### 2 Market Valuation Reports (MVR)



161 reports that explain how assessment methodology is applied to value properties, at the sector level, including reports for each of MPAC's 128 residential market areas.

### 3 Property Specific Valuation Information



Detailed information is also provided for over 5 million properties in Ontario, including 600,000+ farm and business properties, available through secure access ([aboutmyproperty.ca](http://aboutmyproperty.ca)) to property taxpayers, their representatives and municipalities. MPAC has published 33 additional supporting documents, including our Information and Data Sharing Policy, Economic Obsolescence Reports, and Cost Analytics.

# 2016 Assessment Update Rollout



## Residential Properties

Notices for residential property owners were mailed over a 21-week period starting on April 4, 2016. The staggered approach was intended for MPAC to:

- Resolve any property owner concerns before final Assessment Rolls are returned to municipalities
- Allow for more localized targeted outreach
- Manage the influx of calls to our call centre to better respond to enquiries

## RESIDENTIAL Market Trends™

### Residential Market Trends

Launched April 2016, Residential Market Trends is a new, user-friendly online tool on [aboutmyproperty.ca](http://aboutmyproperty.ca) designed to inform property taxpayers about key market shifts happening in their neighbourhood and across Ontario.

Through interactive maps, property owners can understand how property assessments have changed in any specified neighbourhood. The maps display information on the average assessment increase in an area, including the value of a typical home, condominium and waterfront property value from 2016 to 2017. Provincially, residential property values have increased on average by 4.5% annually since 2012. Over the next four years, the average residential property will increase by 18%.

### Key Improvement Areas

#### *Improved Sales/Data Validation*

MPAC completed more sales investigations and data quality checks in preparation for this year's assessment update than past reassessments. MPAC staff investigated more than 200,000 sales since 2012, which is more than double the sales reviewed for the 2012 Assessment Update. MPAC also reviewed and updated more than 2.8 million data elements.

#### *Redesigned Property Assessment Notice*

MPAC redesigned the Property Assessment Notice as part of its commitment to enhance the residential taxpayer experience and educate property taxpayers on the valuation process.



MPAC conducted quantitative and qualitative research through a third party to receive feedback from residential taxpayers from across Ontario. Enhancements were made based on this feedback and through consultation with the Ministry of Finance.

Changes include:

- An Issue Date and specific Request for Reconsideration (RfR) deadline for each of the applicable tax years
- A clear explanation of phase-in
- A simple explanation of the Ontario Property Assessment System
- Information on the valuation process and the five key factors that affect residential property value

#### ***Improved Understanding***

In advance of the residential Notice mailing, a variety of resources were provided to property owners, including:



- Brochures
  - [About MPAC](#)
  - [Understanding Your 2016 Property Assessment Notice](#)
  - [Resolving Assessment Concerns/Requests for Reconsideration \(RfR\)](#)
  - [Residential Properties](#)
  - [Newly Built Homes](#)
  - [Waterfront Properties](#)



- Videos
  - [AboutMyProperty™ Overview](#)
  - [How MPAC Assesses Properties](#)
  - [The Request for Reconsideration process](#)
  - [Property Assessment and Taxation](#)
- [Residential Market Trends](#)



## Farm Properties

MPAC has strengthened the accuracy and equity of farm valuations for the 2016 Assessment Update. Property Assessment Notices were delivered starting October 11, 2016, with an average annual increase of 16% since 2012. Over the next four years, the average farm property will increase by 64%.

### Farm Market Trends

Farm Market Trends were created for 48 different geographic regions, and the Current Value Assessment change shows the percentage increase for year one of the phase-in (2017). The maps also show a rate per acre of Class 1 farmland, which is often how farmers speak when referencing the value of their farm property.

1

#### Upward trends continue

Farmland property sales indicate that farm values have continued to increase provincially.

2

#### Interest rates are low

Historic low interest rates have allowed farmers to expand farming operations.

3

#### Demand outweighs supply

Over the last several years, the demand for farmland has significantly outweighed the supply, creating competition.

4

#### Not all buyers are farmers

Non-agricultural buyers in Ontario continue to purchase farmland.

5

#### More land is needed

Many sectors, including large intensive livestock enterprises, need land for nutrient management and cropping requirements.

6

#### Soil type is a factor

The availability of soil types that support high-value crops is driving up demand.

7

#### Farmland sales expand east

Producers continue to expand by purchasing land in Eastern Ontario and in neighbouring communities.

8

#### Lower priced land available in northeast

Buyers from Southern Ontario who are in search of lower priced land are finding it in the Northern and Eastern regions of Ontario.

## Farm Value Comparison



**Overall**  
Average assessment  
change for 2016-2017

<b>Ontario Overall</b>	<b>16%</b>
South West ①	16%
Golden Horseshoe ②	12%
GTA Central Ontario ③	13%
City of Toronto ④	N/A
Central North East ⑤	16%
East ⑥	19%
North ⑦	18%



*Average annual assessment changes reflect the median value for farm properties, regardless of the property class. This includes vacant farmland, farms with residences and outbuildings. The farm market trends map for 48 different geographic regions are available on [aboutmyproperty.ca](http://aboutmyproperty.ca).*

## Key Improvement Areas

### Data Integrity/Accuracy

For the 2016 Update, MPAC implemented a number of changes that have resulted in a better approach to farm valuations.

- **Improved farm sale verification process.** MPAC undertook significant analysis and only used sales of farmland sold to farmers to determine farmland rates. Farm verifications included a standard letter and questionnaire sent to new farm owners, and a mandatory review of vacant farm land sales that are 10 acres or greater.
- **Comprehensive review of vacant farm land sales back to January 2008.** A longer sales period increased the number of farm sales in MPAC's analysis by approximately 40% over past reassessments (sales are time-adjusted to reflect market changes over time).
- **Reduction in the number of farm neighbourhoods.** Farm neighbourhoods have been combined, resulting in a reduction from 228 to 167 neighbourhoods. This has enabled MPAC to use more sales transactions in its determination of the farm land rates. MPAC staff also reviewed the values for farms in bordering neighbourhoods to ensure equity in the valuations.
- **New Agricultural Cost Guide.** MPAC is now relying on a new, up-to-date agricultural cost guide to determine the value of farm structures.



### ***Consultation and Engagement***

In consultation with the Ontario Federation of Agriculture (OFA), the Ontario Ministry of Agriculture Food and Rural Affairs (OMAFRA), municipalities and industry representatives, MPAC worked closely with the farming community to provide additional transparency regarding farmland valuations.



### ***Redesigned Property Assessment Notice***

MPAC engaged property owners and industry groups through focus groups to discuss potential enhancements to the Property Assessment Notice. As a result of feedback received, MPAC customized the Farm Notice to clearly indicate whether the property is classified in the residential or farm tax property class and include acreage as part of the property description.

### ***Improved Understanding***

In addition to outreach and consultation, MPAC created a suite of communication materials to help farm property owners understand the changes being introduced for farm properties as part of this year's province-wide Assessment Update. The materials include:



- A new [Farm brochure](#)
- [How MPAC Assesses Farm Properties](#) video
- An [Infographic](#) that explains how MPAC values farm properties
- [Understanding your Farm Property Assessment Notice Brochure](#)
- Access to all three levels of disclosure for their farm property through [aboutmyproperty.ca](#)
- [Farm Market Trends](#)



## Business Properties

Business property owners received their 2016 Notices starting on October 18, 2016. Values reflect the local real estate market and MPAC's analysis of the market indicates that most categories of business property have increased in value over the last four years. MPAC has made considerable efforts to analyze local markets, review the data on file and talk to property owners in advance of the update.

### Multi-Residential

MPAC has changed the way multi-residential properties are assessed and used the Direct Capitalization Approach for the 2016 Assessment Update. These changes were implemented as a result of feedback received during consultations with the Federation of Rental-Housing Providers of Ontario (FRPO), the Co-operative Housing Federation of Canada (Ontario Region Office) and the Ontario Non-Profit Housing Association. Provincially, multi-residential property values have increased on average by 7% annually since 2012. Over the next four years, the average multi-residential property will increase by 28%.

1

#### Upward trends continue

Multi-residential property sales indicate that values have continued to increase provincially.

2

#### Interest rates are low

Historic low interest rates have fueled an active sales market for multi-residential properties.

3

#### Demand outweighs supply

Competition for apartment investment properties in large urban centres has resulted in premium pricing.

4

#### REITs and large portfolio holders invest

Real estate investment trusts and large institutional investors continue to invest in this stable asset class.

5

#### Rent vs. buy

Many young professionals are choosing to rent instead of buy due to strong home prices.

6

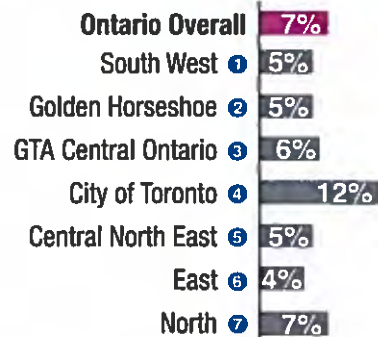
#### Province-wide effects

Sale prices have continued to climb across the province. Sault Ste. Marie, Thunder Bay, Barrie, Hamilton, Windsor and the Greater Toronto Area all show strengthening apartment markets.

## Multi-Residential Value Comparison



**Overall**  
Average assessment  
change for 2016-2017



*Average annual assessment changes reflect the median value for multi-residential properties having seven or more units. Multi-residential market trends include average assessment change (2016-2017), Fair Market Rents, capitalization rates and vacancy rates.*

### Key Improvement Areas

- Reviewed four years of sales data to determine multi-residential values
- Researched and consulted third party sources, including Canada Mortgage and Housing Corporation, to validate our valuation components
- Launched the Property Income and Expense Return (PIER) tool enabling multi-residential property owners to submit their annual rental, income and expense information online
- Studied rental, financial and market information to determine Fair Market Rents, Vacancy and Bad Debt allowances, Expense Ratios and Capitalization Rates for Ontario's multi-residential properties

## Commercial

Commercial properties have a broad range of uses including small retail, food service, shopping centres or big box centres, office buildings or other general commercial uses.

MPAC conducted pre-roll discussions and/or information sessions with Ontario Business Improvement Area Associations, large office and large retail property owners, major tenants (i.e., national chains) to review preliminary valuation parameters for the various sectors. In preparation for this year's Assessment Update, MPAC reviewed Fair Market Rents against market data submitted by property owners and reviewed three years of sales data to establish accurate values. Provincially, commercial property values have increased on average by 3.1% annually since 2012. Over the next four years, the average commercial property will increase by 12.4%.

**1**

### **Retail development in an expanding housing market**

Retail development remains strong in areas with growing residential communities to support the demand for retail services from new residents.

**2**

### **Capitalization rates and office buildings**

Capitalization rates continue to compress in most parts of Ontario. New supply continues to be added in several major markets, including Toronto, Richmond Hill, Mississauga and Oakville.

**3**

### **Ottawa faces decline in office building values**

Ottawa continues to see a decline in rents and an increase in vacancy as the federal government continues to relinquish office space back to the market.

**4**

### **Big box vs. standard retail properties**

Province-wide, big box properties are experiencing marginally lower increases in assessment when compared to standard retail properties due to the limited utility beyond their existing use and limited market demand within this sector.

5

**Commercial in the Northwest**

The main urban centres of Thunder Bay, Kenora, Dryden and Fort Frances are experiencing the most consistent assessment increases in the region. Affordable housing market conditions along with stability in the mining and forestry sector have contributed to steady market conditions in the commercial sector.

6

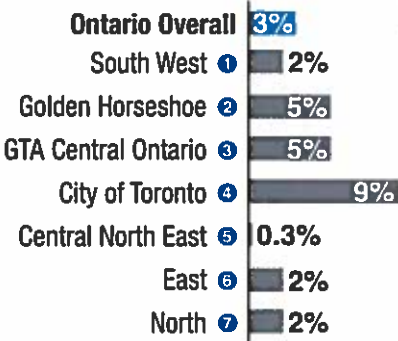
**Commercial in Northeastern Ontario**

Northeastern Ontario is seeing the lowest average change in commercial properties in the region. Increases to small retail properties are tempered in part due to the continued development of big box centres in these communities which have drawn consumers from traditional retail markets. Office buildings and large shopping centre values have outperformed small retail as sectors and investors outside of Northern Ontario see value in investing in the North due to low interest rates.

**Commercial Value Comparison**



**Overall**  
Average assessment change for 2016-2017



*Commercial market trends include average annual assessment change (2016-2017), Fair Market Rent, Vacancy, Non-Recoverable, Capitalization.*

## Industrial

MPAC conducted pre-roll consultations and/or information sessions with the Ontario Business Improvement Areas (BIA) Association and member BIAs from across Ontario, ONroute Service Centres, the Gravel Pit Industry, municipalities, the Ministry of Finance and Infrastructure Ontario to get an improved understanding of how assessment changes will impact various groups in this sector. Provincially, industrial property values have increased on average by 3% annually since 2012. Over the next four years, the average industrial property will increase by 12%.

1

### Upward trends continue

Standard industrial property sales indicate the industrial market remains strong in the Greater Toronto Area.

2

### Rebounding market in Southwestern Ontario

The market in Southwestern Ontario remains stable with industrial sales rebounding in Windsor/Chatham.

3

### Logistics a key driver for this segment

Access to main transportation routes along the 400 series highways and large distribution centres continues to stimulate industrial markets.

4

### Steady growth province-wide

Central, east and northern areas of the province continue to experience stable industrial markets.

5

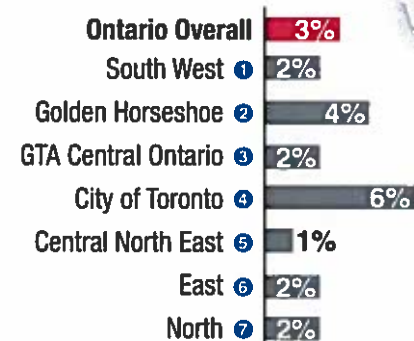
### Interest rates are low

Historic low interest rates have fueled growth in industrial property sales.

## Industrial Value Comparison



Overall  
Average assessment  
change for 2016-2017



*Industrial maps show the average annual assessment change for industrial properties for year one of the phase-in (2017) for standard industrial properties only.*

### Key Improvement Areas

- More than 62,000 sales investigations on commercial/industrial properties province-wide, representing almost 90% of all sales for the province
- Staff reviewed and updated more than 2.8 million data elements
- Engagement has focused on property owners and stakeholders most likely to be affected by changes (either in methodology or value) and those who have expressed an interest in participating in pre-roll discussion and consultation

### Methodology Changes

MPAC engaged key stakeholder groups, municipalities, property owners and the Ministry of Finance in discussions about methodology changes in advance of the update. Key changes include:

- **Big Box Stores** – changed from the income approach to the cost approach
- **Consolidated Courthouses** – changed from the income approach to the cost approach
- **Billboards** – assessed using the regulated cost approach and included in the commercial property class
- **Equity Co-ops/Co-ownerships** – returning to its approach of valuing Equity Co-ops and Co-ownerships by the direct sales comparison approach
- **Multi-Residential** – changed the application of the income approach from a Gross Income Multiplier approach to a direct capitalization of net income



### Improved Understanding

Multi-residential and business owners have access to a range of assessment tools and information to assist them in understanding how MPAC has assessed their property. These tools include:

- A new [Multi-Residential Brochure](#) and [Infographic](#) with an overview of MPAC's approach to valuing multi-residential properties
- A [Small Commercial and Industrial Properties Brochure](#)
- [Understanding your Business Property Assessment Notice Brochure](#)
- A video that explains the [Request for Reconsideration Process for Business Properties](#)
- [Business Market Trends](#) for Commercial, Industrial and Multi-Residential properties



## Large and Special Purpose Business Properties

Large and special purpose business properties are generally characterized as properties that have a unique design, layout, size, construction materials and/or building services that facilitate one or a limited number of uses.

- They have limited market possibilities, except as a going concern business
- They typically have specialized building services
- They tend to serve large market areas that are more regional, national or international in scope
- They generally contain machines and machine fittings that are designed to facilitate one purpose
- Adaptation to other uses is typically challenging, requiring significant alterations and rarely finding economically viable uses for all of the improvements

As part of MPAC's delivery of the 2016 Assessment Update and the implementation of the recommendations under the Ministry of Finance's [Special Purpose Business Property Assessment Review \(SPBPAP\) Report](#), MPAC established an [Advance Disclosure Protocol for Large and Special Purpose Business Properties](#).

The protocol provided municipalities and property taxpayers with the opportunity to review and comment on MPAC's market analytics and preliminary assessed values for large and special purpose business properties in advance of roll return.

Under the Ministry of Finance's Section 10 directive, MPAC was required to develop [Methodology Guides](#) for the following large and special purpose business property types:

- Pulp and Paper Mills
- Saw Mills
- Value-Added Wood Products Manufacturing Plants
- Steel Manufacturing Plants
- Automotive Assembly Plants
- Automobile Parts Manufacturing Plants



Recognizing the complexities surrounding other property sectors, MPAC followed the same procedure for the following additional large and special purpose business property types:

- Pharmaceutical Manufacturing
- Chemical Manufacturing
- Oil Refineries
- Mining
- Food Processing
- Aerospace

### **Consultation**

Engagement and collaboration has provided municipalities and property owners with an opportunity to review and comment on MPAC's sector level analytics and preliminary assessed values for large and special purpose business property types.

Preliminary valuation summaries were shared with property owners and municipalities in May of 2016 encouraging property owners and municipalities to review the information and provide feedback, and to share alternate data, evidence and analysis with MPAC. This feedback was reflected in the updated preliminary values distributed by MPAC on October 4, 2016, which allowed property owners and municipalities a final opportunity to review their revised preliminary summary and offer input prior to Property Assessment Notice delivery on November 28, 2016.

# Our Approach to Value



## The Municipal Experience

A redesigned [Municipal Connect™](#) allows for better understanding and management of the assessment base and assessment at risk, and offers municipalities a modern and flexible way to access assessment information.

To better support the management of municipal services and provide further insight into the 2016 Assessment Update, Municipal Connect™ provided municipalities with access to preliminary values allowing for early consultation/discussion with the goal of greater roll stability and predictability.

Many enhancements were made in the development of Municipal Connect 2.0. Key changes include:

- Access to preliminary values through the Pre-Roll Consultation File for the 2016 Current Value Assessment (2017 to 2020 tax years)
- Weighted assessments based on a municipality's specific ratios
- New and enhanced mapping and satellite photo capabilities, including property type and assessment parcel overlays
- Access to Commercial/Industrial preliminary values
- Access to Assessment Review Board appeal and Request for Reconsideration information

MPAC staff continue to work to provide additional enhancements to meet municipalities' unique needs. Throughout 2017, we will continue to transition functionality from the classic version of Municipal Connect, offer municipalities improved flexibility to build on-demand reports, as well as continue to improve the ability to search, sort, and monitor properties.

# Conclusion

Throughout the 2016 Assessment Update, we have placed careful and deliberate focus on increased transparency and a shared understanding of property assessments.

Careful consideration was given to property sectors where there was a change in methodology, and we have worked collaboratively to engage municipalities, stakeholders and property owners to deliver fair and accurate property assessments.

Significant improvements were introduced this year including the early mailing of Notices, revamped aboutmyproperty.ca site, redesigned Property Assessment Notices, work on advance disclosure, early engagement and pre-roll discussions. These changes share a common goal that is rooted in MPAC's commitment to bring stability and predictability to municipalities' tax base.

As final rolls are delivered, and we enter the first year of Ontario's next four-year cycle, we remain focused on continuing to support all our stakeholders with regard to 2016 base year assessments. We are also committed to continuously improving our service to stakeholders and encourage you to share your feedback with us on the delivery of the 2016 Assessment Update.

Looking forward, we are excited to foster continuous improvements in service delivery through greater collaboration between MPAC and municipalities.

Your local [Municipal and Stakeholder Relations team](#) is available to support you throughout the Assessment Update and beyond. Please contact your Regional Manager, Account Manager or Account Support Coordinator if you have questions or would like more information about this report.

# APPENDIX 1

## Assessment Change Summary by Property Class

### Township of Melancthon

The following chart provides a comparison of the total assessment for the 2012 and 2016 base years, as well as a comparison of the assessment change for year one of the four year phase in (2017 property tax year), by property class.

Property Class/Realty Tax Class	2012 Full CVA	2016 Full CVA	Percent Change 2012 to 2016	2017 Phased-in CVA	Percent Change 2012 to 2017
R Residential	345,346,035	410,770,200	18.9%	355,541,153	3.0%
C Commercial	6,914,865	7,400,600	7.0%	6,857,375	-0.8%
X Commercial (New Construction)	1,728,400	2,288,800	32.4%	1,799,275	4.1%
I Industrial	10,150,000	10,895,800	7.3%	9,580,450	-5.6%
J Industrial (New Construction)	19,826,900	24,267,000	22.4%	20,752,725	4.7%
P Pipeline	1,810,000	1,945,000	7.5%	1,843,750	1.9%
F Farm	132,309,900	237,479,000	79.5%	158,578,175	19.9%
T Managed Forests	1,607,000	2,394,200	49.0%	1,798,100	11.9%
(PIL) R Residential	203,000	225,000	10.8%	208,500	2.7%
(PIL) C Commercial	286,616	412,000	43.7%	317,962	10.9%
E Exempt	8,613,384	11,388,200	32.2%	8,890,913	3.2%
<b>TOTAL</b>	<b>528,796,100</b>	<b>709,465,800</b>	<b>34.17%</b>	<b>566,168,378</b>	<b>7.07%</b>

## APPENDIX 2

### Assessment Base Distribution Summary by Property Class Township of Melancthon

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The following chart provides a comparison of the distribution of the total assessment for the 2012 and 2016 base years, which includes the percentage of the total assessment base by property class.

Property Class/Realty Tax Class	2012 Full CVA	Percentage of Total 2012 CVA	2016 Full CVA	Percentage of Total 2016 CVA	2017 Phased-in CVA	Percentage of Total 2017 CVA
R Residential	345,346,035	65.3%	410,770,200	57.9%	355,541,153	62.8%
C Commercial	6,914,865	1.3%	7,400,600	1.0%	6,857,375	1.2%
X Commercial (New Construction)	1,728,400	0.3%	2,288,800	0.3%	1,799,275	0.3%
I Industrial	10,150,000	1.9%	10,895,800	1.5%	9,580,450	1.7%
J Industrial (New Construction)	19,826,900	3.7%	24,267,000	3.4%	20,752,725	3.7%
P Pipeline	1,810,000	0.3%	1,945,000	0.3%	1,843,750	0.3%
F Farm	132,309,900	25.0%	237,479,000	33.5%	158,578,175	28.0%
T Managed Forests	1,607,000	0.3%	2,394,200	0.3%	1,798,100	0.3%
(PIL) R Residential	203,000	0.0%	225,000	0.0%	208,500	0.0%
(PIL) C Commercial	286,616	0.1%	412,000	0.1%	317,962	0.1%
E Exempt	8,613,384	1.6%	11,388,200	1.6%	8,890,913	1.6%
<b>TOTAL</b>	<b>528,796,100</b>	<b>100.0%</b>	<b>709,465,800</b>	<b>100.0%</b>	<b>566,168,378</b>	<b>100.0%</b>



**Regular Council  
December 13 2016**

**Resolution #423-2016**

**Motion Details**

Moved by Councillor Mary Kavanagh, Seconded by Councillor Charles Mullett

**WHEREAS** the Province of Ontario has asked local governments to put forward new "revenue tools" for municipalities through public discussion;

**AND WHEREAS** the Association of Municipalities of Ontario, in its "What's Next" survey, dated August 17, 2015, projected that with all other revenues remaining stable and service levels unchanged, property taxes will need to increase by 4.51% per year for the next ten years just to meet current service levels and standards;

**AND WHEREAS** municipalities are facing an estimated \$60 billion infrastructure investment gap;

**AND WHEREAS** Ontarians still pay the highest property taxes in the country;

**AND WHEREAS** the revenue raising capacity of property tax is extremely limited for many communities;

**AND WHEREAS** the National Bank of Canada noted in June 25, 2015, "The municipal sector generally bears the greatest burden when it comes to addressing Canada's infrastructure deficit. ... Local governments are responding to this infrastructure challenge as best they can;"

**AND WHEREAS** members of the public, staff and Council participated in a public opportunity to identify and assess new revenue tools for the Town of Bancroft through public open discussion;

**AND WHEREAS** the use of lotteries to raise funds for municipal purposes was brought forward;

**AND WHEREAS** many communities nationally and internationally have experienced overwhelming success raising funds for infrastructure needs with local lotteries such as "Chase the Ace;"

INFO6

FEB 02 2017

**NOW THEREFORE BE IT RESOLVED THAT** The Council of the Corporation of the Town of Bancroft does hereby request that the Province of Ontario strongly consider allowing municipalities in Ontario to hold municipal lotteries for the purpose of generating funds for local infrastructure needs;

**AND FURTHER BE IT RESOLVED THAT** a copy of this resolution be circulated to the Premier of Ontario, AMO, ROMA, and Ontario municipalities for support.

		RECORDED VOTE	YES	NO
		Mayor Bernice Jenkins		
		Deputy Mayor Paul Jenkins		
		Councillor Mary Kavanagh		
CARRIED:	X	Councillor Bill Kilpatrick		
TABLED:		Councillor Barry McGibbon		
DEFEATED:		Councillor Tracy McGibbon		
RECORDED VOTE (SEE LEFT):		Councillor Charles Mullett		

BERNICE JENKINS, MAYOR	HAZEL LAMBE, CLERK
	



**Nottawasaga Valley  
Conservation Authority**

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January 9, 2017

Mayor Darren White and Council  
The Township of Melancthon  
Via email: Denise Holmes, CAO/ Town Clerk

Dear Mayor White & Council

Re: NVCA 2017 Municipal Levy

On December 16, 2016 the NVCA Board of Directors approved the circulated 2017 NVCA Budget. As you are aware, the NVCA circulated our Draft 2017 Budget to our 18 member municipalities on October 3, 2016 for a 30 day review and comment.

The NVCA Board and staff look forward to implementing the 2017 Conservation Authority programs supported by the approved budget including:

- Private land stewardship, restoration and reforestation
- Conservation Authority education and recreation
- Flood forecasting and warning
- Municipal source water protection
- Natural Hazard and Natural Heritage protection in accordance with the *Planning Act* and Provincial Regulations
- Environmental monitoring and preparation of watershed report cards
- Implementing the NVCA 2015-2018 Strategic and Business Plans
- Climate Change.

The approved budget will enable the NVCA, in partnership with our local Municipalities, and residents to continue to protect and restore the environment, reduce and or prevent flood and erosion hazards to property and persons, and continue to support the health of the local residents and the health of our local economy.

The following table provides a comparison to the 2016 levy and identifies your portion of the municipal levy for 2017.

	<b>2016</b>	<b>2017</b>	<b>\$ Increase</b>	<b>% Increase</b>
<b>Total Levy</b>	\$2,147,883.48	\$2,196,487.39	\$ 48,603.91	2.26%
<b>Melancthon</b>	\$10,277.62	\$10,633.20	\$355.57	3.46%



As well, the NVCA introduced the Asset Levy in support of the approved Asset Management Plan. This plan has a ten year forecast of our capital replacement costs and will ensure that the NVCA has the funds moving forward to adequately maintain our current assets. The amount required each year for the next ten years is \$129,926.50 apportioned out the same way as the general levy.

The NVCA has heard from our municipalities that many would like to phase this in over 4 years, so each municipality has the option to either go all in or phase it in. The financial impacts for your municipality are shown below. Please let us know which option your municipality would like to choose by the end of January.

	All In	Year 1 (2017)	Year 2 (2018)	Year 3 (2019)	Year 4 & onward
Melancthon	\$628.97	\$207.57	\$415.14	\$628.99	\$719.75

\*\*Year 2 onward is an estimate based on the current value assessment

An invoice for levy will be sent out late January or February.

Should you have any questions regarding the approved NVCA budget or associated conservation programs please contact me directly.

Thank you again for your ongoing support of the NVCA. I would like to also thank the NVCA Board Members for their continued governance, ensuring that the watershed conservation needs are best served.

Sincerely,



D. Gayle Wood, CMM3  
Chief Administrative Officer

# GRCA Current



January, 2017 • Volume 22 Number 1

## GRCA General Membership

<b>Chair</b>	Helen Jowett
<b>Vice-Chair</b>	Chris White
<b>Townships of Amaranth, East Garafraxa, Melancthon and Southgate and Town of Grand Valley</b>	Guy Gardhouse
<b>Townships of Mapleton and Wellington North</b>	Pat Saker
<b>Township of Centre Wellington</b>	Kelly Linton
<b>Town of Erin, Townships of Guelph/Eramosa and Puslinch</b>	Chris White
<b>City of Guelph</b>	Bob Bell, Mike Salisbury
<b>Region of Waterloo</b>	Les Armstrong, Elizabeth Clarke, Sue Foxton, Helen Jowett, Geoff Lorentz, Jane Mitchell, Joe Nowak, Wayne Roth, Sandy Shantz, Warren Stauch
<b>Municipality of North Perth and Township of Perth East</b>	George Wicke
<b>Halton Region</b>	Cindy Lunau
<b>City of Hamilton</b>	George Stojanovic
<b>Oxford County</b>	Bruce Banbury
<b>County of Brant</b>	Brian Coleman, Shirley Simons
<b>City of Brantford</b>	Dave Neumann, Vic Prendergast
<b>Haldimand and Norfolk Counties</b>	Bernie Corbett, Fred Morison

## Success in 2016 for the Foundation

The Grand River Conservation Foundation had a successful year.

While the final numbers haven't yet been calculated, it looks like the Foundation raised \$1 million in 2016. This will go towards GRCA projects with few or no other sources of funding. In 2015, GRCF disbursed about \$940,000 for conservation work.

The GRCF is similar to a hospital foundation, because it supports the conservation authority by raising funds for projects related to the GRCA.

About 600 donors made contributions during the year. This includes the biggest donation in two decades that was made by Toyota Motor Manufacturing Canada (\$250,000) and is being used to expand winter programs at Grand River Parks.

Work on the new Guelph Lake Nature Centre learning grounds is underway with Foundation funding, and renovations have also been undertaken to improve accessibility at Apps' Mill Nature Centre.

Priorities for 2017 include the new Guelph Lake Nature Centre and work to improve trails and boardwalks at FWR Dickson Wilderness Area near Cambridge.

Donations can always be accepted online at [www.grcf.ca](http://www.grcf.ca).

## Let it snow, let it snow, let it snow

You might not mind the snow as much if you know that it is helping to alleviate the dry conditions within the watershed that persisted through most of 2016.

Precipitation was high in December, with lots of snow, but it also rained during warmer days. The warmer periods allowed the snow to melt and enter the Grand River system.

This brought most reservoir levels up to more

seasonal levels for the time of year. It also increased river flows, which had been very low.

More snowmelt is needed to fill the reservoirs by the spring.

## GRCA winter programming launched January 3

The GRCA launched its winter programming on January 3.

Cross-country skiing and snowshoeing will be offered at Laurel Creek, Pinehurst Lake and Shade's Mills when conditions are suitable. Equipment rental may be available at these locations on weekends only.

Ice fishing will be offered at Pinehurst Lake and Shade's Mills this winter when conditions allow. Ice thickness is monitored daily to ensure the ice thickness meets safety requirements.

Hiking is available at Belwood Lake and Rockwood, but these parks don't provide a formal winter program and services are limited to parking, waste bin removal and signage.

Call the individual park to find out about winter activities. Check [www.grandriver.ca/events](http://www.grandriver.ca/events) to find out about events at the nature centres during the winter.

## Hydrology update

The GRCA is starting to update its hydrology modeling software and is hiring Resource Management Associates Inc. to do the work.

Software is used for hydrology modelling and flood forecasting. Last year, the province gave funds to the GRCA to evaluate a new hydrology model to be used in Ontario. It was developed by the U.S. Army Corps Hydrologic Engineering Center.

Last year's evaluation found that it is the preferred hydrology model for the future in Ontario. It has many advantages, including that it provides real-time flood forecasting to manage the Grand River system. It can also be integrated with



[www.grandriver.ca](http://www.grandriver.ca)

Grand River Conservation Authority

INFO8

FEB 02 2017



other technology used by conservation authorities in Ontario.

The old hydrology modeling software was developed at the University of Guelph and may not be supported in coming years. For this reason, work is underway to replace it.

The Ministry of Natural Resources and Forestry is providing \$100,000 to adapt the hydrology software so that it can be used in Ontario by the GRCA and other conservation authorities and has transferred the funds to the GRCA for this purpose. The hydrology software is one part of the overall forecasting framework.

The work is expected to be completed in 2017.

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## Warm temperatures and rain in early January

Warm weather and light rain spread across the Grand River watershed in early January.

Much of the rain was absorbed into the snow pack. As a result, snowmelt was gradual and didn't cause flooding.

The GRCA issued a Watershed Conditions Statement due to water safety, urging people to exercise caution around all water bodies. Banks next to rivers and creeks become slippery when the temperature changes and they pose a serious hazard.

Parents are encouraged to keep their children and pets away from all watercourses and off frozen water bodies, which may be weakened when the weather becomes warm.

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## Student summer jobs now posted

The GRCA hires well over 200 students during the summer to work in Grand River Parks and recruiting got underway at the end of December.

Student jobs are posted on the GRCA website in the careers section and include positions such as lifeguards, gate staff, security and concession attendants. The positions are available at the GRCA's 11 parks and a few others will be available for head office in Cambridge.

The deadline to apply for most student positions is Feb. 20, however a few positions may be posted later.



Winter programming at Grand River Parks launched January 3. This photo was taken by Jenny Schwing at Shades' Mills Park and was one of the submissions to the GRCA photo contest.

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## Great Lakes Water Quality Agreement

In February 2016, the governments of Canada and the United States adopted a binational target to reduce total phosphorus entering Lake Erie by 40 per cent.

To meet this target, the two countries will develop Domestic Actions Plans by February 2018. The conservation authorities that manage river systems draining into Lake Erie have a significant role in working to achieve the target.

The Great Lakes Advisory Board serves in an advisory capacity to the International Joint Commission. GRCA staff will participate in a workshop on February 1-2 where the advisory board will seek input on how to best achieve the nutrient reduction targets for Lake Erie.

GRCA staff members continue to participate on a number of working groups related to the Great Lakes Water Quality Agreement, dealing with issues of climate change and nutrient loading.

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## Sign up to receive news and newsletters online

Anyone can sign up to receive specific types of news in their inbox on the GRCA website at [www.grandriver.ca/subscribe](http://www.grandriver.ca/subscribe).

including this newsletter.

There are several categories of news so that individuals receive what they are interested in. These include farm and landowner information, flood messages, the Grand Actions newsletter (sent out four to six times a year), GRCA Current (this monthly publication), The Grand newsletter (an annual publication), low water messages and park events and activities.

This issue of *GRCA Current* was published in January, 2017.

It is a summary of the December, 2016 business conducted by the Grand River Conservation Authority board and committees, as well as other noteworthy happenings and topics of interest.

The Grand River Conservation Authority welcomes distribution, photocopying and forwarding of *GRCA Current*.

**Next board meeting:**  
January 27 at 9:30 a.m.,  
GRCA Administration Centre

**Subscribe to GRCA Current:**  
[www.grandriver.ca/subscribe](http://www.grandriver.ca/subscribe)

**View meeting agendas:**  
<https://calendar.grandriver.ca/directors>

**View coming events:**  
[www.grandriver.ca/events](http://www.grandriver.ca/events)

**From:** AMO Communications <communicate@amo.on.ca>  
**Sent:** Thursday, January 12, 2017 4:15 PM  
**To:** dholmes@melancthontownship.ca  
**Subject:** AMO POLICY UPDATE - Provincial Cabinet Shuffle

January 12, 2017

## **Today's Changes to Provincial Cabinet**

Today Premier Kathleen Wynne appointed new Ministers to Cabinet and made changes to some portfolios in her second Cabinet shuffle since the June 2014 provincial election.

This mini Cabinet shuffle was anticipated after the December 16<sup>th</sup> departure of former Community Safety and Correctional Services Minister David Oraziotti. At that time, Premier Wynne appointed the Minister of Labour, the Honourable Kevin Flynn, to be the interim Minister of Community Safety and Correctional Services.

AMO would like to congratulate the Honourable Marie-France Lalonde on her appointment as the Minister of Community Safety and Correctional Services (MCSCS). Minister Lalonde will also retain her responsibility for Francophone Affairs.

We look forward to working with the new MCSCS Minister Lalonde and her staff on significant municipal issues such as policing modernization and the anticipated *Police Services Act* amendments, the recently announced changes to provincial policing grants and the treatment of property counts in the OPP billing model.

Other Cabinet appointments and portfolio changes today included:

Hon. Dipika Damerla - Minister of Senior Affairs

Hon. Jeff Leal - Minister of Agriculture, Food and Rural Affairs and Responsible for Small Business

Hon. Tracy MacCharles - Minister of Government and Consumer Affairs and Minister Responsible for Accessibility

Hon. Indira Naidoo-Harris - Minister of Women's Issues and Minister Responsible for Early Years and Child Care.

With the Ontario Legislature returning for its Spring sitting on February 21<sup>st</sup>, the newly shuffled Cabinet Ministers have some time to be briefed on their portfolios. The ROMA Ministers' Forum is on January 30<sup>th</sup> and there will be ministerial delegations at the upcoming ROMA Conference.

**AMO Contact:** Monika Turner, Director of Policy, E-mail: [mturner@amo.on.ca](mailto:mturner@amo.on.ca), 416.971.9856 ext. 318.

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**PLEASE NOTE:** AMO Breaking News will be broadcast to the member municipality's council, administrator, and clerk. Recipients of the AMO broadcasts are free to redistribute the AMO broadcasts to other municipal staff as required. We have decided to not add other staff to these broadcast lists in order to ensure accuracy and efficiency in the management of our various broadcast lists.

**DISCLAIMER:** Any documents attached are final versions. AMO assumes no responsibility for any discrepancies that may have been transmitted with this electronic version. The printed versions of the documents stand as the official record.

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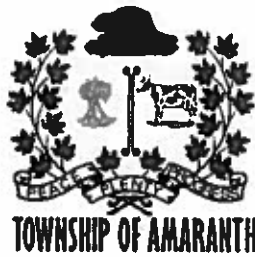
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To: [dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca)      [Remove](#) this sender from my allow list  
From: [communicate@amo.on.ca](mailto:communicate@amo.on.ca)

*You received this message because the sender is on your allow list.*

**BEN RYZEBOL, Director of Public Works**  
PUBLIC WORKS - TELEPHONE: (519) 941-1065  
FAX: (519) 941-1802  
email: bryzebol@amaranth-eastgary.ca



374028 6<sup>TH</sup> LINE, AMARANTH, ONTARIO  
L9W 0M6

**SUSAN M. STONE, C.A.O./Clerk-Treasurer**  
TELEPHONE: (519) 941-1007  
FAX: (519) 941-1802  
email: suestone@amaranth-eastgary.ca

January 12, 2017

Hon. Kathryn McGarry, Minister  
Ministry of Natural Resources and Forestry  
Whitney Block, 6<sup>th</sup> Floor, Room 6630  
99 Wellesley Street West  
Toronto ON M7A 1W3

Dear Minister McGarry:

**Re: Township of Amaranth Resolution – Changes to the Conservation Authorities Act**

At their regular meeting of January 11, 2017, Council passed the following resolution:

**Moved by J. Aultman – Seconded by G. Little**

**Whereas** the Conservation Authorities Act gives Conservation Authorities the power to study and investigate the watershed and to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed; and

**Whereas** the Township of Amaranth currently has received complaints regarding fill operations and peat extraction within the Township; and

**Whereas** the Grand River Conservation Authority has indicated it does not have the power to issue stop work orders regarding these complaints;

**Now Therefore Be It Resolved That** Council of the Township of Amaranth calls on the Provincial government to make the necessary changes to the Conservation Authorities Act with regard to the extraction of peat and the placement of fill; and further

INFO 10

FEB 02 2017

**That Conservation Authorities be given the necessary powers to issue stop work orders and shut down these operations; and**

**That this resolution be circulated to all municipalities within Dufferin County.**

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

**Yours truly,**

A handwritten signature in black ink, reading "Susan M. Stone". The signature is written in a cursive, flowing style.

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

**SMS/kp**

**cc: Dufferin County Municipalities  
Hon. Kathleen Wynne, Premier  
Joe Farwell, CEO, Grand River Conservation Authority**





DUFFERIN  
COUNTY

## Notice of Open House

Dufferin County's Forest Operation Review Committee is inviting the public to provide comments on the proposed

### **DUFFERIN COUNTY FOREST RECREATIONAL USE POLICY**

The committee members and staff will be present at two open house events to share the proposed plan, answer questions and receive public input.

**Wednesday February 8th, 2017**

**3:00 - 8:00 pm**

Dufferin County Courthouse "The Atrium" - 55 Zina St. Orangeville Ontario

**Saturday February 11th, 2017**

**10:00 am - 4:00 pm**

Dufferin County Museum & Archives - Airport Road, Mulmur Ontario

**Public Comment Period is Open until March 31st, 2017**

Comments can be submitted using the feedback option on the County website ([www.dufferincounty.ca](http://www.dufferincounty.ca)) or by emailing them to [forestmanager@dufferincounty.ca](mailto:forestmanager@dufferincounty.ca)

Info 11

FEB 02 2017



## Denise Holmes

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**From:** Randy Hillier <info@randyhillier.com>  
**Sent:** Monday, January 16, 2017 12:13 PM  
**To:** Denise Holmes  
**Subject:** Bill 77, Kickstarting Public Participation Act



Denise Holmes --

### **Bill 77, Kickstarting Public Participation Act, 2016**

At a time when municipalities struggle to balance the competing needs of their budgets, community projects often must be delayed in order to undertake higher priority obligations, leaving citizens feeling ignored or overlooked. We also see and hear from many residents that they lack appropriate tools to help them advocate and promote community projects.

Civic crowdfunding has become a popular mechanism to solve this problem by enhancing public participating in municipal and community projects across Europe and North America. By providing citizens with a method of actively engaging in the development of public projects, they are given the opportunity to take part in and see the direct benefits of community investment.

It is for this reason that I have introduced to the Ontario Legislature Bill 77, the "Kickstarting Public Participation Act", which if enacted, will lead to the establishment of a province-wide online crowd sourcing platform for municipalities and community organizations to use to raise funds for community-improvement projects.

For those who don't know, crowdfunding allows groups and individuals to solicit donations and investment for projects online by setting donation tiers, goals and in some cases rewards. While this method started as a tool to finance projects by artists and entrepreneurs, it has since expanded to become used by humanitarian groups and municipalities, and has been used to fund projects such as bridges, parks, and even the establishment of new transit routes.

I believe that a crowdfunding platform accessible to all municipalities in the province will enable local governments to secure finances and gauge interest in public projects, while simultaneously empowering citizens to be more involved in community affairs and development.

I hope that I can count on your support for Bill 77 so that together we may improve Ontario communities one project at a time. One method to show support and help me in having this Bill approved by the legislature would be an approved resolution by your council or association and copied

to my office and that of the Premier.

You can view a full copy of the bill [here](#)

If you have any questions about the bill or crowdfunding in general, do not hesitate to contact my office.

Randy Hillier

Email: [info@randyhillier.com](mailto:info@randyhillier.com)

Perth Office: 613 267 8239

Queens Park: 416 325 2244

<http://www.randyhilliermpp.com/>

Randy Hillier · Canada

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2ND SESSION, 41ST LEGISLATURE, ONTARIO  
65 ELIZABETH II, 2016

2<sup>e</sup> SESSION, 41<sup>e</sup> LÉGISLATURE, ONTARIO  
65 ELIZABETH II, 2016

## **Bill 77**

**An Act to enact  
the Kickstarting Public  
Participation Act, 2016**

**Mr. R. Hillier**

**Private Member's Bill**

1st Reading      December 5, 2016  
2nd Reading  
3rd Reading  
Royal Assent

Printed by the Legislative Assembly  
of Ontario

## **Projet de loi 77**

**Loi édictant la  
Loi de 2016 de démarrage  
de la participation citoyenne**

**M. R. Hillier**

**Projet de loi de député**

1<sup>re</sup> lecture      5 décembre 2016  
2<sup>e</sup> lecture  
3<sup>e</sup> lecture  
Sanction royale

Imprimé par l'Assemblée législative  
de l'Ontario



## EXPLANATORY NOTE

The Bill requires the Minister of Tourism, Culture and Sport to maintain a website to facilitate the funding of projects that benefit local communities through the use of crowdfunding. The Bill establishes the requirements to submit a proposal for publication on the website as well as the manner in which the Minister is to collect and distribute the donations received via the website.

## NOTE EXPLICATIVE

Le projet de loi oblige le ministre du Tourisme, de la Culture et du Sport à tenir à jour un site Web pour faciliter le financement de projets dont bénéficient les collectivités locales grâce au financement participatif. Le projet de loi établit les conditions à remplir pour demander l'affichage d'un projet sur le site Web ainsi que la manière dont le ministre doit recueillir et verser les dons reçus par l'intermédiaire du site Web.

**An Act to enact  
the Kickstarting Public  
Participation Act, 2016**

**Loi édictant la  
Loi de 2016 de démarrage  
de la participation citoyenne**

Her Majesty, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:

**Definitions**

1. In this Act,

“crowdfunding” means the funding of a project by raising donations via the internet; (“financement participatif”)

“Minister” means the Minister of Tourism, Culture and Sport or, if another member of the Executive Council is responsible for the administration of this Act, that Minister; (“ministre”)

“prescribed” means prescribed by the regulations made under this Act; (“prescrit”)

“sponsored organization” means an organization that proposes to implement a project funded through crowdfunding under this Act; (“organisme parrainé”)

“target amount” means the amount of funds required to implement the particular proposal. (“objectif de financement”)

**Minister to maintain crowdfunding website**

2. The Minister shall maintain a website that facilitates the crowdfunding of projects that benefit local communities.

**Submission of proposals**

3. (1) Any person may submit to the Minister a proposal to fund a particular project through the website by providing to the Minister,

- (a) a proposal in a form approved by the Minister that includes a description of the project and the target amount;
- (b) any information or documentation that may be specified by the Minister; and
- (c) any prescribed information.

**Criteria for inclusion on the website, collection of donations**

(2) The Minister shall accept a proposal and collect donations for a project through the website if it meets the following conditions:

- 1. The sponsored organization has approved the project.

Sa Majesté, sur l'avis et avec le consentement de l'Assemblée législative de la province de l'Ontario, édicte :

**Définitions**

1. Les définitions qui suivent s'appliquent à la présente loi.

«financement participatif» Financement d'un projet par la collecte de dons sur Internet. («crowdfunding»)

«ministre» Le ministre du Tourisme, de la Culture et du Sport ou l'autre membre du Conseil exécutif chargé de l'application de la présente loi. («Minister»)

«objectif de financement» Le montant des fonds nécessaires pour mettre en oeuvre le projet proposé. («target amount»)

«organisme parrainé» Organisme qui propose de mettre en oeuvre un projet financé par financement participatif en vertu de la présente loi. («sponsored organization»)

«prescrit» Prescrit par les règlements pris en vertu de la présente loi. («prescribed»)

**Responsabilité du ministre : site Web de financement participatif**

2. Le ministre tient à jour un site Web qui facilite le financement participatif de projets dont bénéficient les collectivités locales.

**Présentation des propositions**

3. (1) Toute personne peut présenter au ministre une proposition visant à financer un projet donné par l'intermédiaire du site Web en lui fournissant :

- a) sous la forme qu'il approuve, une proposition qui inclut la description du projet et l'objectif de financement;
- b) les renseignements ou documents qu'il précise;
- c) les renseignements prescrits.

**Critères à remplir pour l'affichage sur le site Web et la collecte des dons**

(2) Le ministre accepte une proposition et recueille des dons pour un projet par l'intermédiaire du site Web si le projet remplit les conditions suivantes :

- 1. L'organisme parrainé a approuvé le projet.

2. The sponsored organization is a person described in clauses (a) to (c) of the definition of “qualified donee” in subsection 149.1 (1) of the *Income Tax Act* (Canada) or a prescribed person.
3. Any municipality on whose property the project will be located or undertaken has approved the project.
4. The Minister is satisfied that the project is not substantially similar to a project currently published on the website.
5. The Minister is satisfied that the proposed target amount would reasonably cover the costs of the project.
6. The project or sponsored organization meets any further condition that may be prescribed.

#### Information to be on the website

(3) The Minister shall maintain on the website in respect of each project:

1. A description of the project.
2. The name of the sponsored organization.
3. The amount of donations received towards the project in real time.

#### Minister to distribute donations

4. (1) If the donations received for a particular project reach the target amount, the Minister shall remove the project from the website and arrange for the funds to be transferred to the organization along with the names and contact information of each of the donors and the amounts of their respective donations.

#### Funds collected in excess of target amount

(2) If the Minister collects funds in excess of the target amount, the Minister shall refund any excess funds to the donors.

#### When donation made

(3) The donation shall be deemed to be made by each donor when the Minister transfers the funds to the organization.

#### Minister to remove proposals

(4) The Minister shall remove a project from the website and refund any donations if the project has been published on the website for 120 days and its target amount has not been reached.

#### Donations not part of the Consolidated Revenue Fund

(5) Despite Part I of the *Financial Administration Act*, the donations made through the website do not form part of the Consolidated Revenue Fund.

#### Regulations

5. The Minister may make regulations respecting any matter necessary or advisable to carry out effectively the intent and purpose of this Act, and without limiting the generality of the foregoing, may make regulations,

2. L'organisme parrainé est une personne visée aux alinéas a) à c) de la définition de «donataire reconnu» au paragraphe 149.1 (1) de la *Loi de l'impôt sur le revenu* (Canada) ou est une personne prescrite.
3. Le cas échéant, la municipalité sur les biens de laquelle sera situé ou entrepris le projet a approuvé celui-ci.
4. Le ministre est convaincu que le projet n'est pas essentiellement semblable à un projet affiché sur le site Web.
5. Le ministre est convaincu que l'objectif de financement proposé est raisonnable pour couvrir le coût du projet.
6. Le projet ou l'organisme parrainé remplit toute autre condition prescrite.

#### Renseignements devant figurer sur le site Web

(3) Le ministre tient à jour sur le site Web les renseignements suivants au sujet de chaque projet :

1. La description du projet.
2. Le nom de l'organisme parrainé.
3. Le montant des dons reçus pour le projet en temps réel.

#### Versement des dons par le ministre

4. (1) Si les dons reçus pour un projet donné atteignent l'objectif de financement, le ministre retire le projet du site Web et prend des dispositions pour faire transférer les fonds à l'organisme et lui communiquer les noms et coordonnées de chacun des donateurs ainsi que le montant de leurs dons respectifs.

#### Excédent des fonds recueillis sur l'objectif de financement

(2) Si le total des fonds qu'il recueille dépasse l'objectif de financement, le ministre rembourse les fonds excédentaires aux donateurs.

#### Moment où sont effectués les dons

(3) Les dons sont réputés effectués par leurs donateurs respectifs lorsque le ministre transfère les fonds à l'organisme.

#### Retrait des propositions

(4) Le ministre retire le projet du site Web et rembourse les dons si le projet est affiché sur le site Web depuis 120 jours et que l'objectif de financement n'est pas atteint.

#### Exclusion du Trésor

(5) Malgré la partie I de la *Loi sur l'administration financière*, les dons effectués par l'intermédiaire du site Web ne font pas partie du Trésor.

#### Règlements

5. Le ministre peut, par règlement, traiter de toute question jugée nécessaire ou utile pour réaliser efficacement l'intention et l'objet de la présente loi, notamment :

- (a) prescribing requirements for the website;
- (b) prescribing additional information for the purposes of clause 3 (1) (c);
- (c) prescribing persons for the purposes of paragraph 2 of subsection 3 (2);
- (d) prescribing further conditions for the purposes of paragraph 6 of subsection 3 (2);
- (e) prescribing any requirements relating to the collection or transfer of funds donated via the website.

**Commencement**

**6. This Act comes into force on January 1, 2018.**

**Short title**

**7. The short title of this Act is the *Kickstarting Public Participation Act, 2016*.**

- a) prescrire des exigences à l'égard du site Web;
- b) prescrire des renseignements supplémentaires pour l'application de l'alinéa 3 (1) c);
- c) prescrire des personnes pour l'application de la disposition 2 du paragraphe 3 (2);
- d) prescrire d'autres conditions pour l'application de la disposition 6 du paragraphe 3 (2);
- e) prescrire des exigences relatives à la collecte ou au transfert de fonds donnés par l'intermédiaire du site Web.

**Entrée en vigueur**

**6. La présente loi entre en vigueur le 1<sup>er</sup> janvier 2018.**

**Titre abrégé**

**7. Le titre abrégé de la présente loi est *Loi de 2016 de démarrage de la participation citoyenne*.**

## Denise Holmes

---

**From:** Kevin.Flood@ontario.ca  
**Sent:** Tuesday, January 17, 2017 12:03 PM  
**To:** tsalkeld@nvca.on.ca; clerk@dufferincounty.on.ca; dholmes@melancthontownship.ca; kevin.flood@ontario.ca  
**Subject:** Notification of Application for Permit to Take Water

This E-mail message has been sent to you as a result of the requirements of Ontario's new Water Taking and Transfer Regulation (O.Reg 387/04). The regulation requires that the Ministry of the Environment and Climate Change notify municipalities and conservation authorities of applications for Permits to Take Water to withdraw water from locations within their jurisdiction.

You may examine the wording of the new Regulation online at the following web site:

[http://www.e-laws.gov.on.ca/html/regs/english/elaws\\_regs\\_040387\\_e.htm](http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_040387_e.htm)

### Notification of Application for Permit to Take Water

**Ministry Reference Number:**  
7645-AH4JDN

**Applicant:**

Strada Aggregates Inc.  
30 Floral Pky  
Vaughan, Ontario  
L4K 4R1

**Location of Water Taking(s):**  
437159 4th Line  
NA  
Lot 11 and 12, Concession 3  
Melancthon Township, County of Dufferin

**Ministry of the Environment Region:**  
West Central

**Description:**

This proposal is for a Permit To Take Water for aggregate washing purposes. Water will be taken from one (1) pond. Details of the water taking are as follows:

**Permit type - Category 3**

**Source Name:** Wash Pond  
**Purpose:** Aggregate Washing  
**Maximum rate per minute (Litres):** 4,000



Maximum number of hours of taking per day: 10  
Maximum volume per day (Litres): 2,400,000  
Maximum number of days of taking per year: 240  
Earliest calendar date of taking (mm/dd): 04/01  
Latest calendar date of taking (mm/dd): 11/30  
Period of taking: 10 years

Permit type:  
New

Length of Taking:  
10 years

**Table A**

**Source Information and Water Taking Amount Applied For**

	Source Name / Description:	Source: Type:	Taking Specific Purpose:	Taking Major Category:	Max. Taken per Minute (litres):	Max. Num. of Hrs Taken per Day:	Max. Taken per Day (litres):	Max. Num. of Days Taken per Year:	Zone/ Easting/ Northing:
1	Wash Pond	Pond	Aggregate Washing	Industrial	4,000	10	2,400,000	240	17 561589 4887164
						Total Taking:	2,400,000		

Comments should be directed to the following Contact Person:

Kevin Flood  
Ministry of the Environment  
12th Floor  
119 King St W  
Hamilton ON L8P 4Y7

This E-mail message has been sent to you as a result of the requirements of Ontario Regulation 387/04. It is the responsibility of the municipality or Conservation Authority to determine the appropriate staff person to whom this notification should be forwarded. If you wish to have subsequent notification sent to a different person within your organization, please respond to this E-mail message with an alternate E-mail address and contact name. It is the responsibility of the municipality or conservation authority to ensure that any changes to the alternate E-mail address are reported to the Ministry.

Please note that any comments, concerns, or questions must be received by the Ministry within 30 days of the date of this message.



**Ontario Water Resources Act**  
**Loi sur les ressources en eau de l'Ontario**

**ONTARIO REGULATION 387/04**

**WATER TAKING AND TRANSFER**

**Consolidation Period:** From March 29, 2016 to the e-Laws currency date.

**Last amendment:** O. Reg. 64/16.

***This Regulation is made in English only.***

**CONTENTS [ - ]**

GENERAL

- 2. Definitions
- 2.1 Water taking, clarification
- 3. Maps

PERMITS

- 4. Matters to be considered by the Director
- 4.1 Prescribed water takings
- 4.2 Exemption from s. 34 (1) of the Act
- 5. High use watersheds
- 6. Compliance with Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement
- 7. Notice and consultation
- 8. Transition

DATA AND REPORTING

- 9. Duties of permit holders
- 10. Manner of calculating average amount of water per day

TRANSFERS

- 11. Related transferor
- 12. Great Lakes watersheds
- 13. Connecting channels of Great Lakes watersheds
- 14. Determination of threshold amount
- 15. Exemption from s. 34.6 (1) of the Act
- 16. Exemptions from ss. 34.5 to 34.8 of the Act
- 17. Determination of amount re consumptive use
- 18. Permits, inclusion of specifically directed terms and conditions
- 19. Determining amount of water currently being transferred
- 20. Reciprocating jurisdictions

**GENERAL**

## Definitions

2. (1) In this Regulation,

"application" means an application to the Director for a permit,

(a) made under section 34.1 of the Act, if the application is made on or after the day section 34.1 of the Act comes into force, or

(b) made under section 34 of the Act as it read before section 34.1 of the Act came into force;

"Average Annual Flow Map" means the map entitled "Water Use — Average Annual Flow Conditions", dated November, 2004 and on file in the offices of the Ministry of the Environment and Climate Change at Toronto and available on a website of the Government of Ontario;

"Drinking Water Systems" means Ontario Regulation 170/03 (Drinking Water Systems) made under the *Safe Drinking Water Act, 2002*;

"Great Lakes Charter" means the Great Lakes Charter signed by the premiers of Ontario and Quebec and the governors of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania and Wisconsin on February 11, 1985 and amended by the Great Lakes Charter Annex, dated June 18, 2001;

"Municipal Class Environmental Assessment" means the Municipal Class Environmental Assessment prepared by the Municipal Engineers Association, dated October, 2000 and as amended in 2007 and afterwards from time to time;

"municipal drinking water system" means a municipal drinking water system within the meaning of the *Safe Drinking Water Act, 2002*;

"permit" means a permit issued under section 34 of the Act, as it read before section 34.1 of the Act came into force, or under section 34.1 of the Act;

"sewer" has the same meaning as in Ontario Regulation 525/98 (Approval Exemptions) made under the Act;

"Summer Low Flow Map" means the map entitled "Water Use — Summer Low Flow Conditions", dated November, 2004 and on file in the offices of the Ministry of the Environment and Climate Change at Toronto and available on a website of the Government of Ontario;

"water body" has the same meaning as in Ontario Regulation 359/09 (Renewable Energy Approvals Under Part V.0.1 of the Act) made under the *Environmental Protection Act*;

"wetland" has the same meaning as in the *Conservation Land Act*. O. Reg. 387/04, s. 2; O. Reg. 225/14, s. 2 (1-4); O. Reg. 64/16, s. 1.

(2) The definitions in subsection 34.5 (1) of the Act apply for the purposes of this Regulation. O. Reg. 225/14, s. 2 (5).

## Water taking, clarification

2.1 (1) The activity of diverting the waters of a water body for the purpose of creating and maintaining a dewatered work area located in whole or in part in the water body for a project described in subsection (2) is not water taking as described in subsection 1 (7) of the Act and does not otherwise constitute a water taking for the purposes of the Act if,

(a) the water levels upstream and downstream of the work area are not affected by the diversion; and

(b) the water that is diverted,

(i) is not removed from the water body, or

(ii) is removed from the water body without the use of a pump and is directly returned to the same water body. O. Reg. 64/16, s. 2.

(2) A project referred to in subsection (1) includes the following:

1. The construction, repair, alteration, extension or replacement of a bridge, culvert, pier or other structure.

2. The construction, repair, alteration, extension or replacement of a sewer or water works other than a sewer or water works situated under a watercourse that was or will be installed using open-cut trench techniques. O. Reg. 64/16, s. 2.

## Maps

3. (1) REVOKED: O. Reg. 225/14, s. 3 (1).

(2) Whether water taking or proposed water taking is located in a high use watershed or medium use watershed as shown on the Average Annual Flow Map or on the Summer Low Flow Map is determined by reference to,

(a) the Average Annual Flow Map or the Summer Low Flow Map, as the case may be;

(b) the geographic co-ordinates of the location; and

(c) the applicable watershed boundaries as defined in "Metadata Reference: Ministry of Natural Resources, Land Information Ontario, 2002, Watersheds, Tertiary, Queen's Printer for Ontario", which is available on a website of the Government of Ontario. O. Reg. 387/04, s. 3 (2); O. Reg. 225/14, s. 3 (2).

## PERMITS

### Matters to be considered by the Director

4. (1) This section applies,

(a) when the Director is considering an application, other than an application for a new transfer or an increased transfer that does not involve a new water taking or an increased water taking; and

(b) when the Director is otherwise considering whether to cancel or amend a permit or issue a new permit, but not,

(i) when the Director is considering whether to amend a permit or issue a new permit for the purpose of responding to a request made under section 34.8 of the Act, or

(ii) when the Director is considering whether to impose conditions under subsection 34.7 (2) of the Act or amendments to conditions imposed under that subsection. O. Reg. 225/14, s. 4 (1).

(2) The Director shall consider the following matters, to the extent that information is available to the Director, and to the extent that the matters are relevant to the water taking or proposed taking in the particular case:

1. Issues relating to the need to protect the natural functions of the ecosystem, including,

i. the impact or potential impact of the water taking or proposed water taking on,

A. the natural variability of water flow or water levels,

B. minimum stream flow, and

C. habitat that depends on water flow or water levels,

ii. ground water and surface water and their interrelationships that affect or are affected by, or may affect or be affected by, the water taking or proposed water taking, including its impact or potential impact on water quantity and quality, and

iii. the potential to restore the hydrologic conditions and functions of the source watershed.

2. Issues relating to water availability, including,

i. the impact or potential impact of the water taking or proposed water taking on,

A. water balance and sustainable aquifer yield, and

B. existing uses of water for large municipal residential systems and small municipal residential systems, both as defined in subsection 1 (1) of Drinking Water Systems, for sewage disposal, livestock and other agricultural purposes, for private domestic purposes, and for other purposes,

ii. low water conditions, if any,

iii. whether the water taking or proposed water taking is in a high use watershed or a medium use watershed,

A. as shown on the Average Annual Flow Map, or

B. as shown on the Summer Low Flow Map, and

iv. any planned municipal use of water that has been approved,

A. under a municipal official plan in accordance with Part III of the *Planning Act*, or

B. under the *Environmental Assessment Act*.

3. Issues relating to the use of water, including,

i. whether water conservation is being implemented or is proposed to be implemented in the use of the water, in accordance with best water management standards and practices for the relevant sector if these are available,

ii. the purpose for which the water is being used or is proposed to be used, including the amount of water that is or will be lost through consumptive use, and

iii. if the water is not currently being used, whether there is a reasonable prospect that the person will actually use the water in the near future.

3.1 Issues relating to the return, after use, of water, including,

i. the manner in which the water is being returned or is proposed to be returned, and

ii. the location or area to which the water is being returned or is proposed to be returned.

4. Other issues, including,

i. the interests of other persons who have an interest in the water taking or proposed water taking, to the extent that the Director is made aware of those interests,

ii. whether the water taking or proposed water taking is in compliance with,

A. the Boundary Waters Treaty of 1909, and

B. the *International Boundary Waters Treaty Act (Canada)*, and

iii. any other matters that the Director considers relevant. O. Reg. 225/14, s. 4 (2-5).

(3) If clause (1) (a) applies, the Director may, in order to be able to consider the matters set out in subsection (2), require the applicant to submit further information, including plans, specifications, reports and other materials and documents relating to the water taking or proposed water taking. O. Reg. 387/04, s. 4 (3).

#### Prescribed water takings

4.1 For the purposes of subsection 34 (3) of the Act, subsection 34 (1) of the Act applies to a person who takes water by any of the means described in paragraphs 1 to 4 of subsection 34 (3) of the Act if the person takes the water for use in a facility that falls into a class described in subsection 3 (1) of Ontario Regulation 450/07 (Charges for Industrial and Commercial Water Users) made under the Act. O. Reg. 225/14, s. 5.

#### Exemption from s. 34 (1) of the Act

4.2 (1) Subject to subsection (2), subsection 34 (1) of the Act does not apply to a person who takes water only for,

- (a) domestic purposes, if the taking of the water is not done by a municipal drinking water system or by a public utility company;
- (b) watering livestock or poultry; or
- (c) both of the purposes described in clauses (a) and (b). O. Reg. 225/14, s. 6.

(2) Subsection (1) does not apply to a person who takes water on or after the day this section comes into force if the taking of the water causes or permits a new transfer or an increased transfer of the threshold amount. O. Reg. 225/14, s. 6.

(3) Subsection 34 (1) of the Act does not apply to a person who takes water by means of a pump for the purpose of diverting water to create and maintain a dewatered work area located in whole or in part in the water body for a project described in subsection (4) if the following conditions are satisfied:

- 1. The water taken from the water body is returned directly to the same water body.
- 2. There is no visible petroleum hydrocarbon film or sheen present in the returned water.
- 3. Measures are implemented to control the rate of the water taking and the flow rate of the returned water in order to ensure that water quantity and quality are not affected upstream or downstream of the work area.
- 4. Erosion and sediment control measures are used during the return of the water to the water body.
- 5. All erosion and sediment control measures referred to in paragraph 4 are used, operated and maintained in accordance with recommendations provided by the manufacturers of the control measures.
- 6. All erosion and sediment control measures referred to in paragraph 4 and all materials collected or trapped by those measures are recovered and disposed of when the water is no longer being taken.
- 7. No pump is refuelled within 30 meters of the water body. O. Reg. 64/16, s. 3.

(4) A project referred to in subsection (3) includes the following:

- 1. The construction, repair, alteration, extension or replacement of a bridge, culvert, pier or other structure.
- 2. The construction, repair, alteration, extension or replacement of a sewer or water works other than a sewer or water works situated under a watercourse that was or will be installed using open-cut trench techniques. O. Reg. 64/16, s. 3.

(5) Subsection 34 (1) of the Act does not apply to a person who takes water from a water body by means of a structure or works for the diversion or storage of water if the structure or works was constructed solely for the conservation, development, restoration or management of a wetland. O. Reg. 64/16, s. 3.

(6) Subject to subsections (7) and (8), subsection 34 (1) of the Act does not apply to a person who takes water by means of a structure or works constructed across a water body for the diversion or storage of water if,

- (a) the structure or works is designed in a manner that permits the flow of water to pass freely over the structure or works while remaining part of the same water body;
- (b) the structure or works does not include any mechanisms that may be operated to alter the flow rates or levels of the water upstream or downstream of the structure or works; and
- (c) the structure or works is not used for the purpose of generating electricity. O. Reg. 64/16, s. 3.

(7) Subsection (6) applies only if the structure or works was constructed before the day section 3 of Ontario Regulation 64/16 made under the Act comes into force. O. Reg. 64/16, s. 3.

(8) Despite subsection (6), the natural flow of the water body may be impeded by the presence of a fishway within the structure or works. O. Reg. 64/16, s. 3.

(9) Subsection 34 (1) of the Act does not apply to a person who takes water at a site if the activity has been prescribed by the regulations made under the *Environmental Protection Act* for the purposes of subsection 20.21 (1) of that Act, unless the Director has issued an order under 20.18 of that Act in respect of the activity and the site. O. Reg. 64/16, s. 3.

#### High use watersheds

5. (1) Subsections (3) and (4) apply to applications that relate to water taking for a purpose described in subsection (5). O. Reg. 387/04, s. 5 (1).

(2) Subsections (3) and (4) do not apply,

- (a) if the applicant is a municipality, or
- (b) if the application relates to water taking from,
  - (i) Lake Ontario, Lake Erie, Lake Huron, Lake Superior, the St. Mary's River, the St. Clair River, Lake St. Clair, the Detroit River and the Niagara River,
  - (ii) the Welland Canal,

(iii) the St. Lawrence River, or

(iv) the Ottawa River. O. Reg. 387/04, s. 5 (2); O. Reg. 225/14, s. 7 (1).

(3) If the proposed water taking is in a high use watershed as shown on the Average Annual Flow Map, the Director shall refuse the application unless,

(a) at the time of the application, the applicant or another person held an unexpired permit; and

(b) the application is for a new permit to authorize the taking of the same or a lesser amount of water at the same location and for the same purpose as was authorized by the unexpired permit. O. Reg. 387/04, s. 5 (3); O. Reg. 225/14, s. 7 (2).

(4) If the proposed water taking is in a high use watershed as shown on the Summer Low Flow Map, the Director shall refuse the application unless,

(a) the permit includes a condition prohibiting the person from taking water during the six-week period from August 1 to September 11, or during a specified longer period that includes the six-week period; or

(b) at the time of the application, the applicant or another person held an unexpired permit, and the application is for a new permit to authorize the taking of the same or a lesser amount of water at the same location and for the same purpose as was authorized by the unexpired permit. O. Reg. 387/04, s. 5 (4); O. Reg. 225/14, s. 7 (3).

(5) The purposes referred to in subsection (1) are:

1. Beverage manufacturing, including the manufacturing or production of bottled water or water in other containers.

2. Fruit or vegetable canning or pickling.

3. Ready-mix concrete manufacturing, not including concrete manufactured at a portable ready-mix concrete manufacturing facility.

4. Aggregate processing, if the aggregate and the water that is taken are incorporated into a product in the form of a slurry.

5. Product manufacturing or production, if, in the normal course of the manufacturing or production, more than a total of 50,000 litres of the water that is taken may be incorporated in a single day into the products being manufactured or produced. O. Reg. 387/04, s. 5 (5).

(6) Paragraph 2 of subsection (5) does not apply in respect of water that is taken only for washing in the course of the canning or pickling. O. Reg. 387/04, s. 5 (6).

(7) Paragraph 4 of subsection (5) does not apply in respect of the extraction of aggregates where the water taking is incidental. O. Reg. 387/04, s. 5 (7).

(8) Paragraph 5 of subsection (5) does not apply in respect of the manufacturing or production of,

(a) pulp and paper; or

(b) ethanol. O. Reg. 387/04, s. 5 (8).

(9) Subsection (5) does not apply in respect of water that is taken for agricultural purposes, including aquaculture, nurseries, tree farms and sod farms. O. Reg. 387/04, s. 5 (9).

#### **Compliance with Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement**

6. (1) For the purposes of this section,

"Agreement" means the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement of 2005. O. Reg. 225/14, s. 8.

(2) Subject to subsection (6), this section applies to an application for a permit to authorize a new or increased taking of water from the Great Lakes - St. Lawrence River Basin if the Director is of the opinion that the amount of water that would be lost through consumptive use, if the proposed new or increased taking of water were authorized, is an amount that triggers Ontario's obligations under Article 205 of the Agreement to provide prior notice of and an opportunity to comment on the proposal. O. Reg. 225/14, s. 8.

(3) Before a decision is made on the application, the Director shall ensure that the prior notice and opportunity to comment on the proposal is provided in accordance with Article 205 of the Agreement. O. Reg. 225/14, s. 8.

(4) For the purposes of determining if the application triggers Ontario's obligations under Article 205 of the Agreement, the determination of the amount of water lost through consumptive use as a result of the proposed new or increased taking shall be made,

(a) in accordance with a method specified by the Director and made available on a website of the Government of Ontario; and

(b) subject to subsections (5) and (7), by taking into consideration all amounts of water lost through consumptive use as a result of the holder's new or increased takings under the permit that were approved during the period set out in subsection (8). O. Reg. 225/14, s. 8.

(5) For the purposes of clause (4) (b), if the application is made by a permit holder who is authorized to take water under more than one permit, consideration shall also be taken of the amount of water lost through consumptive use as a result of any new or increased takings under the other permit or permits that were approved during the period set out in subsection (8) if,

(a) the application is by a municipality and the water that is taken under the other permit or permits supplies water to a common distribution system to which the proposed new or increased taking relates; or

(b) the application is by a permit holder, other than a municipality, and the water that is taken under the other permit or permits supplies water to the same facility, undertaking or enterprise to which the proposed new or increased taking relates. O. Reg. 225/14, s. 8.

(6) This section does not apply to an application that is made by a person to whom the *Environmental Assessment Act* applies if,

(a) the application is the result of an environmental assessment of an undertaking that was approved on or before December 31, 2014; or



(b) the application is the result of a Schedule B or C project considered under the Municipal Class Environmental Assessment and,

(i) a notice of completion was issued for the project in accordance with the Municipal Class Environmental Assessment on or before December 31, 2014, and

(ii) no request has been made for an order under Part II of the *Environmental Assessment Act* or, if such a request was made, the request was denied. O. Reg. 225/14, s. 8.

(7) Clause (4) (b) does not apply to any new or increased takings that were approved during the period set out in subsection (8) if those takings were exempt as a result of the application of subsection (6). O. Reg. 225/14, s. 8.

(8) The period referred to in clause (4) (b) is,

(a) if the application is made on or before December 31, 2024, the period starting January 1, 2015 until the application date; or

(b) if the application is made on or after January 1, 2025, the period starting 10 years before the date of the application until the application date. O. Reg. 225/14, s. 8.

(9) After a decision has been made by the Director with respect to the application, the decision is subject to sections 34.10 and 34.11 of the Act. O. Reg. 225/14, s. 8.

#### Notice and consultation

7. (1) Subject to subsection (2), a Director who is considering an application shall give the following persons notice of the application:

1. The upper-tier and lower-tier municipalities or the single-tier municipality, as the case may be, within whose area of jurisdiction the proposed water taking is located.

2. Any conservation authority within whose area of jurisdiction the proposed water taking is located. O. Reg. 387/04, s. 7 (1).

(2) Subsection (1) does not apply if,

(a) the application is for a permit that is exempt under subsection 3 (2) of Ontario Regulation 681/94 (Classification of Proposals for Instruments) made under the *Environmental Bill of Rights, 1993* from being classified as a Class 1 proposal for an instrument;

(b) in the Director's opinion, the delay involved in giving notice to the persons listed in subsection (1) would result in,

(i) danger to the health or safety of any person,

(ii) harm or serious risk of harm to the environment, or

(iii) injury or damage or serious risk of injury or damage to any property; or

(c) in the Director's opinion, the persons listed in subsection (1) have already received the information that would be included in the notice. O. Reg. 387/04, s. 7 (2); O. Reg. 225/14, s. 9 (1).

(3) Subsection (2) does not prohibit the Director from giving any person notice of an application if the Director is of the opinion that it is consistent with the purposes of this Regulation to do so. O. Reg. 387/04, s. 7 (3).

(4) The Director may require the applicant to,

(a) notify or consult with other persons who have an interest in the proposed water taking, including,

(i) persons mentioned in subsection (1), and

(ii) governmental authorities for other jurisdictions;

(b) provide the Director with information on the interests of and responses of the persons notified or consulted under clause (a);

(c) provide the Director with information on the efforts that the applicant has made to resolve any concerns raised by the persons notified or consulted under clause (a); and

(d) provide the Director with such other information as the Director specifies. O. Reg. 387/04, s. 7 (4).

(5) Subsection (4) applies despite subsection (2), and any notice required by the Director under subsection (4) is in addition to the notice given by the Director under subsection (1). O. Reg. 387/04, s. 7 (5).

(6) Subject to section 6, the Director may give governmental authorities for other jurisdictions notice of the application and consult them about it, even if notice and consultation are not required by Article 205 of the Great Lakes - St. Lawrence River Basin Sustainable Water Resources Agreement of 2005. O. Reg. 387/04, s. 7 (6); O. Reg. 225/14, s. 9 (2).

(7) For the purposes of subsections (1) and (6), the Director may give a person notice of an application by,

(a) sending the person a brief description or a copy of the application by mail, by fax, by e-mail or by other electronic means; or

(b) delivering a brief description or a copy of the application to the person. O. Reg. 387/04, s. 7 (7).

#### Transition

8. (1) This Regulation, as it read on December 31, 2014, applies to applications received before January 1, 2015. O. Reg. 225/14, s. 10.

(2) This Regulation, as it read on or after January 1, 2015, applies to applications received on and after January 1, 2015. O. Reg. 225/14, s. 10.

(3) This Regulation, as it read on or after January 1, 2015, applies to decisions under section 34.1 of the Act to cancel or amend a permit or issue a new permit, whether the water taking is authorized by a permit that is issued before, on or after January 1, 2015. O. Reg. 225/14, s. 10.

## DATA AND REPORTING

### Duties of permit holders

9. (1) Every holder of a permit, other than a related transferor, shall collect and record data on the volume of water taken daily. O. Reg. 225/14, s. 11 (1).
- (2) The data collected under subsection (1) shall be measured by a flow meter or calculated using a method acceptable to a Director. O. Reg. 387/04, s. 9 (2).
- (3) On or before March 31 in every year, every person to whom subsection (1) applies shall submit to a Director, in the form and manner approved by the Director, the data collected and recorded under subsection (1) for the previous year. O. Reg. 387/04, s. 9 (3).
- (4) Subsections (1), (2) and (3) do not affect a Director's discretion, under subsection 34.1 (8) or (9) or subsection 34.7 (2) of the Act, to impose terms and conditions in issuing a permit and to alter the terms and conditions of a permit after it is issued. O. Reg. 387/04, s. 9 (4); O. Reg. 225/14, s. 11 (2).
- (5)-(8) REVOKED: O. Reg. 225/14, s. 11 (3).

### Manner of calculating average amount of water per day

10. For the purposes of sections 34 to 34.11 of the Act and this Regulation, the average amount of water per day is the highest average amount of water per day that is determined by finding the simple moving averages of the amount of water per day for each consecutive 90-day period that falls within the longer period for which the calculation is made. O. Reg. 225/14, s. 12.

## TRANSFERS

### Related transferor

11. For the purpose of subclause (b) (ii) of the definition of "related transferor" in subsection 34.5 (1) of the Act, a prescribed class of persons consists of persons who own or operate water works and in respect of whom the following circumstances apply:
1. The water works owned or operated by the persons,
    - i. are connected to another water works which distribute or will distribute water that is or will be transferred, and
    - ii. are capable of supplying the threshold amount.
  2. The Director or the Minister, as the case may be, is of the opinion that the distribution of the transferred water by the water works owned or operated by the persons must be regulated by a permit in order for the transfer to satisfy the criteria set out in subsection 34.6 (3) of the Act. O. Reg. 225/14, s. 13.

### Great Lakes watersheds

12. (1) Subject to subsection (3), a Great Lakes watershed consists of the area shown to be within the boundaries of that watershed in a data file entitled "Great Lakes - St. Lawrence Basin Watersheds — *Ontario Water Resources Act*", dated March 15, 2010, as amended from time to time, that is maintained by the Ministry of Natural Resources and Forestry as part of its Land Information Ontario initiative and available on a website of the Government of Ontario. O. Reg. 225/14, s. 13.
- (2) Subject to subsection (3), the watershed of each connecting channel of a Great Lake consists of the area shown to be within the boundaries of that watershed in the data file referred to in subsection (1). O. Reg. 225/14, s. 13.
- (3) If large scale mapping or information from an on-site field investigation establishes the location of all or part of the boundary of a Great Lakes watershed or a watershed of a connecting channel of a Great Lake with greater accuracy than the location shown in the data file referred to in subsection (1), the boundary of that watershed shall be adjusted accordingly. O. Reg. 225/14, s. 13.

### Connecting channels of Great Lakes watersheds

13. The boundaries of a Great Lakes watershed include the upstream connecting channel, as set out in Column 2 of the Table to this section opposite the name of the Great Lake, and the downstream connecting channel, as set out in Column 3 of the Table opposite the name of the Great Lake.

TABLE

Item	Column 1 Name of Great Lake watershed	Column 2 Name of upstream connecting channel(s)	Column 3 Name of downstream connecting channel(s)
1.	Lake Superior	N/A	St. Mary's River
2.	Lake Huron	St. Mary's River	Detroit River Lake St. Clair St. Clair River



3.	Lake Erie	Detroit River Lake St. Clair St. Clair River	Niagara River
4.	Lake Ontario	Niagara River	N/A

O. Reg. 225/14, s. 13.

#### Determination of threshold amount

14. (1) Subject to subsection (2), for the purposes of subsection 34.6 (1) of the Act, the determination of whether an application for a new transfer or an increased transfer would be the threshold amount must take into consideration all amounts of water transferred by the permit holder between the same Great Lakes watersheds to which the application relates that were approved during the period set out in subsection (3). O. Reg. 225/14, s. 13.

(2) If the application is made by a permit holder who is authorized to transfer water under more than one permit, consideration shall also be taken of the amount of water transferred as a result of any new transfers or increased transfers under the other permit or permits that were approved during the period set out in subsection (3) if,

- (a) the application is by a municipality and the water that is transferred under the other permit or permits supplies water to a common distribution system to which the proposed new transfer or increased transfer relates; or
- (b) the application is by a permit holder, other than a municipality, and the water that is transferred under the other permit or permits supplies water to the same facility, undertaking or enterprise to which the proposed new transfer or the increased transfer relates. O. Reg. 225/14, s. 13.

(3) The period referred to in subsection (1) is,

- (a) if the application is made on or before December 31, 2024, the period starting January 1, 2015 until the application date; or
- (b) if the application is made on or after January 1, 2025, the period starting 10 years before the date of the application until the application date. O. Reg. 225/14, s. 13.

#### Exemption from s. 34.6 (1) of the Act

15. Subsection 34.6 (1) of the Act does not apply in respect of an amendment to a permit or issuance of a new permit to authorize a new or increased taking of water where some or all of the water is to be transferred if,

- (a) the *Environmental Assessment Act* applies to the holder of the permit; and
- (b) the issuance of or amendment to the permit to increase the amount of water the holder is permitted to take is authorized as a result of,
  - (i) an environmental assessment of an undertaking that was approved on or before December 31, 2014, or
  - (ii) a Schedule B or C project considered under the Municipal Class Environmental Assessment if,
    - (A) a notice of completion was issued for the project in accordance with the Municipal Class Environmental Assessment on or before December 31, 2014, and
    - (B) no request has been made for an order under Part II of the *Environmental Assessment Act* or, if such a request was made, the request was denied. O. Reg. 225/14, s. 13.

#### Exemptions from ss. 34.5 to 34.8 of the Act

16. Sections 34.5 to 34.8 of the Act and sections 17 to 19 of this Regulation do not apply to the transfer of water in each of the following circumstances:

1. The transfer of water is from a Great Lakes watershed to a watershed of a downstream connecting channel of that Great Lake as set out in section 13.
2. The transfer of water is from a watershed of a downstream connecting channel of a Great Lake to the watershed of that Great Lake as set out in section 13.
3. The water is taken from a location in the St. Lawrence River that is within 10 kilometres of the point at which Lake Ontario flows into the St. Lawrence River and transferred to the Lake Ontario watershed.
4. The water is taken from a location in Lake Ontario that is within 10 kilometres of the point at which Lake Ontario flows into the St. Lawrence River and transferred to the St. Lawrence River watershed. O. Reg. 225/14, s. 13.

#### Determination of amount re consumptive use

17. (1) For the purposes of subparagraphs 1 i, 2 i and 3 i of subsection 34.6 (2) of the Act and paragraph 1 of subsection 34.6 (3) of the Act, the determination of the amount of water lost through consumptive use shall be made in accordance with a method specified by the Director and made available on a website of the Government of Ontario. O. Reg. 225/14, s. 13.

(2) For the purposes of subparagraph 3 i of subsection 34.6 (2) of the Act and for determining if an application for a new transfer or an increased transfer is to be referred to the Minister in accordance with subsection 34.1 (12) of the Act, the determination of the amount of water that would be lost through consumptive use as a result of the proposed new transfer or increased transfer shall be made,

- (a) in accordance with the method identified in subsection (1); and

(b) subject to subsection (3), by taking into consideration all amounts of water lost through consumptive use as a result of the holder's new transfers and increased transfers between the same Great Lakes watersheds to which the application relates that were approved during the period set out in subsection (4). O. Reg. 225/14, s. 13.

(3) For the purposes of clause (2) (b), if the application is made by a permit holder who is authorized to transfer water under more than one permit, consideration shall also be taken of the amount of water lost through consumptive use as a result of any new transfers or increased transfers under the other permit or permits that were approved during the period set out in subsection (4) if,

(a) the application is by a municipality and the water that is taken under the other permit or permits supplies water to a common distribution system to which the proposed new transfer or increased transfer relates; or

(b) the application is by a permit holder, other than a municipality, and the water that is taken under the other permit or permits supplies water to the same facility, undertaking or enterprise to which the proposed new transfer or increased transfer relates. O. Reg. 225/14, s. 13.

(4) The period referred to in clause (2) (b) is,

(a) if the application is made on or before December 31, 2024, the period starting January 1, 2015 until the application date; or

(b) if the application is made on or after January 1, 2025, the period starting 10 years before the date of the application until the application date. O. Reg. 225/14, s. 13.

#### **Permits, inclusion of specifically directed terms and conditions**

18. If, under subsection 34.7 (3) of the Act, the Director directs a term or condition described in subsection 34.7 (2) of the Act to a particular holder of a permit who is or will be taking water under the permit or who is or will be a related transferor with respect to the permit or to any two or more of them, the term or condition must be included in the part or parts of the permit or any schedule or schedules to the permit that are applicable to the holder or holders to whom the term or condition is directed. O. Reg. 225/14, s. 13.

#### **Determining amount of water currently being transferred**

19. (1) If a holder of a permit is a person who transfers water that is taken under the authority of two or more permits, the holder may make a request under section 34.8 of the Act for a determination in respect of all the permits that relate to the holder's transfers, and subsections (2) to (6) of this section apply to the request with necessary modifications. O. Reg. 225/14, s. 13.

(2) Subject to subsections (3), (4) and (5), for the purposes of section 34.8 of the Act, the amount of water the Director may specify is deemed to currently be transferred by a holder shall be the amount of water any holder is authorized to take under the holder's permit as of the day this section comes into force. O. Reg. 225/14, s. 13.

(3) Despite subsection (2), if the *Environmental Assessment Act* applies to a permit holder and the holder's permit is amended or a new permit is issued on or after the day this section comes into force to increase the amount of water the holder is permitted to take, the amount of water the Director may specify is deemed to currently be transferred by the holder shall be the increased amount of water the holder is authorized to take, but only if that increased amount is authorized as a result of,

(a) an environmental assessment of an undertaking that was approved on or before December 31, 2014; or

(b) a Schedule B or C project considered under the Municipal Class Environmental Assessment if,

(i) a notice of completion was issued for the project in accordance with the Municipal Class Environmental Assessment on or before December 31, 2014, and

(ii) no request has been made for an order under Part II of the *Environmental Assessment Act* or, if such a request was made, the request was denied. O. Reg. 225/14, s. 13.

(4) Despite subsection (2), if water is taken under a permit by a municipality and the majority of the water that is being transferred under the permit is for use by another municipality, the Director may specify that the amount of water that is deemed to currently be transferred by the permit holder is lower than the amount authorized under the permit if the Director is of the opinion that it is reasonable to do so under the circumstances. O. Reg. 225/14, s. 13.

(5) Despite subsection (2), if a proposed new transfer or increased transfer has undergone the prior notice and consultation process under the Great Lakes Charter or that process was begun on or before December 31, 2014, the Director shall deem the person making the request to currently be transferring under the permit the amount of water considered under the Great Lakes Charter if the Ministry of Natural Resources and Forestry has notified the Director that Ontario's prior notice and consultation obligations under the Great Lakes Charter in respect of the proposed new transfer or increased transfer have been satisfied. O. Reg. 225/14, s. 13.

(6) After determining the amount of water that is currently deemed to be transferred for the purpose of section 34.8 of the Act, the Director shall amend the permit or issue a new permit to,

(a) specify the amount of water that is deemed to be currently transferred under the permit;

(b) designate, for each person who is a related transferor with respect to the permit, a part of or schedule to the permit that will apply to the person and include any conditions the Director considers appropriate to be directed specifically to that person in that part or schedule; and

(c) with respect to each holder of the permit who makes a transfer, specify all other permits in respect of which the holder makes transfers and the total amount of water under all of the permits that the holder is authorized to transfer. O. Reg. 225/14, s. 13.

#### **Reciprocating jurisdictions**

20. For the purpose of the definition of "reciprocating jurisdiction" in section 34.9 of the Act, the following are prescribed as reciprocating jurisdictions:

1. The Province of Quebec.
2. The states of Illinois, Indiana, Michigan, Minnesota, New York, Ohio and Wisconsin.
3. The Commonwealth of Pennsylvania. O. Reg. 225/14, s. 13.

**STATEMENT OF THE TREASURER OF REMUNERATION AND EXPENSES PAID  
AS REQUIRED BY SECTION 284(1) OF THE MUNICIPAL ACT, 2001  
FOR THE YEAR 2016**

		Salary 2/3 Taxable	Salary 1/3 Tax Free	IT Allowance 2/3 Taxable	IT Allowance 1/3 Tax Free	Meetings 2/3 Taxable	Meetings 1/3 Tax Free	Mileage	Total Paid
<b>Council Members</b>									
Darren White	Mayor	\$ 10,070.05	\$ 5,035.16	\$ -	\$ -	\$ 760.00	\$ 380.00	\$ -	\$ 16,245.21
Janice Elliott	Deputy Mayor	\$ 6,980.18	\$ 3,490.09	\$ 600.00	\$ 300.00	\$ 946.67	\$ 473.33	\$ 340.00	\$ 13,130.27
David Besley	Councillor	\$ 6,293.77	\$ 3,146.89	\$ 600.00	\$ 300.00	\$ 1,166.67	\$ 583.33	\$ 410.00	\$ 12,500.66
James Webster	Councillor	\$ 6,293.77	\$ 3,146.89	\$ 600.00	\$ 300.00	\$ 820.00	\$ 410.00	\$ -	\$ 11,570.66
Wayne Hannon	Councillor	\$ 6,293.77	\$ 3,146.89	\$ 600.00	\$ 300.00	\$ 806.67	\$ 403.33	\$ 567.00	\$ 12,117.66
Council Totals for year 2016		\$ 35,931.54	\$ 17,965.92	\$ 2,400.00	\$ 1,200.00	\$ 4,500.01	\$ 2,249.99	\$ 1,317.00	\$ 65,564.46

All Council Members with the exception of the Mayor receive an IT Allowance of \$75.00 per month

Payments are made under the authority of By-law 18-2016

<b>Public Members</b>		Meetings	Mileage	Total Paid
Ron Webster	CDRC	\$ 780.00	\$ -	\$ 780.00
David Thwaites	Police Services	\$ 480.00	\$ 80.50	\$ 560.50
Bart Malloy	Police Services	\$ 300.00	\$ 58.00	\$ 358.00
Bart Malloy	Roads Sub Committee	\$ 30.00	\$ 8.00	\$ 38.00
Total		\$1,590.00	\$ 146.50	\$ 1,736.50

January 23, 2017

The Honourable Steven Del Duca  
Minister of Transportation  
77 Wellesley Street West  
Ferguson Block, 3<sup>rd</sup> Floor  
TORONTO ON M7A 1A8

Dear Minister Del Duca:

**Re: Gas Tax Funding Formula**

City Council, at its meeting held on January 16, 2017 considered the above noted matter and the following Resolution No. R-170116-008 was adopted:

**"THAT City Council:**

- 1. forward a letter to the Ministry of Transportation encouraging the provincial government to review the gas tax funding formula recognizing that there has been no increase since 2006 and that with the implementation of Cap and Trade January 1, 2017 it is more expensive for municipalities consuming the fuel; and**
- 2. forward the subject letter to the Association of Municipalities of Ontario, all Ontario municipalities and the Bruce-Grey-Owen Sound M.P.P."**

Thank you for your attention to this important matter.

Yours truly,



Briana Bloomfield, B.A. (Hons.)  
Deputy Clerk  
/bb

- c: Association of Municipalities of Ontario (AMO)  
All Ontario Municipalities  
Bill Walker, M.P.P. Bruce-Grey-Owen Sound  
Owen Sound City Council  
K. Allan, Director of Corporate Services

INFO 15

FEB 02 2017

## Denise Holmes

---

**From:** Tecia White <tecia@white-water.ca>  
**Sent:** Friday, January 06, 2017 3:30 PM  
**To:** 'Denise Holmes'; GHoran@Strada-Aggregates.com  
**Subject:** Strada 2016 groundwater compliance reports  
**Attachments:** 2016 Shelburne North - Complete.pdf; 2016 Shelburne South Report Complete.pdf

Hi Denise

I have attached the two Strada groundwater compliance reports. Hard copies will be mailed out by Monday.

Just to follow up with the low levels of TPH that were detected at both sites. I consulted with the laboratory and after a review of the chromatograms by the analyst at the laboratory reported that a consistent peak in F1 is present but is not of a petroleum product. It may be contamination of vial or preservative and were false positive hits. Furthermore, low level hits in F3-F4 region most likely does not indicate presence of petroleum products. The resample was completed with fresh bottles and new sampling equipment. The results of the resample indicated no evidence of hydrocarbons.

Any questions please feel free to contact me at any time.

Regards,

Tecia White  
Whitewater Hydrogeology Ltd.  
Cell: 705-888-7064  
[www.white-water.ca](http://www.white-water.ca)

---

Total Control Panel

[Login](#)

**To:** [dholmes@melanctontownship.ca](mailto:dholmes@melanctontownship.ca)  
**From:** [srs0=vilh18=yu=white-water.ca=tecia@eigbox.net](mailto:srs0=vilh18=yu=white-water.ca=tecia@eigbox.net)

Message Score: 15  
My Spam Blocking Level: High

High (60): Pass  
Medium (75): Pass  
Low (90): Pass

[Block](#) this sender  
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*This message was delivered because the content filter score did not exceed your filter level.*

# Whitewater

Hydrogeology Ltd.



## **2016 COMPLIANCE GROUNDWATER MONITORING REPORT.**

### **SHELBURNE NORTH PIT**

Prepared for:  
Strada Aggregates

Whitewater Hydrogeology Ltd  
Phone: 705.888.7064  
Email: [tecia@white-water.ca](mailto:tecia@white-water.ca)

Date: January 2017

January 6, 2017

Strada Aggregates Inc.  
30 Floral Parkway  
Concord, Ontario  
L4K 4R1

Attention: Mr. Grant Horan  
Controller

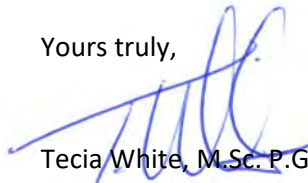
**Re: 2016 Compliance Report: Strada Aggregates: Shelburne North Pit**

Dear Sir:

Whitewater Hydrogeology Ltd. (Whitewater) is pleased to present the 2016 Compliance Groundwater Monitoring Report for the Shelburne North Pit. The findings indicate that the extraction of aggregate from above the water table has had no measurable influence on the groundwater regime.

If you have any questions or concerns, please do not hesitate to call at any time.

Yours truly,



Tecia White, M.Sc. P.Geo.  
Senior Hydrogeologist  
Whitewater Hydrogeology Ltd.



## Table of Contents

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
<b>2.0</b>	<b>GROUNDWATER COMPLIANCE MONITORING PROGRAM .....</b>	<b>1</b>
2.1	Compliance Reporting Requirements .....	1
<b>3.0</b>	<b>SITE SETTING .....</b>	<b>3</b>
3.1	Physiography and Hydrology .....	3
3.2	Geology .....	3
3.2.1	<i>Quaternary Geology.....</i>	<i>3</i>
3.2.1	<i>Paleozoic Geology .....</i>	<i>3</i>
<b>4.0</b>	<b>HYDROGEOLOGICAL EVALUATION .....</b>	<b>5</b>
4.1	Groundwater Elevations .....	5
4.1.1	<i>Overburden Groundwater Elevations.....</i>	<i>5</i>
4.1.2	<i>Bedrock Groundwater Elevations.....</i>	<i>5</i>
4.2	Groundwater Flow .....	6
4.3	Groundwater Quality .....	6
<b>5.0</b>	<b>CONCLUSIONS .....</b>	<b>7</b>
<b>6.0</b>	<b>REFERENCES .....</b>	<b>7</b>

## List of Tables

Table 1:	Groundwater Monitoring Program
Table 2:	2016 Manual Groundwater Measurements

## List of Figures

Figure 1: Site Location Map .....	2
Figure 2: Digital Elevation Model .....	4
Figure 3: Overburden Water Level Elevations .....	9
Figure 4: Bedrock Water Level Elevations .....	9
Figure 5: Geological and Hydrogeological Cross Section .....	10
Figure 6: Groundwater flow Contours .....	11

## List of Appendices

Appendix A:	Borehole Records
Appendix B:	Water Quality Results

## 1.0 INTRODUCTION

Strada Aggregates Inc. (Strada) owns and operates the Shelburne North Pit, which is located on Lot 13, Concession, 3, Township of Melancthon, Dufferin County. This Class A pit above water is licensed to extract sand and gravel to an elevation of no less than 488.55 masl or to within 1.5 m of the water table, or within 1m of the bedrock surface where no water is encountered.

Whitewater Hydrogeology Ltd. (Whitewater) has been retained by Strada to monitor and report on the groundwater conditions and the impact, if any, on the influence of the aggregate extraction on this regime. The compliance monitoring has been completed to comply with the site license, which is regulated under the Aggregate Resources Act (ARA).

## 2.0 GROUNDWATER COMPLIANCE MONITORING PROGRAM

The 2016 groundwater monitoring program was carried out under the existing Operations Plan. A summary of the compliance program is provided on Table 1. Monitoring locations are provided on Figure 1.

**Table 1: Groundwater Monitoring Program**

Regulation	Requirement	Frequency
<b>Aggregate Resources Act</b>		
Operations Plan		
G3	Groundwater levels of all on-site monitoring wells and local domestic water wells (i.e., Nelson/Arnold, Banks (MW6), Garner)	Quarterly
G4	Groundwater quality sampling (general chemistry, TPHs, and VOCs)	Annually

Note:

1. The Garner well is inaccessible and therefore no water levels are collected from this location.
2. Nelson/Arnold has been removed from the monitoring program. It was determined that this well is not representative of the overburden conditions at the site.

Copies of all water well records are provided in Appendix A.

### 2.1 Compliance Reporting Requirements

An annual compliance report on the groundwater monitoring program is to be prepared and submitted to the Ministry of Natural Resources and Forestry (MNRF) and the Township of Melancthon, for the public record. The Site Plan does not include a reporting deadline. However, the MNRF expects to have reports available to review in conjunction with the Compliance Assessment Reports. The Compliance Assessment Reports are due at the end of September of the previous monitoring year.

**FIGURE 1: SITE LOCATION MAP**

### 3.0 SITE SETTING

#### 3.1 Physiography and Hydrology

The subject lands are within the Nottawasaga watershed, which covers an area of 3,361 km<sup>2</sup>. The Shelburne North Pit is located in proximity to the drainage divide between two headwaters systems of the Nottawasaga River (the Pine River and the Boyne River). These rivers rise west of the Niagara Escarpment and flow in an easterly direction.

The Shelburne North Pit resides within the physiographic region referred to as the Horseshoe Moraines (Chapman and Putnam, 1984). From Singhampton south to Caledon Village, the moraines lie along the brow and slopes of the Niagara Escarpment. Associated with these moraines is a system of spillways with board gravel and sand terraces. The aggregate operation extracts the sand and gravels from this spillway system referred to as the Orangeville Moraine.

A Digital Elevation Model (DEM) of the region is presented on Figure 2. DEMs consist of a sampled array of elevations for a number of ground positions at regularly spaced intervals (10 m resolution in southern Ontario). The DEM model has been conditioned to be hydrologically correct which simply means, spurious sinks (depressions) within a DEM have been removed and the data are topologically flow corrected.

The most dominant feature on the DEM in this region is the glacial re-entrant valley of the Pine River (Figure 2). This valley extends east of Horning Mills, terminating at Terra Nova. The Boyne River is also obvious on the DEM just north of Primrose. Both re-entrant valley systems cut deeply into the bedrock escarpment from the east. The Shelburne North Pit is located on the plateau formed by the dolostone cap rock, west of the Niagara Escarpment face.

#### 3.2 Geology

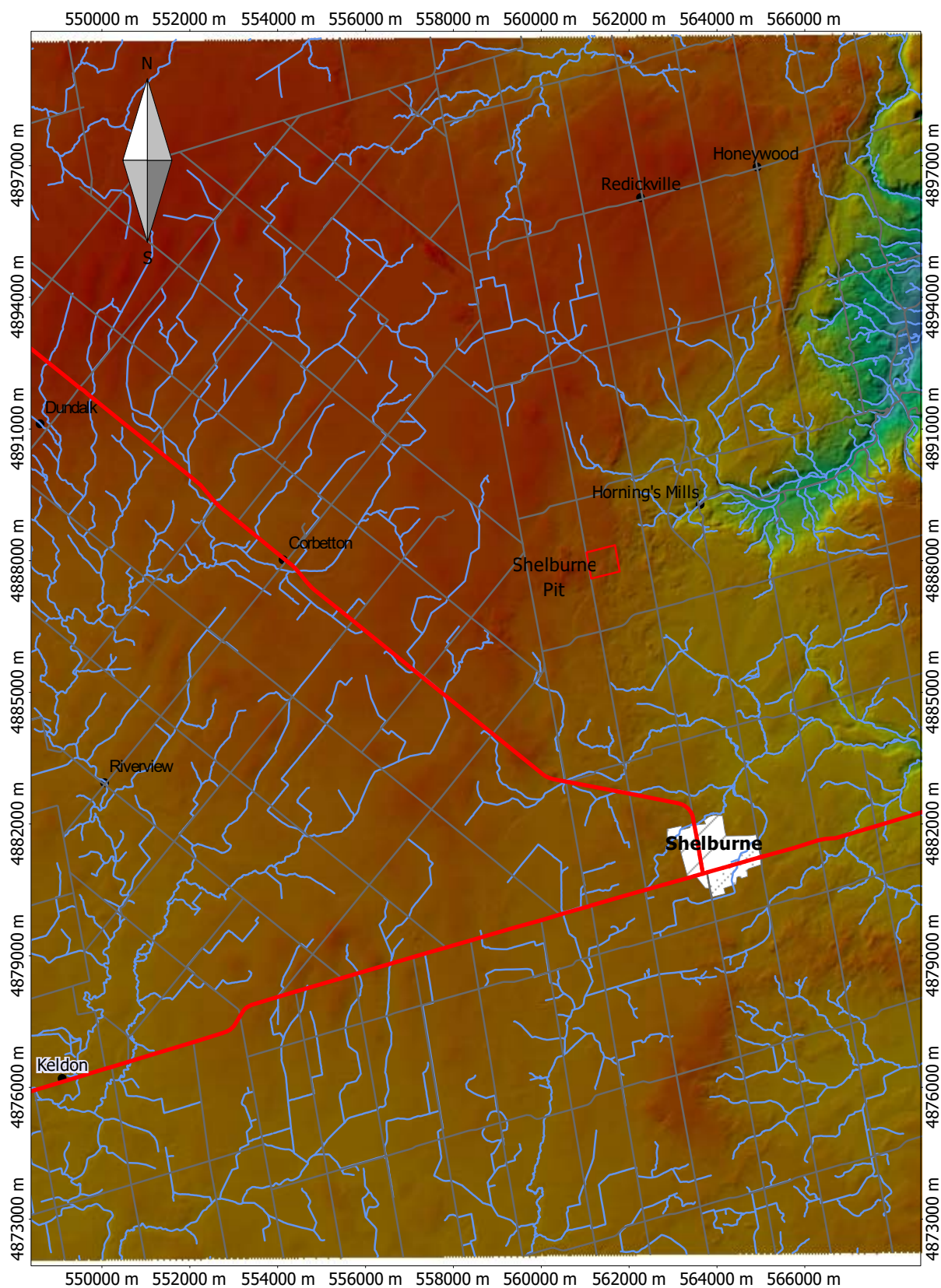
##### 3.2.1 Quaternary Geology

The Quaternary materials consist of ice-contact stratified deposits that are incised into the underlying fine grained till. The ice-contact drift materials are described as mainly medium-grained sand with some gravel and pebbly sand (Gwyn, 1972). This sand and gravel unit is the material extracted from the Shelburne North Pit. The unconsolidated sand and gravel resource overlays a silty clay till deposit at various locations across the pit. This till unit may represent the regionally extensive Tavistock Till sheet, which is a calcareous silty clay to silt till largely derived from glaciolacustrine sediments. This till sheet overlies the Paleozoic bedrock.

##### 3.2.1 Paleozoic Geology

The Paleozoic bedrock beneath the subject property is made up of a sedimentary rock sequence consisting primarily of layered dolostone, shale and sandstones units that were deposited in an ocean environment 400 to 500 million years ago. Brunton and Brintnell (2011) recognized that the un-subdivided Amabel Formation actually represents the Goat Island, Gasport, and Irondequoit Formation; and the Lions Head Member of the basal Amabel Formation is actually a carbonate equivalent of part of the Rochester Formation. These recent changes in the geological units and nomenclature have been adopted for this hydrogeological assessment to ensure consistency with provincial documentation.



**FIGURE 2: DIGITAL ELEVATION MODEL**

## 4.0 HYDROGEOLOGICAL EVALUATION

### 4.1 Groundwater Elevations

The groundwater monitoring network at the Shelburne North Pit consists of multi-level monitoring wells that are constructed in the overburden and bedrock aquifers. The shallow wells, which are constructed in the sand and gravel aquifer (extraction unit) are identified as monitors “A”. The remaining wells are constructed in the bedrock and are identified as monitors “B”, as well as OW1, MW6 and OW8 (open-hole monitoring wells).

The manual water level measurements are provided in Table 2. Manual and continuous water levels are provided on Figure 3 and Figure 4.

#### 4.1.1 Overburden Groundwater Elevations

The water level elevation in the overburden is monitored at 6 locations around the perimeter of the extraction area. The water levels collected over the history of the Shelburne North Pit indicate that the water table fluctuates above and below the geological contact between the overburden and bedrock. Groundwater monitoring wells MW1A, MW2A, MW9A, and MW10A have all reported to be dry, either seasonally or permanently. Water levels in 2016 remained within overburden in the southern portion of the site at MW1A, MW5A, and M10A. At MW1A, water levels ranged between 500.31 masl and <492.45 masl (well was dry during the summer/fall of 2016)). Groundwater was reported during the spring at MW10A, where water levels peaked at 495.23 masl before dropping below the base of the well screen (< 490.0 masl).

A perched water table in the vicinity of MW4A remained above the bedrock aquifer in 2016. Water levels remain relatively stable and fluctuate approximately 1 m over the course of the monitoring period, which captures several seasonal events. Under the Revision of Policies and Procedures Manual for the administration of the ARA (May 2005) a perched groundwater table is not usually considered the water table for the purpose of establishing the on-site groundwater conditions. Therefore, the water table in the overburden is only found in the south-western portion of the site. To the north and east, the overburden is generally unsaturated, with the exception of the perched system at MW4A, and the shallow water table (potentiometric surface) is reported only the bedrock aquifer.

#### 4.1.2 Bedrock Groundwater Elevations

The bedrock aquifer monitoring network includes wells that are either constructed as:

1. discrete screened intervals that allow for the potentiometric surface to be monitored for a fracture zone; or as
2. open-holed wells where the water level corresponds to a composite hydraulic head that represents a weighted average of hydraulic heads based upon the transmissivity of different bedding plane fractures. This composite head is typically dominated by the most permeable fracture intersecting the bedrock well.

The monitoring locations that monitor discrete fracture intervals (typically 1.5 to 3 m span in the bedrock) include: MW1B, MW2B, MW4B, and MW5B. MW4B, which monitors the upper 3 meters of the bedrock (immediately below the overburden contact) remains dry, indicating that the upper portion of the bedrock is unsaturated below MW4A (perched water table).

Saturated conditions of discretely monitored portions of the bedrock are reported at MW1B, MW2B, and MW5B, all located along the southern property boundary. The top of the bedrock surface at MW1B is approximately 491 masl. In 2016, water levels in MW1B were reported to be above the geological contact and

ranged between approximately 497.52 and 491.78 masl. At MW2B, the bedrock contact is at approximately 483 masl. In 2016, water levels range between approximately 483.75 and 481.75 masl. The drop in elevation of the bedrock surface across the site (from west to east) is reflected in the water level elevations (Figure 5).

Open-hole water levels within the bedrock are measured at MW6 (Scale House Well), OW1, and OW8. The water level in MW6 is relatively constant at 490 masl. In comparison, water levels at OW1 and OW8 report larger seasonal fluctuation (approximately 2m and 4m, respectively). As reported over the years, open-hole water levels must be interpreted with caution in heterogeneous fractured rock aquifers.

## 4.2 Groundwater Flow

Regionally, groundwater flow in the bedrock regime will be controlled by the glacial re-entrant valley of the Pine River, which begins in the vicinity of Horning Mills (Figure 2). This north-easterly regional flow direction is supported by on-site bedrock water level data. Figure 6 presents the groundwater flow contours for data collected on June 18, 2016 at the Shelburne North Pit. Generally, the groundwater flow direction in the bedrock is north-eastward towards Horning Mills, with a water level high reported at MW1B and a low at MW8.

There is insufficient groundwater in the overburden to map the water table and groundwater flow direction on-site. Groundwater (that isn't perched) in the overburden is present along the southern property boundary. Based on water levels reported in the overburden south of the Shelburne North Pit, the shallow groundwater flow direction is eastward (Whitewater, 2016).

## 4.3 Groundwater Quality

Groundwater sampling took place on April 14<sup>th</sup> and April 20<sup>th</sup>, 2016. Water level measurements were obtained prior to any disturbance of the potentiometric surface/water level within each monitor. Groundwater samples were collected from dedicated monitoring wells following purging of at least three borehole volumes of water from each monitoring well (or until well pumped dry) using dedicated check valve pumps and tubing. Groundwater samples for inorganic analysis were also filtered using disposable 0.45 µm filters (where permissible). The samples obtained for VOC/PHC analyses were obtained from the top of the water column within the well utilizing dedicated bailers prior to any purging.

The laboratory provided all sample bottles, which were prepared with preservatives for consistency, as required. Samples were maintained in coolers with freezer packs and were delivered to the required laboratory within 24 to 36 hours of collection. The raw results from Testmark Laboratories are provided in Appendix B.

The groundwater geochemistry at the site is characterized by relatively low concentrations for most parameters. This is illustrated by the fact many inorganic parameters have a concentration that is below laboratory detection limits. The 2016 data was compared to historical site data, which correlate well.

In addition to the inorganic sampling discussed above, several petroleum hydrocarbon parameters were analyzed. In 2016, the laboratory reported low level detections of F1 (less BTEX) at all monitoring locations with the exception of MW1A and MW5A. MW2B and MW5B. Similarly, low levels of F3 hydrocarbons were detected at OW1, MW1A, MW5A and MW5B. A review of the chromatograms by the analyst at the laboratory

reported that a consistent peak in F1 is present but is not of a petroleum product. It may be contamination of vial or preservative and is a false positive hit. Furthermore, low level hits in F3 region which is typical and most likely does not indicate presence of petroleum products.

## 5.0 CONCLUSIONS

1. The operation of the Shelburne North Pit is currently not having any measureable impacts on the groundwater regime.
2. It is recommended that the compliance monitoring program continue as stipulated on the Site Plans in 2017.

## 6.0 REFERENCES

Brunton, F. R. and C. Brintnell. 2011.

Project Unit 08-004. Final Update of Early Silurian Stratigraphy of the Niagara Escarpment and Correlation with Subsurface Units across Southwestern Ontario and the Great Lakes Basin. Ontario Geological Survey.

Chapman, L.J., and Putman, D.F., 1984.

The Physiography of southern Ontario. 3<sup>rd</sup> Edition. Ontario Geological Survey, Special Volume 2.

Gwyn, Q.H.J., 1972

The Quaternary Geology of Dundalk area – Southern Ontario. Ont. Dept. Mines and Northern Affairs, P.727

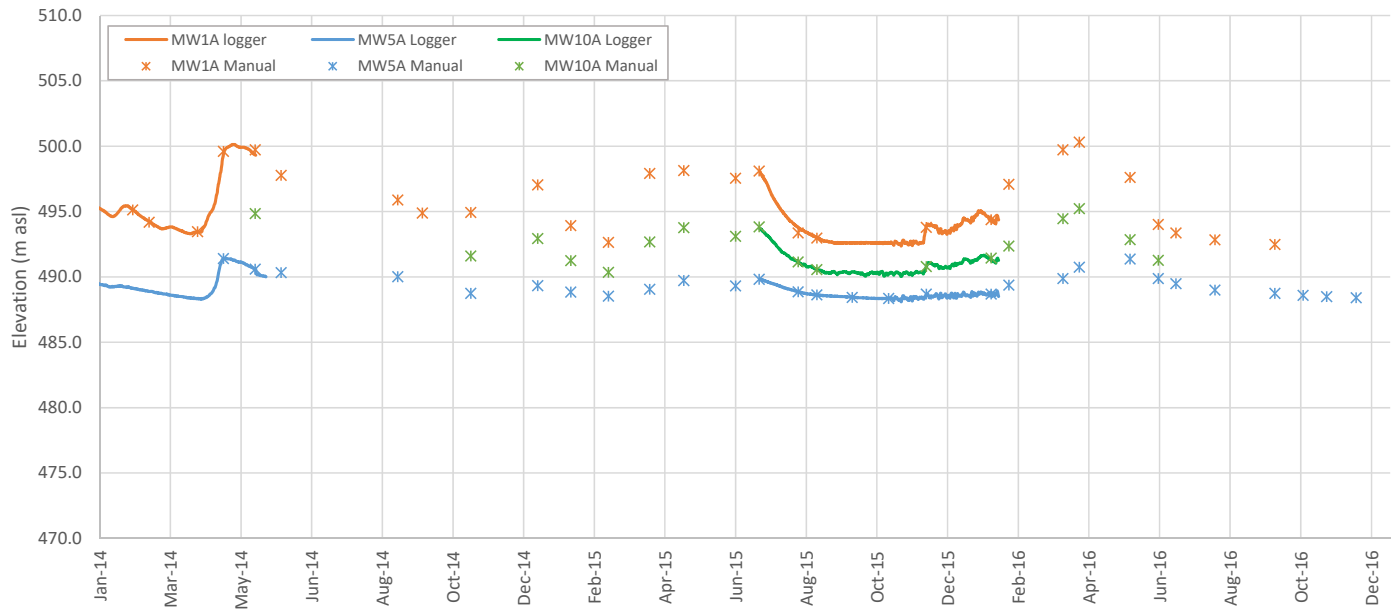
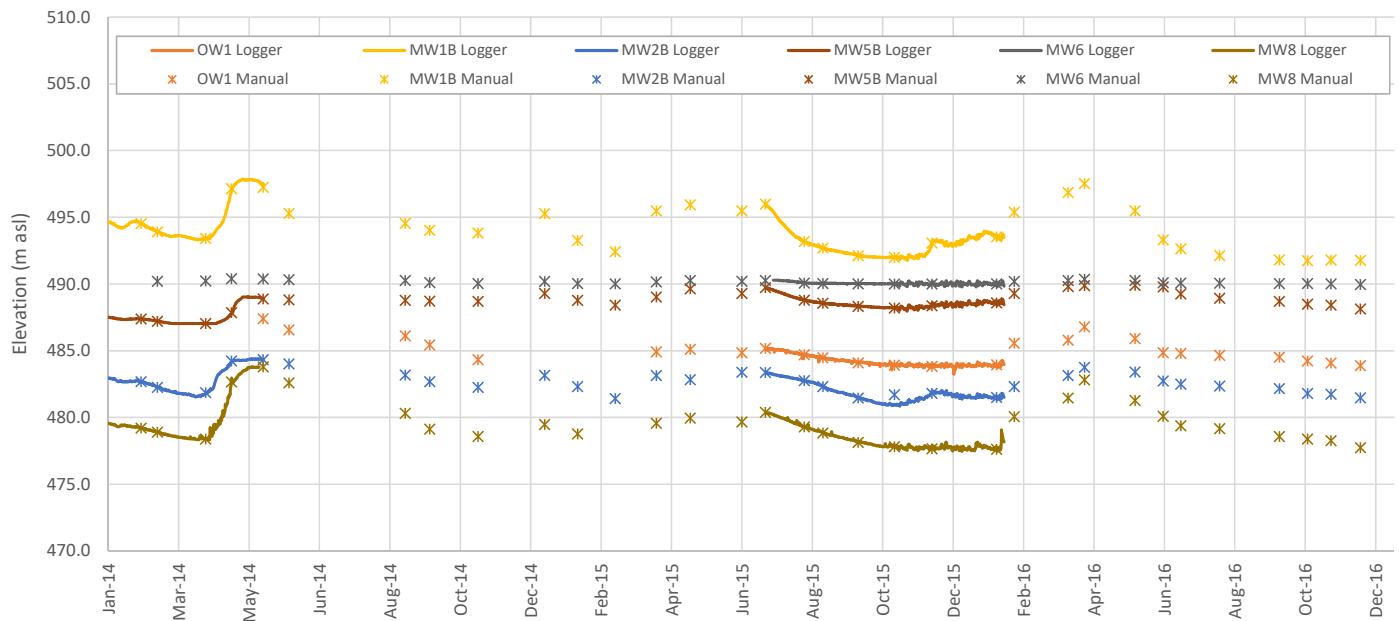
Whitewater Hydrogeology Ltd., 2016

Melancthon Pit (Shelburne South Pit) 2016 Annual Compliance Report. Prepared for Strada Aggregates.



Table 2: 2016 Groundwater Measurements

Monitor Location	Base of Well (masl)	Jan 28	Feb 12	Mar 29	Apr 12	May 25	Jun 18	Jul 3	Aug 5	Sept 25	Oct 19	Nov 8	Dec 3
<b>MW1A</b>	492.1	494.37	497.08	499.73	500.31	497.6	494.01	493.37	492.84	492.49	DRY	DRY	DRY
<b>MW1B</b>	487.5	493.53	495.39	496.86	497.52	495.48	493.31	492.64	492.14	491.81	491.75	491.8	491.78
<b>MW2A</b>	484.1	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>MW2B</b>	476.8	481.5	482.32	483.13	483.75	483.4	482.73	482.48	482.35	482.16	481.81	481.74	481.48
<b>MW4A</b>	495.2	496.2	497.29	498.15	498.39	496.74	497.23	496.76	496.53	496.27	496.16	496.11	496.09
<b>MW4B</b>	489.4	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY
<b>MW5A</b>	488.9	488.69	489.37	489.87	490.73	491.37	489.87	489.49	489	488.75	488.59	488.48	488.42
<b>MW5B</b>	479.8	488.59	489.29	489.8	489.88	489.9	489.78	489.26	488.92	488.69	488.49	488.42	488.13
<b>MW6</b>	N/A	490.02	490.18	490.26	490.35	490.26	490.1	490.07	490.05	490.03	490.04	490.01	489.96
<b>MW8</b>	469.9	477.61	480.06	481.46	482.82	481.27	480.08	479.37	479.17	478.58	478.39	478.27	477.73
<b>MW9A</b>	489.9							NA					
<b>MW9B</b>	486.9							NA					
<b>MW10</b>	490.2	491.44	492.37	494.45	495.23	492.86	491.26	DRY	DRY	DRY	DRY	DRY	DRY
<b>OW1</b>	455.3	483.94	485.56	485.8	486.78	485.91	484.86	484.81	484.64	484.52	484.22	484.08	483.89

**FIGURE 3: OVERBURDEN WATER LEVEL ELEVATIONS****FIGURE 4: BEDROCK WATER LEVEL ELEVATIONS**

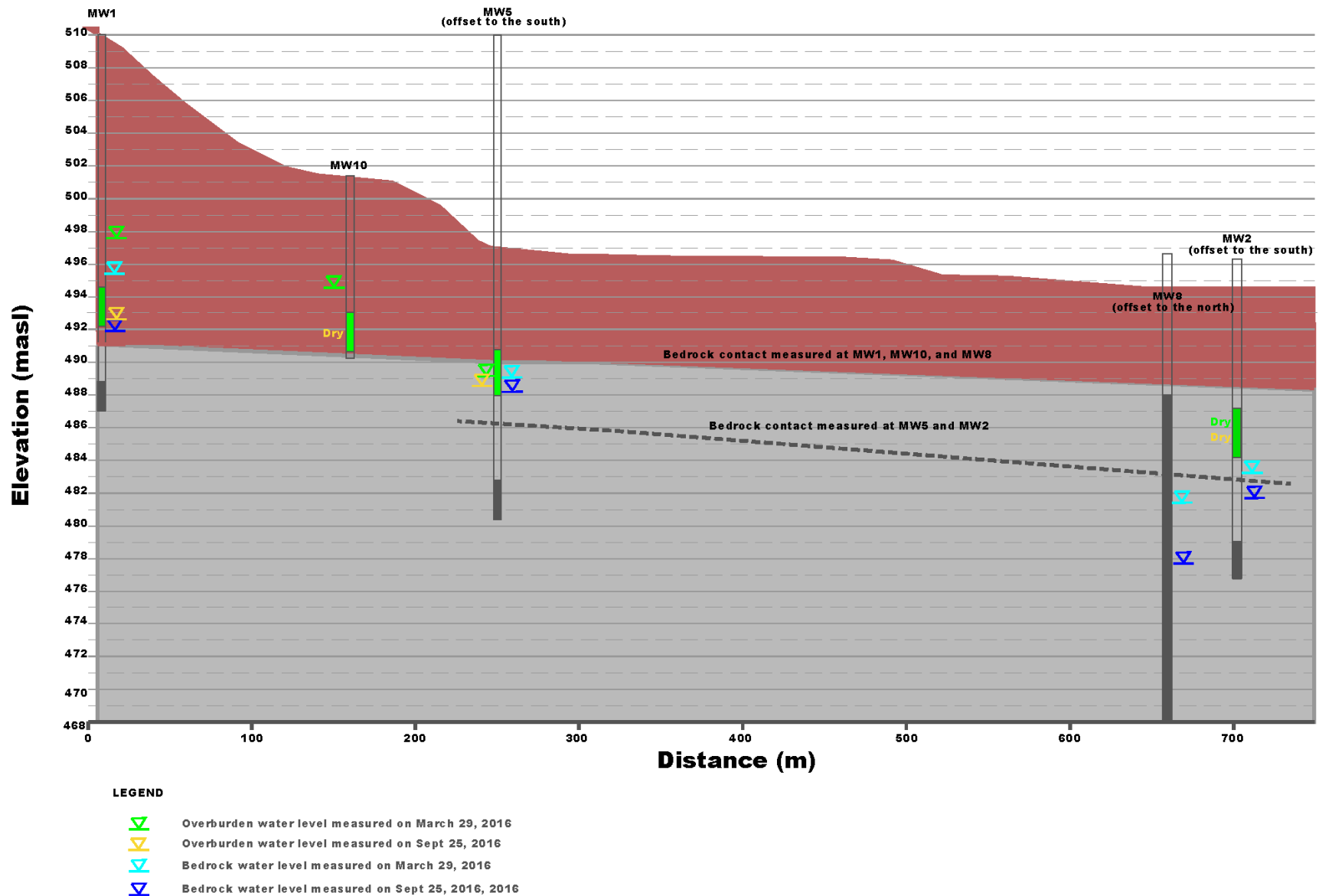


FIGURE 5: GEOLOGICAL AND HYDROGEOLOGICAL CROSS SECTION



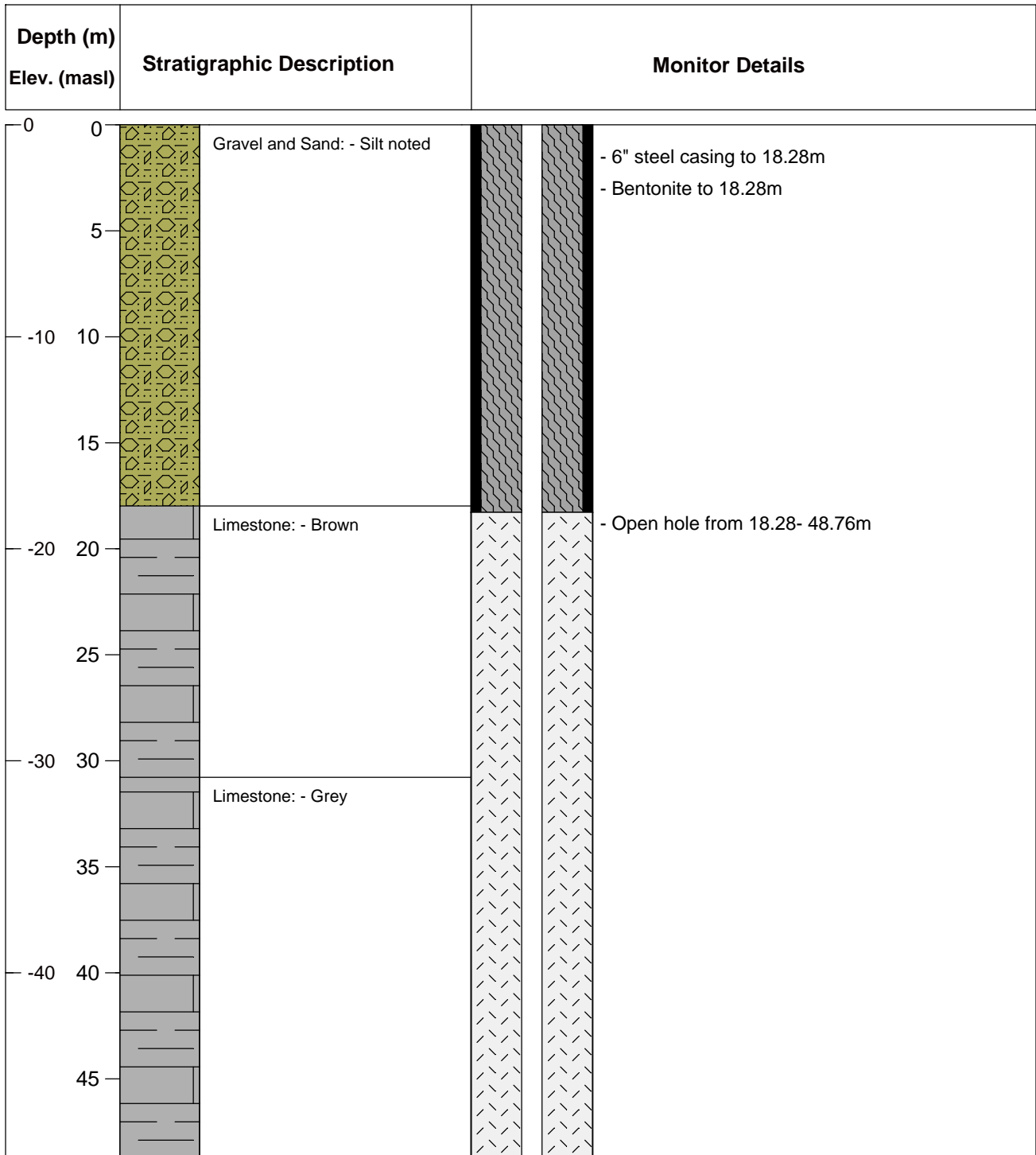
FIGURE 6: GROUNDWATER FLOW CONTOURS

# APPENDIX A

## WATER WELL RECORDS

# Well Name: OW1

<b>Project No:</b> 07-253p <b>Date:</b> August 2, 2004		<b>Location:</b> Lot 12, Con 3, Twp. of Melancthon Shelbourne	
<b>Logged By:</b> Keith Lang		<b>Total Depth:</b> 48.76m <b>Ground Elevation:</b> 504.07 (masl)	<b>Top of Casing:</b> 504.77 (masl)
<b>Drilled by:</b> Keith Lang Well Drilling		<b>UTM:</b> Northing: 4888237 Easting: 561395	
<b>MOE Well Tag I.D.</b> A 006830			



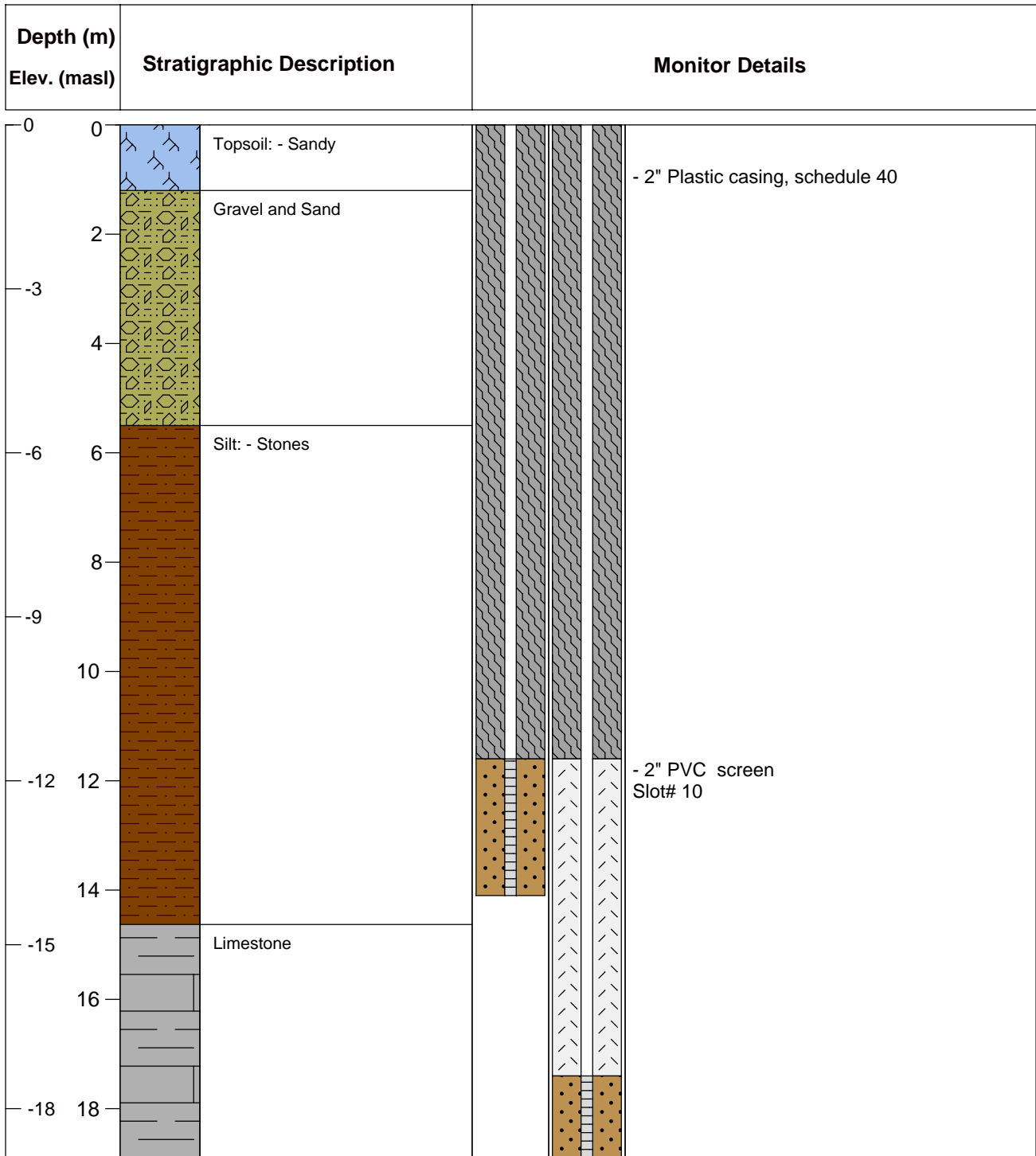
Prepared By: Goffco Limited

Prepared For:



# Well Name: MW1-01

<b>Project No:</b> 07-253p <b>Date:</b> December 1, 2001		<b>Location:</b> Lot 12, Con 3, Twp. of Melancthon Shelbourne	
<b>Logged By:</b> Keith Lang		<b>Total Depth:</b> 18.9m	<b>Ground Elevation:</b> 507 (masl)
<b>Drilled by:</b> Keith Lang Well Drilling		<b>Top of Casing:</b> (masl)	
<b>MOE Well Tag I.D.</b> MW1-01		<b>UTM:</b> Northing: 4887604 Easting: 561145	



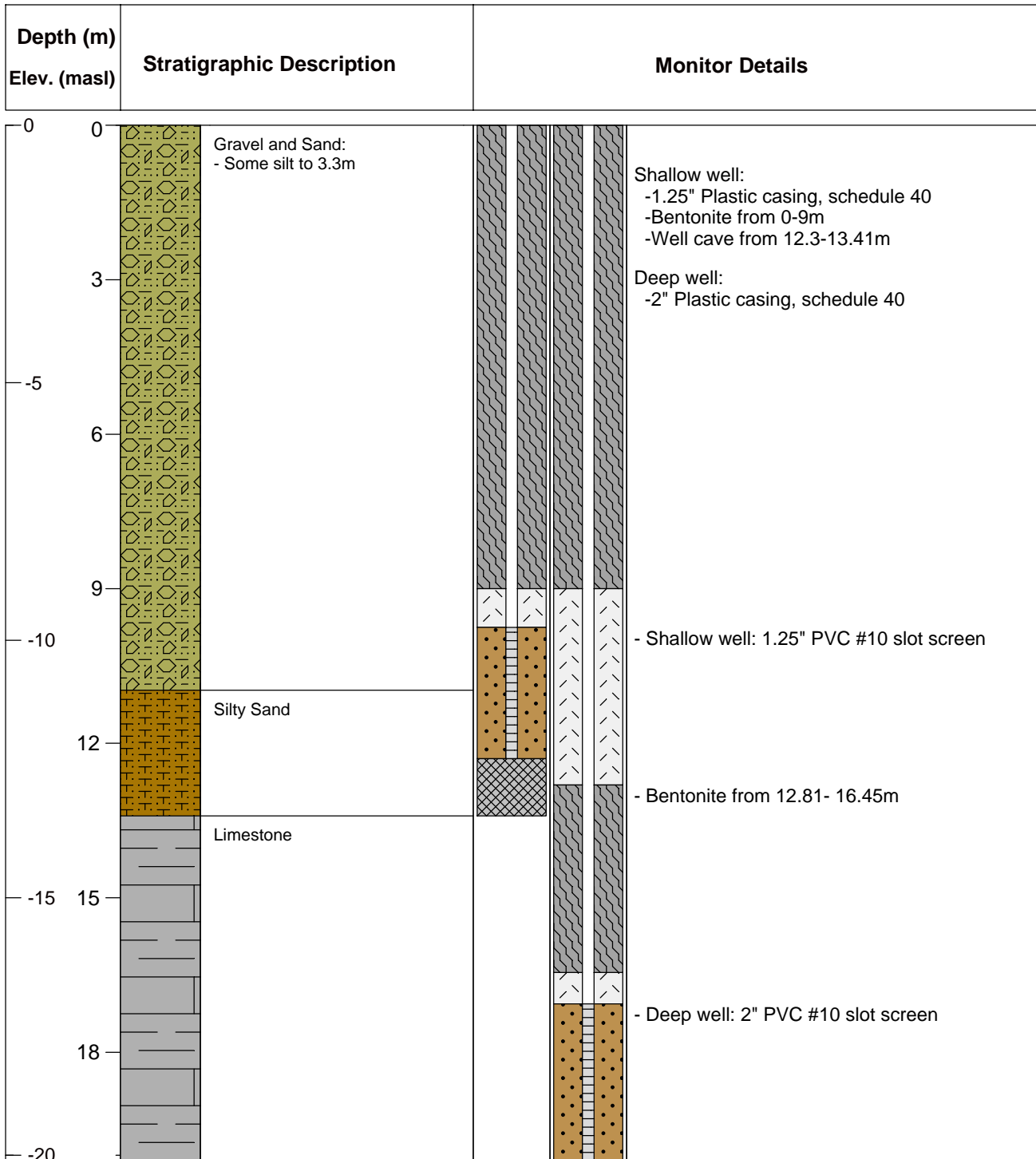
**Prepared By: Goffco Limited**

**Prepared For:**



# Well Name: MW2-04

<b>Project No:</b> 07-253p <b>Date:</b> August 1, 2004	<b>Location:</b> Lot 12, Con 3, Twp. of Melancthon Shelbourne
<b>Logged By:</b> Keith Lang	<b>Total Depth:</b> 20.11m <b>Ground Elevation:</b> 496.32 (masl) <b>Top of Casing:</b> 497.36 (masl)
<b>Drilled by:</b> Keith Lang Well Drilling	<b>UTM:</b> Northing: 4887847 Easting: 561769
<b>MOE Well Tag I.D.</b> A 006815	



**Prepared By: Goffco Limited**

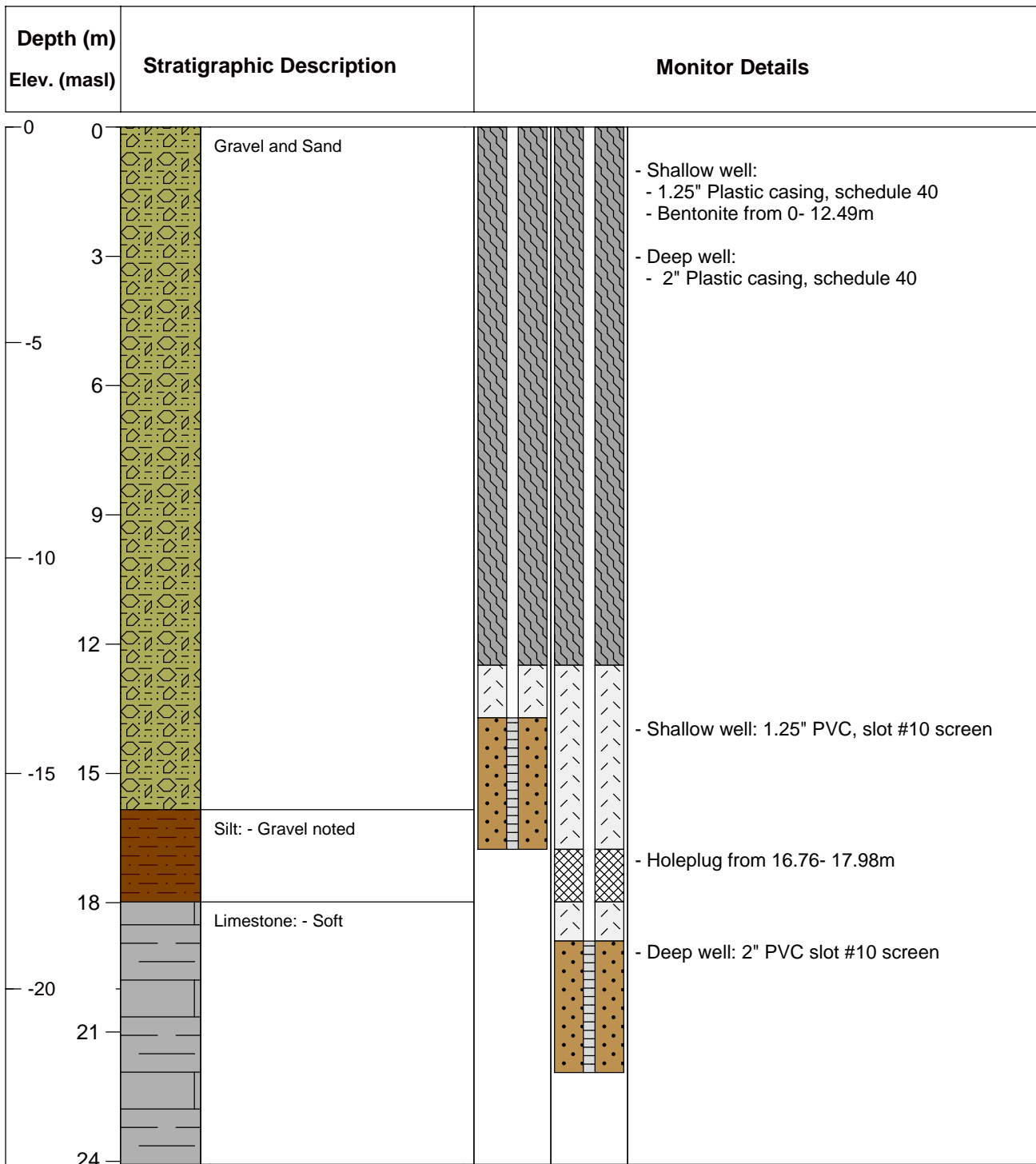
**Prepared For:**





# Well Name: MW4-04

<b>Project No:</b> 07-253p <b>Date:</b> August 1, 2004	<b>Location:</b> Lot 12, Con 3, Twp. of Melancthon Shelbourne
<b>Logged By:</b> Keith Lang	<b>Total Depth:</b> 24.07m <b>Ground Elevation:</b> 511.17 (masl) <b>Top of Casing:</b> 512.08 (masl)
<b>Drilled by:</b> Keith Lang Well Drilling	<b>UTM:</b> Northing: 4888243 Easting: 561230
<b>MOE Well Tag I.D.</b> A 006827	



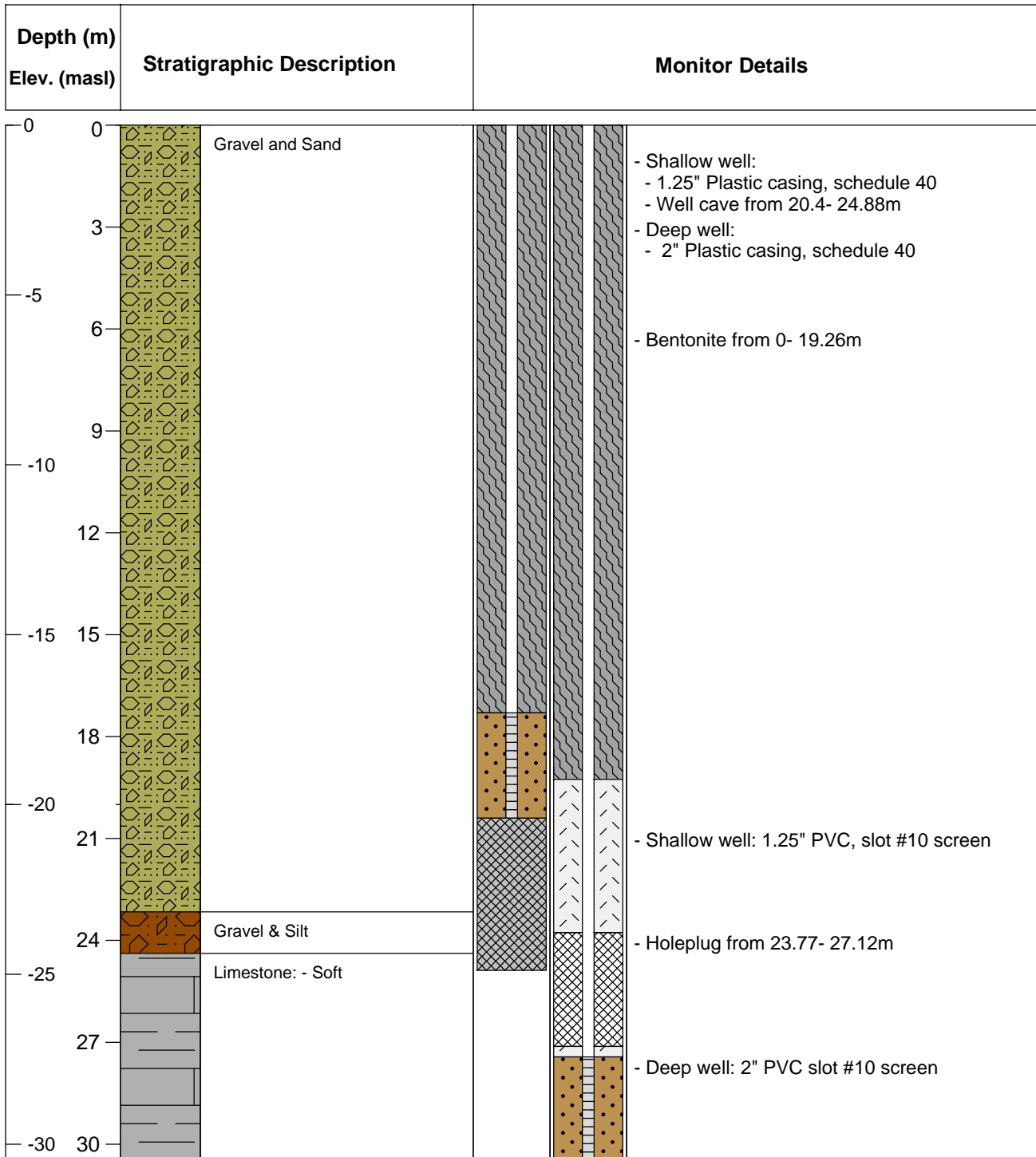
Prepared By: Goffco Limited

Prepared For:



# Well Name: MW5-04

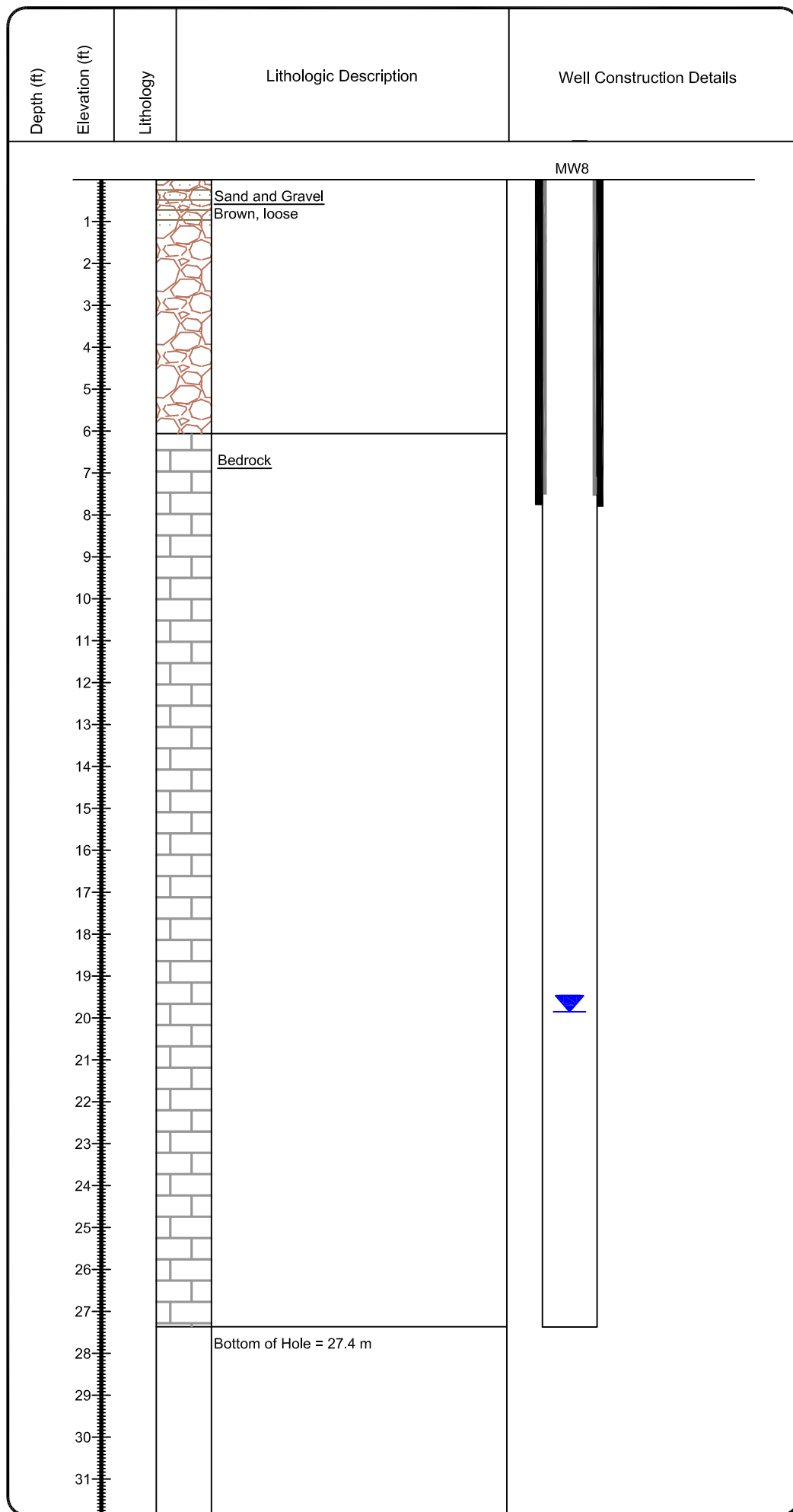
<b>Project No:</b> 07-253p <b>Date:</b> August 8, 2004	<b>Location:</b> Lot 12, Con 3, Twp. of Melancthon Shelbourne
<b>Logged By:</b> Keith Lang	<b>Total Depth:</b> 30.48m <b>Ground Elevation:</b> 510.35 (masl) <b>Top of Casing:</b> 511.48 (masl)
<b>Drilled by:</b> Keith Lang Well Drilling	<b>UTM:</b> Northing: 4887669 Easting: 561431
<b>MOE Well Tag I.D.</b> A 006826	



**Prepared By: Goffco Limited**

**Prepared For:**





## MONITORING WELL NEST

### MW8

Shelburne Pit  
Compliance Monitoring  
Hydrogeological Assessment

Lot 12, Con 3  
Township of Melancthon

#### DRILLING DETAILS

Drill Date: June 2012  
Drilling Method: Mud Rotary  
Driller: Keith Lang Well Drilling  
Geologist: Tecia White

#### MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:  
Northing:

Monitoring Well	MW8		
Ground Elev.			
Top of Casing Elev.			
Stick Up (m)			
Well Depth (m)	27.4 m		
High Water Level (date of water level)			

All units expressed as metres above sea level unless otherwise noted

#### LEGEND



Water Level Elevation



Bentonite Slurry



Backfill



Silica Sand



Schedule 40 (2") PVC Riser Pipe



Schedule 40 (2") 10-slot PVC Screen



Protective Casing (4")

Whitewater Hydrogeology Ltd.

Date Issued: 2012

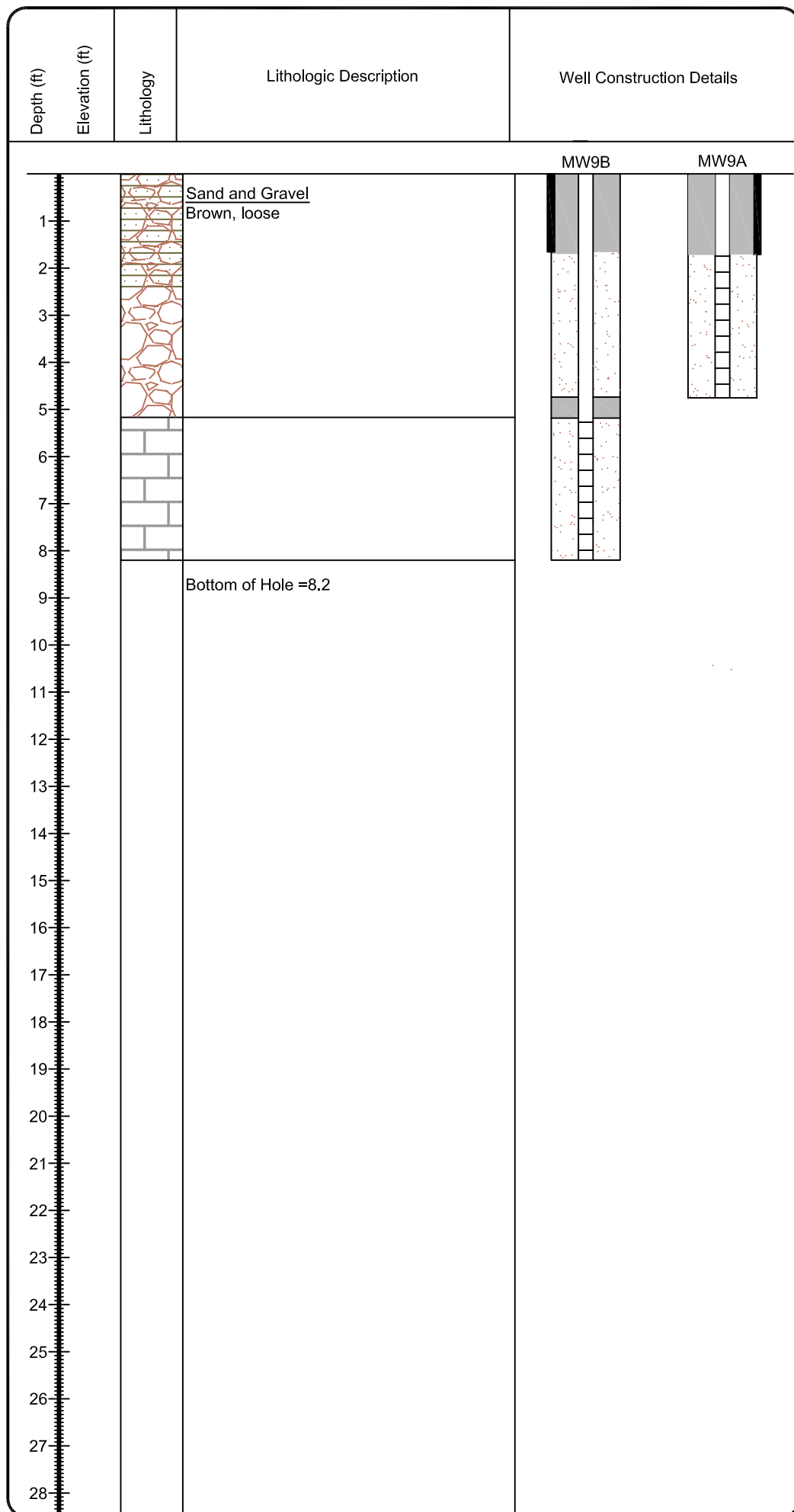
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Project No.

File Name: -

Page

1 of 1



## MONITORING WELL NEST

### MW9

Shelburne Pit  
Compliance Monitoring  
Hydrogeological Assessment

Lot 12, Con 3  
Township of Melancthon

#### DRILLING DETAILS

Drill Date: June 2012  
Drilling Method: Mud Rotary  
Driller: Keith Lang Well Drilling  
Geologist: Tecia White

#### MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:  
Northing:

Monitoring Well	MW9A	MW9B	
Ground Elev.			
Top of Casing Elev.			
Stick Up (m)			
Well Depth (m)	4.8 m	8.2 m	
High Water Level (date of water level)			

All units expressed as metres above sea level unless otherwise noted

#### LEGEND



Water Level Elevation



Bentonite Slurry



Backfill



Silica Sand



Schedule 40 (2") PVC Riser Pipe



Schedule 40 (2") 10-slot PVC Screen



Protective Casing (4")

Whitewater Hydrogeology Ltd.

Date Issued: 2012

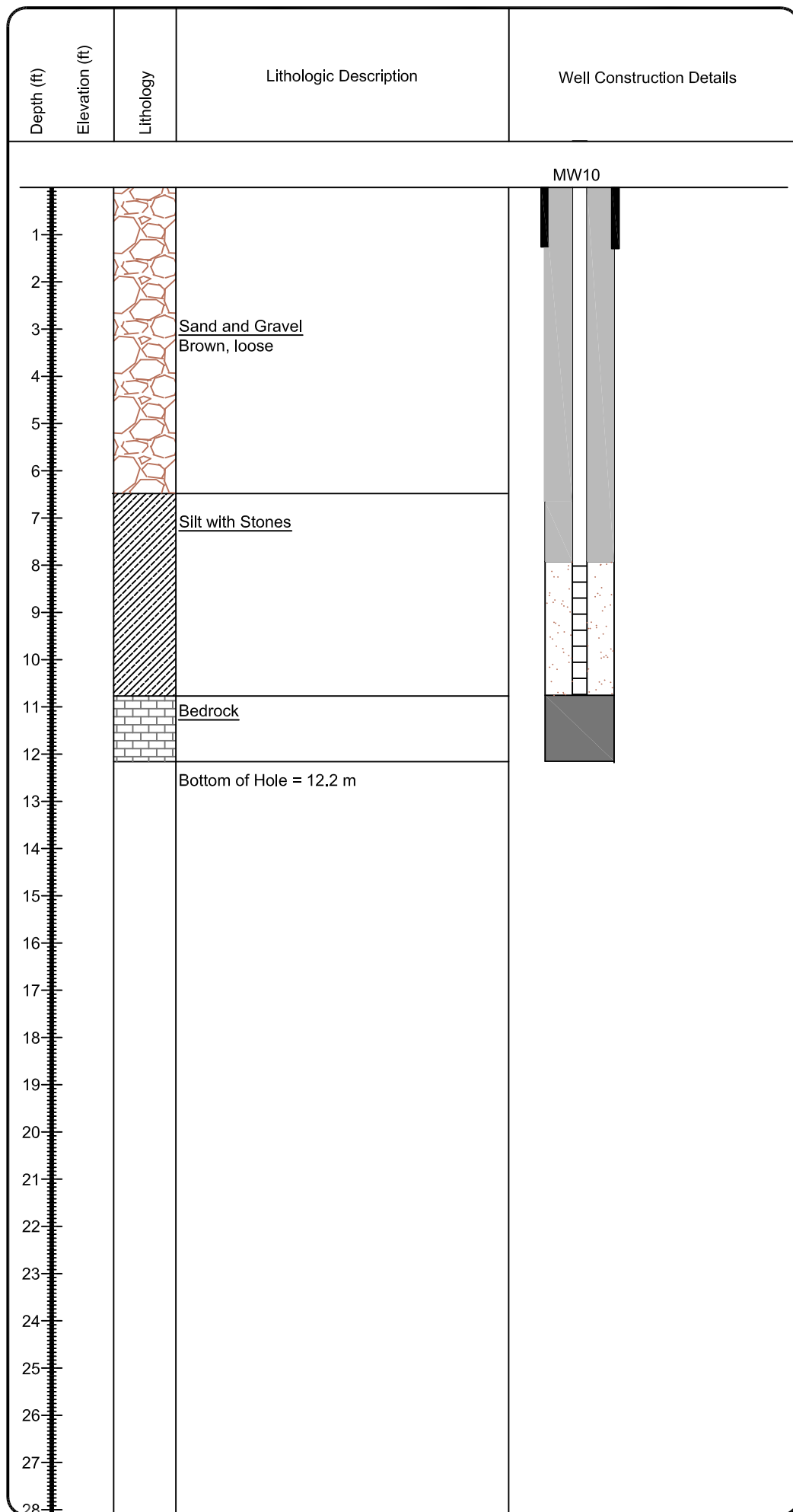
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Page

1 of 1



## MONITORING WELL NEST

### MW10

Shelburne Pit  
Compliance Monitoring  
Hydrogeological Assessment

Lot 12, Con 3  
Township of Melancthon  
-

#### DRILLING DETAILS

Drill Date: 22/06/11  
Drilling Method: Hollow Stem  
Driller: Keith Lang Well Drilling  
Geologist: Tecia White

#### MONITORING WELL INFORMATION

NAD83 Zone 17 Easting:  
Northing:

Monitoring Well	MW10		-
Ground Elev.			-
Top of Casing Elev.			-
Stick Up (m)	0.8 m		-
Well Depth (m)	10.8 m		-
High Water Level (date of water level)	dry October 2012		-

All units expressed as metres above sea level unless otherwise noted

#### LEGEND

- Bentonite Slurry
- Backfill
- Silica Sand
- Schedule 40 (2") PVC Riser Pipe
- Schedule 40 (2") 10-slot PVC Screen
- Protective Casing (4")

Whitewater Hydrogeology Ltd.

Date Issued: November, 2011  
Created By: Whitewater Hydrogeology  
Project No. 00-000  
File Name: -

Page  
1 of 1



Ontario

Ministry of  
the EnvironmentWell Tag No. (Pls  
115091

A115091

Well Record

Regulation 903 Ontario Water Resources Act

Measurements recorded in: ☐ Metric ☐ Imperial

Page 1 of 1

Well Owner Information  
First Name STRADA AGGERAGATES Last Name / Organization E-mail Address ☐ Well Constructed by Well Owner

Mailing Address (Street Number/Name) 30 FLORAL PARKWAY Municipality CONCORD Province ONT Postal Code L4K 4R1 Telephone No. (inc. area code)

Well Location  
Address of Well Location (Street Number/Name) Township MELANCTHON Lot 13 Concession 3

County/District/Municipality DUFFERIN City/Town/Village Province Ontario Postal Code

UTM Coordinates Zone 17 Easting 561721 Northing 4887995 Municipal Plan and Sublot Number Other

General Colour	Most Common Material	Other Materials	General Description	Depth (m/f)
BROWN	SAND & GRAVEL			From To
BROWN	LIMESTONE SOFT			20ft 37ft

Depth Set at (m/f)	Type of Sealant Used (Material and Type)	Volume Placed (m <sup>3</sup> /ft <sup>3</sup> )
0 25ft	BENTONITE 87BAGS	

Method of Construction	Well Use
<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify	<input type="checkbox"/> Public <input type="checkbox"/> Commercial <input type="checkbox"/> Not used <input type="checkbox"/> Domestic <input type="checkbox"/> Municipal <input type="checkbox"/> Dewatering <input type="checkbox"/> Livestock <input type="checkbox"/> Test Hole <input type="checkbox"/> Monitoring <input type="checkbox"/> Irrigation <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify

Inside Diameter (mm/in)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Well Thickness (mm/in)	Depth (m/f)	Water Supply
2in	plastic	40	0 26ft	<input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned, Insufficient Supply <input type="checkbox"/> Abandoned, Poor Water Quality <input type="checkbox"/> Abandoned, other, specify <input type="checkbox"/> Other, specify

Outside Diameter (mm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/f)
2in	plastic	.10	26ft 36ft

Water found at Depth (m/f)	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Untested <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify	Depth (m/f)	Diameter (mm/in)
35ft		0 37ft	6in

Business Name of Well Contractor KEITH LANG WELL DRILLING INC Well Contractor's Licence No. 7154

Business Address (Street Number/Name) 251 ELDON ST GODERICH Municipality

Province ONT Postal Code N7A 3K9 Business E-mail Address

Bus. Telephone No. (inc. area code) Name of Well Technician (Last Name, First Name) KEITH LANG

Well Technician's Licence No. 1440 Signature of Technician and/or Contractor K. Lang Date Submitted Y Y Y Y M M D D

Well owner's information package delivered	Date Package Delivered	Date Work Completed
<input type="checkbox"/> Yes <input type="checkbox"/> No	Y Y Y Y M M D D	2012 6 20



Measurements recorded in: ☐ Metric ☐ Imperial

115096

Page of:

Well 33 well information		Page _____ of _____	
First Name	Last Name / Organization	E-mail Address	
STRADA	AGGERGATES		
Mailing Address (Street Number/Name)	Municipality	Province	Postal Code
30 FLORAL PARKWAY	CONCORD ONT	ONT	L4K 4R1
Well location	Telephone No. (inc. area code)		

Address of Well Location (Street Number/Name)				Township <b>MELANCTHON</b>		Lot <b>13</b>		Concession <b>3</b>	
County/District/Municipality <b>DUFFERIN</b>				City/Town/Village		Province <b>Ontario</b>		Postal Code	
UTM Coordinates <b>NAD 83</b>		Zone <b>17</b>		Easting <b>561634</b>		Northing <b>4887857</b>		Municipal Plan and Sublot Number	
								Other	

[illegible]

Amount Pumped				Pumping Time					
Depth Set at (mft)	From	To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)	After test of well yield, water was:	Draw Down		Recovery	
0		6 ft	bentonite		<input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____	Time (min)	Water Level (mft)	Time (min)	Water Level (mft)
					If pumping discontinued, give reason:	Static Level			
					Pump intake set at (mft)	1		1	
						2		2	

<input type="checkbox"/> Cable Tool <input type="checkbox"/> Rotary (Conventional) <input type="checkbox"/> Rotary (Reverse) <input type="checkbox"/> Boring <input type="checkbox"/> Air percussion <input type="checkbox"/> Other, specify _____			<input type="checkbox"/> Diamond <input type="checkbox"/> Jetting <input type="checkbox"/> Drilling <input type="checkbox"/> Digging <input type="checkbox"/> _____			<input type="checkbox"/> Public <input type="checkbox"/> Domestic <input type="checkbox"/> Livestock <input type="checkbox"/> Irrigation <input type="checkbox"/> Industrial <input type="checkbox"/> Other, specify _____			<input type="checkbox"/> Commercial <input type="checkbox"/> Municipal <input type="checkbox"/> Test Hole <input type="checkbox"/> Cooling & Air Conditioning <input type="checkbox"/> _____			<input type="checkbox"/> Not used <input type="checkbox"/> Dewatering <input type="checkbox"/> Monitoring <input type="checkbox"/> _____		
---	--	--	---	--	--	---	--	--	--	--	--	---	--	--

Construction Record - Casing				Depth (mft)		<input type="checkbox"/> Water Supply <input type="checkbox"/> Replacement Well <input type="checkbox"/> Test Hole <input type="checkbox"/> Recharge Well <input type="checkbox"/> Dewatering Well <input checked="" type="checkbox"/> Observation and/or Monitoring Hole <input type="checkbox"/> Alteration (Construction) <input type="checkbox"/> Abandoned
Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fiberglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	From	To		
1 1/4	plastic	40	0	6ft		
1 1/4	plastic	40	0	18ft		

Outside Diameter (mm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft)	
			From	To
1 1/4	plastic	.10	6ft	16ft
1 1/4	plastic	.10	17ft	27ft

☐ Insufficient Supply  
☐ Abandoned, Poor Water Quality  
☐ Abandoned, other, specify \_\_\_\_\_  
☐ Other, specify \_\_\_\_\_

Water Details		Water Sample		
Water found at Depth (m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Unstested	Depth (m/f) From	To	Dis. meter (m/f)
Water found at Depth (m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Unstested	0	28 ft	6 in
Water found at Depth (m/f) <input type="checkbox"/> Gas <input type="checkbox"/> Other, specify _____	Kind of Water: <input type="checkbox"/> Fresh <input type="checkbox"/> Unstested			

Business Name of Well Contractor		Well Contractor's Licence No.
KEITH LANG WELL DRILLING INC		71540
Business Address (Street Number/Name)		Municipality
251 ELDON ST GODERICH ONT		

Agency N7A389	Business E-mail Address
Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name) <b>KEITH LANG</b>
Well Technician's License No. 440	Signature of Technician and/or Contractor <i>K. Lang</i>
	Date Submitted Y Y Y Y M M D D

Draw Down and Recovery Test					
After test of well yield, water was:		Draw Down		Recovery	
<input checked="" type="checkbox"/> Clear and sand free <input type="checkbox"/> Other, specify _____		Time	Water Level	Time	Water Level
		(min)	(m/ft)	(min)	(m/ft)
If pumping discontinued, give reason:		Static Level			
Pump intake set at (m/ft)		1		1	
Pumping rate (l/min / GPM)		2		2	
Duration of pumping ____ hrs + ____ min		3		3	
Final water level end of pumping (m/ft)		4		4	
If flowing give rate (l/min / GPM)		5		5	
Recommended pump depth (m/ft)		10		10	
Recommended pump rate (l/min / GPM)		15		15	
Well production (l/min / GPM)		20		20	
Disinfected?		25		25	
<input type="checkbox"/> Yes <input type="checkbox"/> No		30		30	
		40		40	
		50		50	
		60		60	

Please provide a map below following instructions on the back.

SCALE HOUSE

ROAD

LANE

PIT

WELL

North Arrow

Comments:	
Well owner's information package delivered	Date Package Delivered Y Y Y Y M M D D Date Work Completed 2012 6 20 Y Y Y Y M M D D
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Utility Use Only Address 2142138



## APPENDIX B

# WATER QUALITY RESULTS

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 270280  
PO #:  
Regulation: Information not provided  
Project #: Shelburne Pit North  
DWS #:  
Sampled By:

Date Order Received: 4/14/2016  
Arrival Temperature: 9.4 °C

Analysis Started: 4/14/2016  
Analysis Completed: 4/21/2016

**WORK ORDER SUMMARY**

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
OW 1	711034	Ground Water	None		4/12/2016	
1-A	711035	Ground Water	None		4/12/2016	
1-B	711036	Ground Water	None		4/12/2016	
2	711037	Ground Water	None		4/12/2016	
5-A	711038	Ground Water	None		4/12/2016	
5-B	711039	Ground Water	None		4/12/2016	
6-A	711040	Ground Water	None		4/12/2016	
10-B	711041	Ground Water	None		4/12/2016	
8-A	711042	Ground Water	None		4/12/2016	

**METHODS AND INSTRUMENTATION**

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
A26-Colour	Mississauga	Determination of Colour by Spectrophotometry	Modified from APHA-2120C
A42-Ammonia Water	Mississauga	Determination of Ammonia/Ammonium in Water	Modified from APHA-4500-NH3
A55-TOC Water	Mississauga	Determination of Total Organic Carbon in Water	Modified from APHA-5310
OP Water	Garson	Determination of Ortho-Phosphate in Water	Based on APHA-4500P
PHC F2-F4 Water	Garson	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME

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Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Method	Lab	Description	Reference
T01-Alkalinity	Mississauga	Determination of Alkalinity in Water	Modified from APHA-2320
T02-pH Water	Mississauga	Determination of pH in Water	Modified from APHA-4500-H+B
T05-Anions Water	Mississauga	Determination of Anions by Ion Chromatography	Modified from SW846-9056
T12-Cond Water	Mississauga	Determination of Conductivity in Water	Modified from APHA-2510
T127-BTEX Water	Mississauga	Determination of BTEX in Water by Headspace GC/MS	Modified from EPA 624
T13-Hardness	Mississauga	Determination of Total Hardness	Modified from APHA-2340B
T13-ICPMS Dis Water FF	Mississauga	Determination of Dissolved (Field Filtered) Metals in Water by ICPMS	Modified from SW846-6020
T13-ICPMS Water	Mississauga	Determination of Metals in Water by ICPMS	Modified from SW846-6020
T21-Turbidity	Mississauga	Determination of Turbidity by Nephelometry	Modified from APHA-2130 B
T27-TDS	Mississauga	Determination of Total Dissolved Solids in water by gravimetry	Modified from APHA-2540
T94-Carbonate	Mississauga	Determination of Carbonate and Bi-Carbonate	Based on APHA-2330
TP Water	Garson	Determination of Total Phosphorus in Water	Based on APHA-4500P
VOC Water	Garson	Determination of Volatile Organic Compounds in Water by P&T/GC/MS	Based on EPA 624

**REPORT COMMENTS**

Report revised as the F1 data was reassessed and determined to be non-detect. 20160503 BWH.

This report has been approved by:

Mark Charbonneau, Ph.D.

Laboratory Director

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

**WORK ORDER RESULTS**

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	3.49	0.05	4.78	0.05	10.3	0.05	2.46	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Nitrate (as N)	6.48	0.02	0.567	0.02	2.23	0.02	3.33	0.02	mg/L
Nitrite (as N)	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	9.91	0.05	7.04	0.05	8.19	0.05	5.74	0.05	mg/L

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	7.18	0.05	6	0.05	11.4	0.05	2.62	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Nitrate (as N)	3.68	0.02	2.18	0.02	3.84	0.02	2.02	0.02	mg/L
Nitrite (as N)	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	12.5	0.05	6.84	0.05	12.5	0.05	13.6	0.05	mg/L

Sample Description	8 - A		
Lab ID	711042		
Anions	Result	MDL	Units
Bromide	<0.05 [<0.05]	0.05	mg/L
Chloride	2.15 [2.19]	0.05	mg/L

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	8 - A		
Lab ID	711042		
Anions	Result	MDL	Units
Fluoride	<0.05 [<0.05]	0.05	mg/L
Nitrate (as N)	1.04 [1.04]	0.02	mg/L
Nitrite (as N)	<0.02 [<0.02]	0.02	mg/L
Phosphate	<0.05 [<0.05]	0.05	mg/L
Sulphate	7.77 [7.78]	0.05	mg/L

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	86	N/A	84	N/A	89	N/A	85	N/A	ug/L
Benzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	53	5	<5	5	87	5	35	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Toluene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
undecane (Surr)	120	N/A	140	N/A	120	N/A	140	N/A	ug/L

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	89	N/A	83	N/A	89	N/A	83	N/A	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Benzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	<5	5	30	5	92	5	89	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Toluene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
undecane (Surr)	100	N/A	140	N/A	130	N/A	140	N/A	ug/L

Sample Description	8 - A		
Lab ID	711042		
BTEX	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	84 [86]	N/A	ug/L
Benzene	<0.4 [<0.4]	0.4	ug/L
Ethylbenzene	<0.4 [<0.4]	0.4	ug/L
F1 (C6-C10) - Less BTEX	122 [109]	5	ug/L
F1 (C6-C10) Incl. BTEX	<10 [<10]	10	ug/L
m+p-Xylene	<0.4 [<0.4]	0.4	ug/L
o-Xylene	<0.4 [<0.4]	0.4	ug/L
Toluene	<0.4 [<0.4]	0.4	ug/L
Total Xylenes	<0.4 [<0.4]	0.4	ug/L
undecane (Surr)	130 [130]	N/A	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	mg/L
Bicarbonate	362	1	217	1	279	1	473	1	mg/L
Carbonate	2	1	2	1	2	1	3.5	1	mg/L
Conductivity	642.4	1	393.9	1	515.1	1	656.7	1	µS/cm
M-Alkalinity (pH 4.5)	364	2	219	2	281	2	477	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.039	0.005	0.03	0.005	0.032	0.005	0.01	0.005	mg/L
pH	7.8	N/A	7.9	N/A	7.9	N/A	7.9	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	414	0.1	213	0.1	280	0.1	381	0.1	mg/L
Total Organic Carbon	1	0.4	2	0.4	1 [1]	0.4	1.2	0.4	mg/L
Total Phosphorus (as P)	0.043	0.01	0.0957	0.002	0.049	0.01	0.47	0.002	mg/L
True Colour	<1	1	<1	1	<1	1	<1	1	TCU
Turbidity	86	0.1	160	0.1	158	0.1	495	1	NTU

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	mg/L
Bicarbonate	249	1	262	1	295	1	228	1	mg/L
Carbonate	2	1	2	1	3.5	1	3	1	mg/L
Conductivity	478.1	1	471.4	1	590.1	1	408.5	1	µS/cm
M-Alkalinity (pH 4.5)	251	2	265	2	299	2	231	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.021	0.005	<0.005	0.005	0.0725	0.005	0.0553	0.005	mg/L
pH	8	N/A	8	N/A	8.1	N/A	8.1	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	244	0.1	251	0.1	301	0.1	190	0.1	mg/L
Total Organic Carbon	4.37	0.4	2.2	0.4	1	0.4	0.9	0.4	mg/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Phosphorus (as P)	17.4	0.1	0.156	0.002	0.18	0.05	0.072	0.002	mg/L
True Colour	<1	1	<1	1	<1	1	<1	1	TCU
Turbidity	11400	20	162	0.1	1.4	0.1	195	0.1	NTU

Sample Description	8 - A		
Lab ID	711042		
General Chemistry	Result	MDL	Units
Ammonia (as N)	<0.01 [<0.01]	0.01	mg/L
Bicarbonate	124	1	mg/L
Carbonate	1	1	mg/L
Conductivity	254.6	1	µS/cm
M-Alkalinity (pH 4.5)	125	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.0742	0.005	mg/L
pH	8	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	186	0.1	mg/L
Total Organic Carbon	0.7	0.4	mg/L
Total Phosphorus (as P)	0.17	0.05	mg/L
True Colour	<1	1	TCU
Turbidity	1.2 [1.1]	0.1	NTU

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	115000	50	60900	50	82700	50	110000	50	ug/L
Magnesium	30700	4	14700	4	17900	4	25900	4	ug/L



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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	66700	50	69700	50	84900	50	45400	50	ug/L
Magnesium	18900	4	18700	4	21500	4	18700	4	ug/L

Sample Description	8 - A		
Lab ID	711042		
Metals	Result	MDL	Units
Calcium	51200	50	ug/L
Magnesium	14100	4	ug/L

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	109	1	22.2	1	52.6	1	81.6	1	ug/L
Dissolved Boron	8.3	2	<2	2	<2	2	<2	2	ug/L
Dissolved Calcium	115000	50	60900	50	82700	50	110000	50	ug/L
Dissolved Copper	<1	1	1	1	1	1	<1	1	ug/L
Dissolved Iron	<20	20	<20	20	<20	20	<20	20	ug/L
Dissolved Magnesium	30700	4	14700	4	17900	4	25900	4	ug/L
Dissolved Manganese	1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Nickel	2	1	1	1	1	1	2	1	ug/L
Dissolved Potassium	750	100	1020	100	1030	100	710	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	2200	100	3900	100	6200	100	2490	100	ug/L
Dissolved Strontium	168	1	84.5	1	146	1	161	1	ug/L
Dissolved Zinc	6	1	20.2	1	4.9	1	19.3	1	ug/L

Sample Description	5 - A		5 - B		10 - B		8 - A		
Lab ID	711038		711039		711041		711042		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	49.7	1	30.2	1	83.4	1	46.4	1	ug/L
Dissolved Boron	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Calcium	66700	50	69700	50	45400	50	51200	50	ug/L
Dissolved Copper	1	1	<1	1	<1	1	1	1	ug/L
Dissolved Iron	<20	20	<20	20	<20	20	<20	20	ug/L
Dissolved Magnesium	18900	4	18700	4	18700	4	14100	4	ug/L
Dissolved Manganese	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	3	1	<1	1	ug/L
Dissolved Nickel	1	1	1	1	1	1	1	1	ug/L
Dissolved Potassium	1180	100	1090	100	1050	100	860	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	7350	100	3100	100	13900	100	3360	100	ug/L
Dissolved Strontium	105	1	97.8	1	124	1	86.7	1	ug/L
Dissolved Zinc	15.8	1	17.5	1	8.1	1	31.9	1	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<30	30	<30	30	<30	30	<30	30	ug/L
F3 (C16-C34)	100	30	40	30	<30	30	<30	30	ug/L
F4 (C34-C50)	<30	30	<30	30	<30	30	<30	30	ug/L
o-Terphenyl (Surr.)	75	N/A	72	N/A	80	N/A	86	N/A	% Rec

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<40	40	<30	30	<40	40	<30	30	ug/L
F3 (C16-C34)	160	40	50	30	<40	40	<30	30	ug/L
F4 (C34-C50)	<40	40	<30	30	<40	40	<30	30	ug/L
o-Terphenyl (Surr.)	69	N/A	75	N/A	67	N/A	80	N/A	% Rec

Sample Description	8 - A		
Lab ID	711042		
Petroleum Hydrocarbons	Result	MDL	Units
Baseline @ C50	Yes	N/A	NA
F2 (C10-C16)	<30	30	ug/L
F3 (C16-C34)	<30	30	ug/L
F4 (C34-C50)	<30	30	ug/L
o-Terphenyl (Surr.)	83	N/A	% Rec

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	385 [393]	3	230	3	322	3	372	3	mg/L

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	340	30	265	3	321	3	219	4	mg/L

Sample Description	8 - A		
Lab ID	711042		
Solids	Result	MDL	Units
Total Dissolved Solids	139	3	mg/L

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,2-Dichloroethane-d4 (Surr)	110	N/A	110	N/A	110	N/A	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	90	N/A	91	N/A	93	N/A	90	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	OW 1		1 - A		1 - B		2		
Lab ID	711034		711035		711036		711037		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	76	N/A	75	N/A	76	N/A	75	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	110	N/A	110	N/A	110	N/A	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	93	N/A	93	N/A	93	N/A	92	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	5 - A		5 - B		6 - A		10 - B		
Lab ID	711038		711039		711040		711041		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	75	N/A	75	N/A	76	N/A	77	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L



**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	8 - A		
Lab ID	711042		
Volatile Organic Compounds	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	93	N/A	% Rec
Acetone	<30	30	ug/L
Benzene	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	8 - A		
Lab ID	711042		
Volatile Organic Compounds	Result	MDL	Units
Chloroethane	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	ug/L
Dichloromethane	<1	1	ug/L
Ethylbenzene	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	ug/L
n-Hexane	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	ug/L
Styrene	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	ug/L
Toluene	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	76	N/A	% Rec
Total Xylenes	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	ug/L



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## CERTIFICATE OF ANALYSIS - REVISED

Whitewater Hydrogeology Ltd.

Work Order Number: 270280

Sample Description	8 - A		
Lab ID	711042		
Volatile Organic Compounds	Result	MDL	Units
Trichlorofluoromethane	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	ug/L

## LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

F1-BTEX, F2-NAPTH, and F3-PAH: BTEX and selected PAHs have been subtracted from the appropriate fractions only if the parameter names are F1-BTEX, F2-NAPTH, and F3-PAH, otherwise these compounds have not been subtracted from their respective fractions.

MDL: Method detection limit or minimum reporting limit.

[ ]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.

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## CERTIFICATE OF ANALYSIS

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 270842  
PO #:  
Regulation: Information not provided  
Project #: Shelburne Pit North  
DWS #:  
Sampled By:

Date Order Received: 4/20/2016  
Arrival Temperature: 9.4 °C

Analysis Started: 4/21/2016  
Analysis Completed: 4/27/2016

## WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
4-A	712416	Ground Water	None		4/1/2016	

## METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
A26-Colour	Mississauga	Determination of Colour by Spectrophotometry	Modified from APHA-2120C
A42-Ammonia Water	Mississauga	Determination of Ammonia/Ammonium in Water	Modified from APHA-4500-NH3
A55-TOC Water	Mississauga	Determination of Total Organic Carbon in Water	Modified from APHA-5310
Hardness/ICP	Garson	Determination of Hardness in Water by ICP	Based on SW846-6020
ICPMS Dis. Water FF	Garson	Determination of Dissolved (Field Filtered) Metals in Water by ICP/MS	Based on SW846-6020A
OP Water	Garson	Determination of Ortho-Phosphate in Water	Based on APHA-4500P
T01-Alkalinity	Mississauga	Determination of Alkalinity in Water	Modified from APHA-2320
T02-pH Water	Mississauga	Determination of pH in Water	Modified from APHA-4500-H+B
T05-Anions Water	Mississauga	Determination of Anions by Ion Chromatography	Modified from SW846-9056
T12-Cond Water	Mississauga	Determination of Conductivity in Water	Modified from APHA-2510
T127-BTEX Water	Mississauga	Determination of BTEX in Water by Headspace GC/MS	Modified from EPA 624
T21-Turbidity	Mississauga	Determination of Turbidity by Nephelometry	Modified from APHA-2130 B
T27-TDS	Mississauga	Determination of Total Dissolved Solids in water by gravimetry	Modified from APHA-2540



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Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Method	Lab	Description	Reference
T59-PHC F2-F4 Water	Mississauga	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME
T94-Carbonate	Mississauga	Determination of Carbonate and Bi-Carbonate	Based on APHA-2330
TP Water	Garson	Determination of Total Phosphorus in Water	Based on APHA-4500P
VOC Water	Garson	Determination of Volatile Organic Compounds in Water by P&T/GC/MS	Based on EPA 624

This report has been approved by:

Mark Charbonneau, Ph.D.

Laboratory Director

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS**

Whitewater Hydrogeology Ltd.

Work Order Number: 270842

**WORK ORDER RESULTS**

Sample Description	4 - A		
Lab ID	712416		
Anions	Result	MDL	Units
Bromide	<0.05	0.05	mg/L
Chloride	1.34	0.05	mg/L
Fluoride	<0.05	0.05	mg/L
Nitrate (as N)	3.14	0.02	mg/L
Nitrite (as N)	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	mg/L
Sulphate	6.61	0.05	mg/L

Sample Description	4 - A		
Lab ID	712416		
BTEX	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	94	N/A	ug/L
Benzene	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	<5	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	ug/L
m+p-Xylene	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	ug/L
Toluene	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	ug/L
undecane (Surr)	130	N/A	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Sample Description	4 - A		
Lab ID	712416		
General Chemistry	Result	MDL	Units
Ammonia (as N)	<0.01 [<0.01]	0.01	mg/L
Bicarbonate	242	1	mg/L
Calcium	72.8	0.5	mg/L
Carbonate	2	1	mg/L
Conductivity	456.8 [458.2]	1	µS/cm
Magnesium	17.2	0.04	mg/L
M-Alkalinity (pH 4.5)	244 [247]	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.05 [0.0526]	0.005	mg/L
pH	8 [7.9]	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	253	0.1	mg/L
Total Organic Carbon	1 [1]	0.4	mg/L
Total Phosphorus (as P)	0.101	0.01	mg/L
True Colour	2	1	TCU
Turbidity	71.1 [72]	0.1	NTU

Sample Description	4 - A		
Lab ID	712416		
Metals (Dissolved - Field Filtered)	Result	MDL	Units
Dissolved Aluminum	19.8 [18.7]	1	ug/L
Dissolved Antimony	<0.5 [<0.5]	0.5	ug/L
Dissolved Arsenic	<1 [<1]	1	ug/L
Dissolved Barium	70.8 [69.8]	1	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Sample Description	4 - A		
Lab ID	712416		
Metals (Dissolved - Field Filtered)	Result	MDL	Units
Dissolved Boron	12 [11]	2	ug/L
Dissolved Cadmium	0.2 [0.2]	0.1	ug/L
Dissolved Calcium	73400 [70500]	50	ug/L
Dissolved Copper	1 [1]	1	ug/L
Dissolved Iron	<20 [<20]	20	ug/L
Dissolved Magnesium	16100 [15500]	4	ug/L
Dissolved Manganese	1 [1]	1	ug/L
Dissolved Molybdenum	<1 [<1]	1	ug/L
Dissolved Nickel	1 [1]	1	ug/L
Dissolved Potassium	770 [740]	100	ug/L
Dissolved Selenium	<1 [<1]	1	ug/L
Dissolved Silver	<0.1 [<0.1]	0.1	ug/L
Dissolved Sodium	3700 [3550]	100	ug/L
Dissolved Strontium	82.9 [81.8]	1	ug/L
Dissolved Zinc	14.5 [13.9]	1	ug/L

Sample Description	4 - A		
Lab ID	712416		
Petroleum Hydrocarbons	Result	MDL	Units
Baseline @ C50	Yes	N/A	NA



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Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Sample Description	4 - A		
Lab ID	712416		
Petroleum Hydrocarbons	Result	MDL	Units
F2 (C10-C16)	<60	60	ug/L
F3 (C16-C34)	<60	60	ug/L
F4 (C34-C50)	<60	60	ug/L
o-Terphenyl (Surr.)	60	N/A	% Rec

Sample Description	4 - A		
Lab ID	712416		
Solids	Result	MDL	Units
Total Dissolved Solids	153	9	mg/L

Sample Description	4 - A		
Lab ID	712416		
Volatile Organic Compounds	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	79	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Sample Description	4 - A		
Lab ID	712416		
Volatile Organic Compounds	Result	MDL	Units
1,3-Dichlorobenzene	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	97	N/A	% Rec
Acetone	<30	30	ug/L
Benzene	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	ug/L
Dichloromethane	<1	1	ug/L
Ethylbenzene	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	ug/L

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## CERTIFICATE OF ANALYSIS

Whitewater Hydrogeology Ltd.

Work Order Number: 270842

Sample Description	4 - A		
Lab ID	712416		
Volatile Organic Compounds	Result	MDL	Units
Methyl ethyl ketone	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	ug/L
n-Hexane	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	ug/L
Styrene	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	ug/L
Toluene	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	89	N/A	% Rec
Total Xylenes	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	ug/L

## LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

F1-BTEX, F2-NAPTH, and F3-PAH: BTEX and selected PAHs have been subtracted from the appropriate fractions only if the parameter names are F1-BTEX, F2-NAPTH, and F3-PAH, otherwise these compounds have not been subtracted from their respective fractions.

MDL: Method detection limit or minimum reporting limit.

[ ]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.

# Whitewater

Hydrogeology Ltd.



## **2016 COMPLIANCE GROUNDWATER MONITORING REPORT**

### **SHELBURNE SOUTH PIT**

Prepared for:  
Strada Aggregates

Whitewater Hydrogeology Ltd  
Phone: 705.888-7064  
Email: [tecia@white-water.ca](mailto:tecia@white-water.ca)

Date: January 2017

January 6, 2017

Strada Aggregates Inc.  
30 Floral Parkway  
Concord, Ontario  
L4K 4R1

Attention: Mr. Grant Horan  
Controller

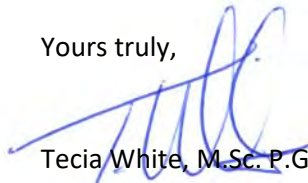
**Re: 2016 Compliance Report: Strada Aggregates: Shelburne South Pit**

Dear Sir:

Whitewater Hydrogeology Ltd. (Whitewater) is pleased to present the 2016 Compliance Groundwater Monitoring Report for the Shelburne South Pit. The findings indicate that the extraction of aggregate from above the water table has had no measurable influence on the groundwater regime.

If you have any questions or concerns, please do not hesitate to call at any time.

Yours truly,



Tecia White, M.Sc. P.Geo.  
Senior Hydrogeologist  
Whitewater Hydrogeology Ltd.

Cc:

Aggregate Technical Specialist: Guelph District MNR Office (1 copy)  
Township of Melancthon: Denise B. Holmes, AMCT CAO/Clerk (1 copy)

## Table of Contents

<b>1.0</b>	<b>INTRODUCTION .....</b>	<b>1</b>
1.1	Compliance Monitoring Program.....	1
<b>2.0</b>	<b>HYDROGEOLOGICAL AND HYDROLOGICAL EVALUATION .....</b>	<b>4</b>
2.1	Climatic Conditions .....	4
2.2	Groundwater Elevations .....	4
2.2.1	Overburden Groundwater Levels .....	5
2.2.2	Bedrock Groundwater Elevations.....	7
2.2.1	OW11 Well Nest.....	7
2.3	Groundwater Flow .....	8
2.4	Groundwater Quality .....	8
2.4.1	Groundwater Monitoring Wells .....	8
2.5	Surface Water Levels.....	10
2.6	Surface Water Quality .....	10
<b>3.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>11</b>

## List of Figures

Figure 1: Regional Location Map .....	2
Figure 2: Monitoring Location Map .....	3
Figure 3: Water Table Elevations (OW2-A, OW4-A, OW10-A).....	5
Figure 4: Water Table Elevations (Sand and Gravel Aquifer).....	6
Figure 5: Groundwater Elevations (Tavistock Till) .....	6
Figure 6: Groundwater Elevations (Bedrock).....	7
Figure 7: Groundwater Hydrograph (OW11) .....	8
Figure 8: Groundwater Flow Map (Sand and Gravel Aquifer) .....	9
Figure 9: Surface Water Elevations.....	10

## List of Tables

Table 1: Compliance Monitoring Program.....	1
Table 2: Climate Summary .....	4
Table 3: 2016 Manual Groundwater Elevations .....	4

## List of Appendices

Appendix A	Borehole Logs
Appendix B	Water Quality Laboratory Results

## 1.0 INTRODUCTION

Strada Aggregates, Inc. (Strada) owns and operates the Shelburne South Pit (formerly known as the Melancthon Pit); a 47.5 ha (117.3 acre) above water aggregate site located in the West Half of Lots 11 and 12, Concession 3 O.S., Township of Melancthon, Dufferin County (Figure 1). The Shelburne South Pit holds a Class “A” Aggregate Resources Act (ARA) license, which is restricted to extracting aggregate material no closer than 1.5 m above the established water table.

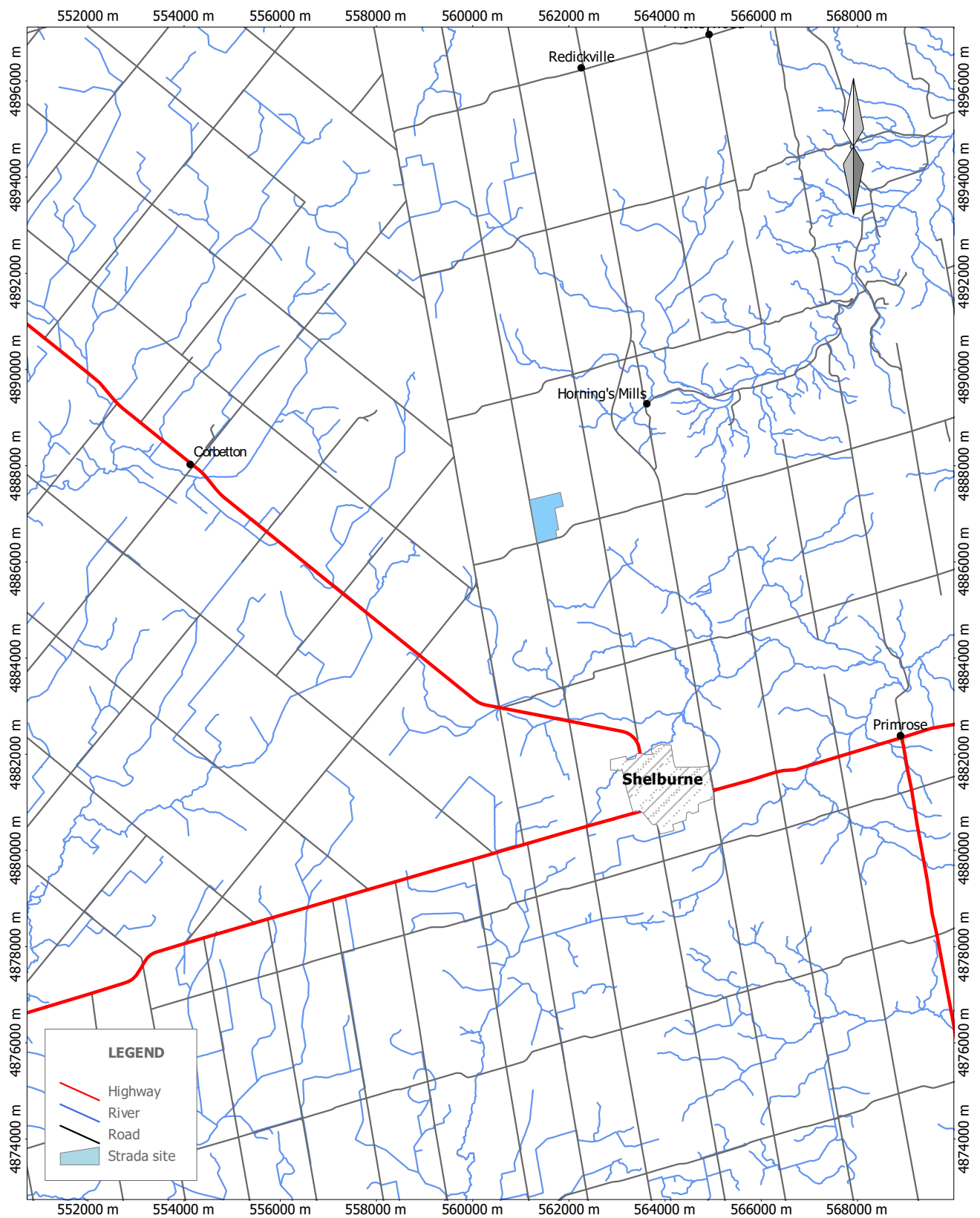
As a condition of the Site Plans, an annual groundwater monitoring report is to be submitted to the Ministry of Natural Resources and Forestry (MNRF) by March 31 of each year. The compliance groundwater monitoring program regulated under the sites ARA license reflects the recommended program outlined in the report “Hydrogeological Assessment Report; Proposed Melancthon Pit” dated March 2010.

### 1.1 Compliance Monitoring Program

The on-going monitoring program at the site is outlined in Table 1. The information that is highlighted in red represents the components of the program that have been added in addition to the ARA compliance requirements to meet the recommendations made by the Township of Melancthon. The groundwater monitoring program consists of multi-level monitoring wells. These well nests consist of a shallow well (sand and gravel), a deep overburden well (Tavistock Till), and a bedrock well, which are identified as monitors A, B, and C respectively. Monitoring locations are provided on Figure 2.

**TABLE 1: COMPLIANCE MONITORING PROGRAM**

Well No.	Water Level Elevations		Water Quality (semi-annual)		Water Quality Monitoring Location Rationale
	Continuous Datalogger	Monthly Manuals	General Parameters	Petroleum Hydrocarbons	
OW2-A	X	X	X	X	Up-gradient / Background Water Quality
OW2-B	X	X	X	X	
OW2-C	X	X	X		
OW3-A	X	X	X		
OW3-B	X	X			Up-gradient / Background Water Quality
OW4-A	X	X	X	X	
OW4-B	X	X	X	X	
OW4-C	X	X	X		
OW5-A	X	X	X	X	Down-gradient / Water Quality
OW5-B	X	X	X	X	
OW5-C	X	X			
OW6-A	X	X	X	X	
OW7-A	X	X	X	X	
OW7-C	X	X	X	X	
OW8-A	X	X	X	X	
OW8-B	X	X			
OW9-A	X	X			
OW10A	X	X	X		
OW10B	X	X			
OW11-A	X	X	X	X	
OW11-C	X	X	X	X	Down-gradient / Water Quality
OW12-A	X	X	X	X	
OW13-A	X	X	X	X	Down-gradient of Fuel Storage Surface Water Quality
South Pond	X	X	X	X	
Wash Pond	X	X	X	X	







## 2.0 HYDROGEOLOGICAL AND HYDROLOGICAL EVALUATION

### 2.1 Climatic Conditions

A summary of precipitation data is provided in Table 2. In comparison to average data collected between 1981 and 2010, the 2016 data are significantly less for all months with the exception of March and August. Overall, the annual total precipitation for 2016 is 37% less than the historical norms. The result of the decrease in precipitation is a reduction in water surplus that would typically include water for infiltration. The reduction in groundwater recharge will have a direct influence on the groundwater elevation trends observed in 2016.

**TABLE 2: CLIMATE SUMMARY**

	Jan	Feb.	Mar.	Apr	May	Jun	Jul	Aug	Sept.	Oct.	Nov.	Total
Average	64.3	54.5	60.9	70.1	86.6	81.3	80.8	88.2	87.0	76.6	87.1	837.4
2016	41.4	25.7	76.4	54.6	42.3	30.6	48.6	90.4	37.4	24.3	53.6	525.3
% Diff	-36%	-53%	25%	-22%	-51%	-62%	-40%	2%	-57%	-68%	-38%	-37%

### 2.2 Groundwater Elevations

The 2016 groundwater monitoring program consisted of the collection of continuous and monthly manual water level measurements. In order to accurately determine the true changes in water level only, barometric pressure fluctuations were removed from the data, which then was corrected to the manual water levels. The 2016 groundwater monitoring results are provided in the following sections.

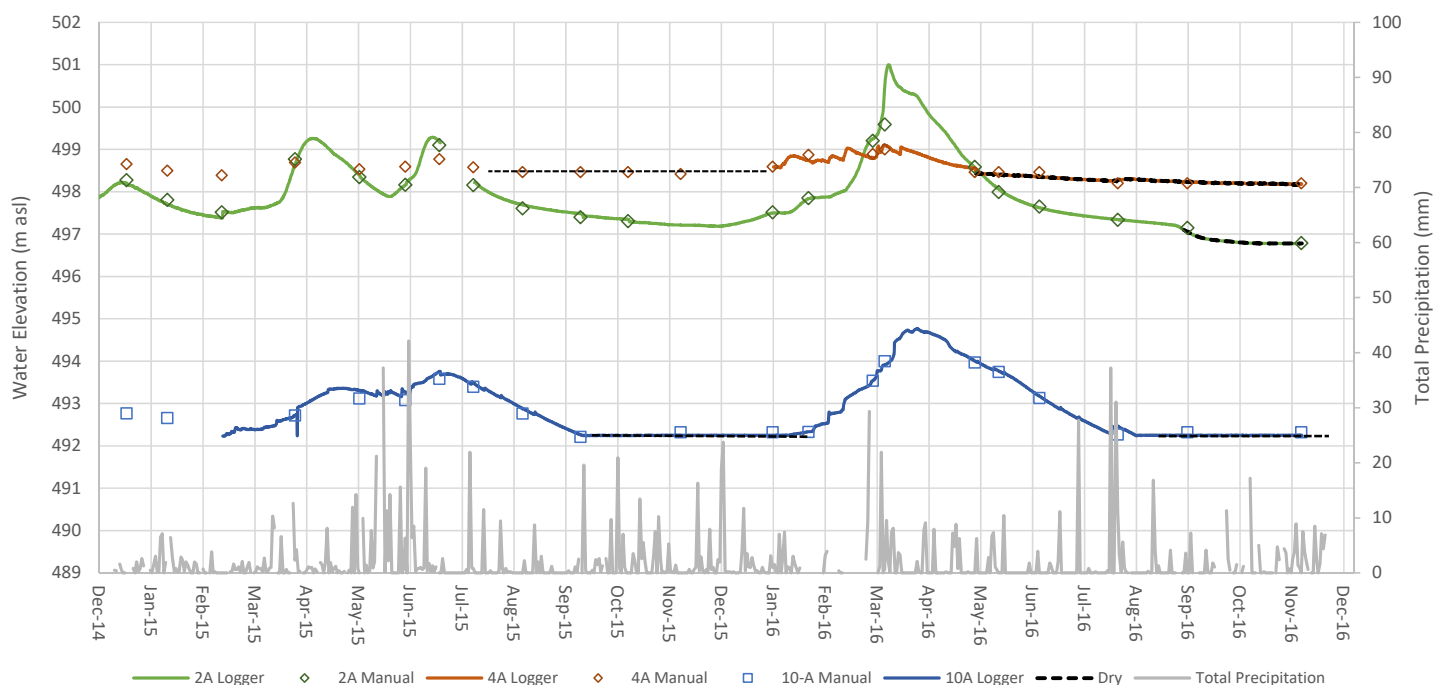
**TABLE 3: 2016 MANUAL GROUNDWATER ELEVATIONS**

Well ID	27-Jan	17-Feb	26-Mar	2-Apr	25-May	8-Jun	2-Jul	17-Aug	27-Sep	16-Oct	13-Nov	3-Dec
OW2-A	497.52	497.85	499.20	499.59	498.59	497.99	497.65	497.34	497.15	<496.79	<496.79	<496.79
OW2-B	496.23	496.77	498.61	500.22	497.44	496.45	495.67	495.07	494.66	494.49	494.32	494.47
OW2-C	494.22	494.74	496.14	496.89	495.58	494.59	494.15	493.48	493.27	492.90	492.80	492.70
OW3-A	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5	<498.5
OW3-B	490.19	490.99	492.48	493.31	492.19	491.91	491.00	489.84	489.84	489.84	489.84	489.84
OW4-A	498.59	498.87	498.89	499.00	498.46	<498.4	<498.4	<498.4	<498.4	<498.4	<498.4	<498.4
OW4-B	498.28	498.46	498.61	498.93	498.14	498.12	497.95	498.00	497.93	497.94	497.93	497.93
OW4-C	491.49	492.16	493.38	494.40	493.00	492.55	491.89	491.00	490.41	490.26	490.23	490.21
OW5-A	489.95	490.38	491.02	491.13	490.79	490.52	490.31	490.00	489.49	489.42	489.36	489.32
OW5-B	491.12	491.92	493.05	493.91	492.63	492.25	491.90	490.80	489.98	489.89	489.60	489.46
OW5-C	491.09	491.82	492.90	493.71	492.49	492.11	491.48	490.71	489.97	489.84	489.57	489.42
OW6-A	491.64	492.00	492.70	493.36	493.29	492.80	492.27	491.64	491.26	491.10	490.99	490.93
OW7-A	490.05	490.44	491.14	491.30	491.30	490.98	490.61	490.00	489.73	489.62	489.36	489.25
OW7-C	489.77	490.45	491.54	492.36	491.29	490.72	490.23	489.38	488.83	488.58	488.33	488.17
OW8-A	492.62	492.76	493.15	493.36	493.33	493.26	493.13	492.37	492.43	492.35	492.24	492.22
OW8-B	489.47	490.03	491.07	491.65	491.05	490.59	490.32	489.34	488.92	488.63	488.44	488.31
OW9-A	491.74	492.05	492.90	493.59	493.58	493.27	492.91	492.37	491.76	491.76	491.55	491.44
OW10A	492.32	492.33	493.54	494.00	493.97	493.75	493.13	<492.2	<492.2	<492.2	<492.2	<492.2
OW10B	488.39	488.95	490.09	490.97	490.19	489.56	489.00	488.23	487.60	487.28	487.05	486.98
OW11-A	4.80	4.08	2.80	2.00	3.34	3.70	4.20	5.22	5.86	6.08	6.31	6.53
OW11-C	4.79	4.07	2.89	2.55	3.26	3.69	4.20	5.19	5.83	6.06	6.28	6.54
OW12-A	492.06	492.32	492.70	492.73	492.81	492.70	492.62	492.26	491.92	491.76	491.61	491.66
OW13-A	497.31	497.21	497.39	497.57	497.35	497.37	497.33	497.29	497.24	497.22	497.15	497.14

Note: OW11 has not been geodetically surveyed

### 2.2.1 Overburden Groundwater Levels

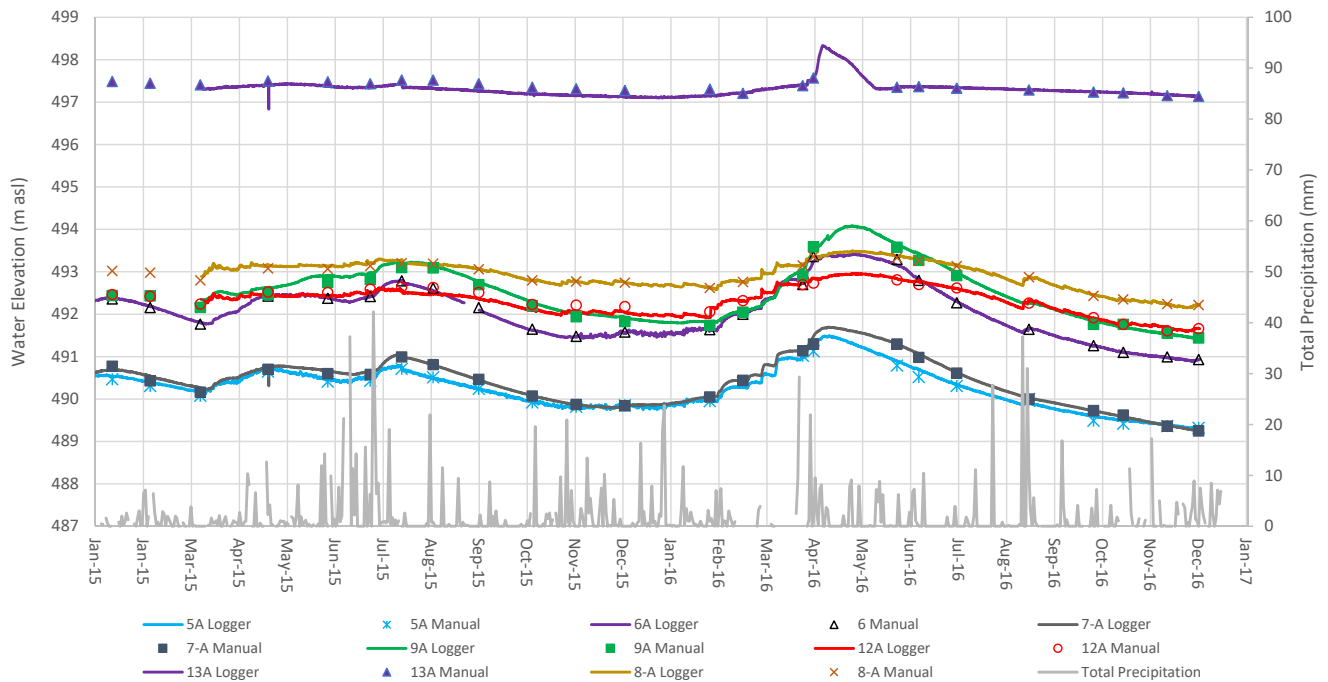
There are 12 shallow groundwater monitoring wells across the Shelburne Pit to measure the water table conditions in the sand and gravel aquifer, where present. At three locations, the water table is generally found beneath the sand and gravel unit (in the underlying till or bedrock formation). OW3-A has been dry since it was installed and the water level remains below an elevation of 498.5 masl in 2016. Historically, water levels have been below the base of OW4-A and OW10-A (<498.4 and <492.2 masl, respectively) with the exception of during the spring freshet period. In response to the dry weather conditions. In 2016, the water level at OW2-A dropped below the base of the well screen (<496.78 masl) for the first time since monitoring commenced. The hydrographs for these wells are presented on Figure 3. Dry periods are lighted by the black dashed line.



**FIGURE 3: WATER TABLE ELEVATIONS (OW2-A, OW4-A, OW10-A)**

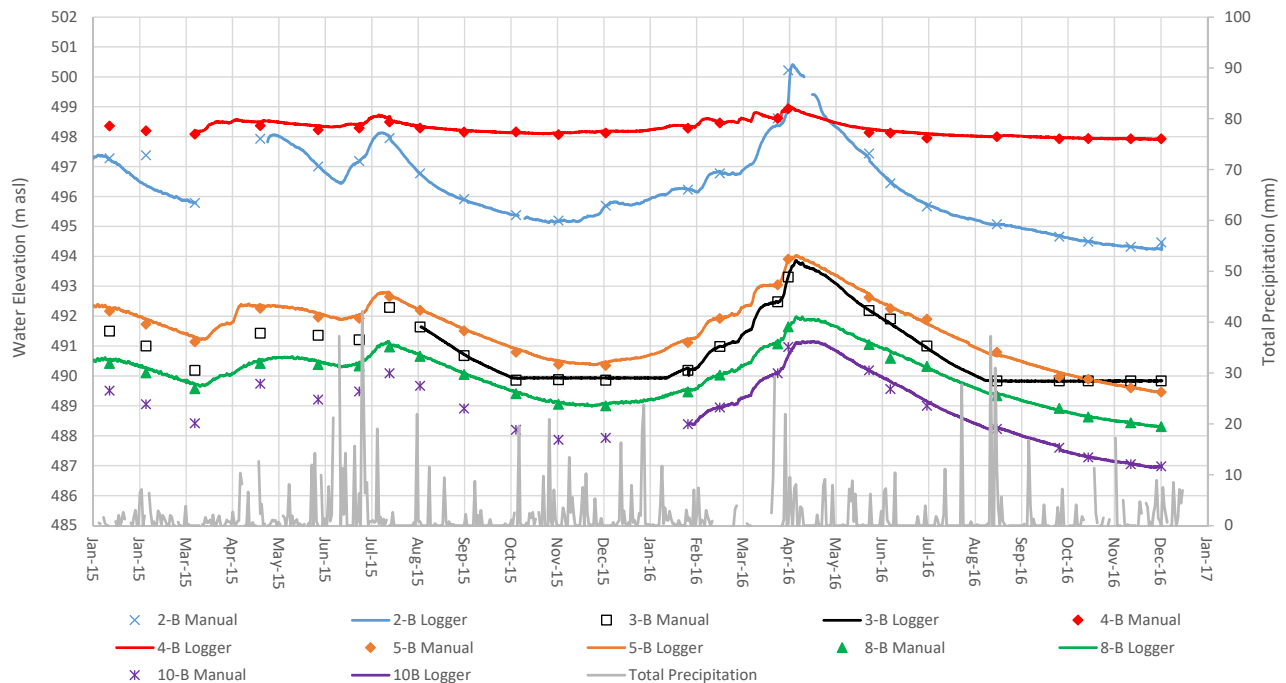
The water levels for the remaining wells are plotted on Figure 4. Seasonal groundwater fluctuations generally range between 1 and 2 m over the course of a year, with the exception of the water levels at OW8-A, OW12-A, and OW13-A, which show a muted response. The magnitude of the water fluctuation is a function of the permeability and the specific yield of the aquifer, as well as the volume of effective infiltration. The more permeable the aquifer materials allow for relatively rapid infiltration and percolation resulting in shallow hydraulic gradients.

In 2016, water levels in the sand and gravel aquifer dropped below historical norms by approximately 1 m. This decrease is attributed to the drier than average seasons, which reduced the water available for infiltration.



**FIGURE 4: WATER TABLE ELEVATIONS (SAND AND GRAVEL AQUIFER)**

Groundwater elevations for the Tavistock Till are plotted on Figure 5. Unlike the water table aquifer, groundwater in the Till unit is controlled by the glacial re-entrant valley of the Pine River. Groundwater in the Till beneath the Shelburne South Pit flows from a high of approximately 498 masl at OW4-B to the low elevation measured at OW10-B (488 masl). During the dry summer months, the water level in OW3-B drops below the base of the well screen (and into the lower bedrock unit).

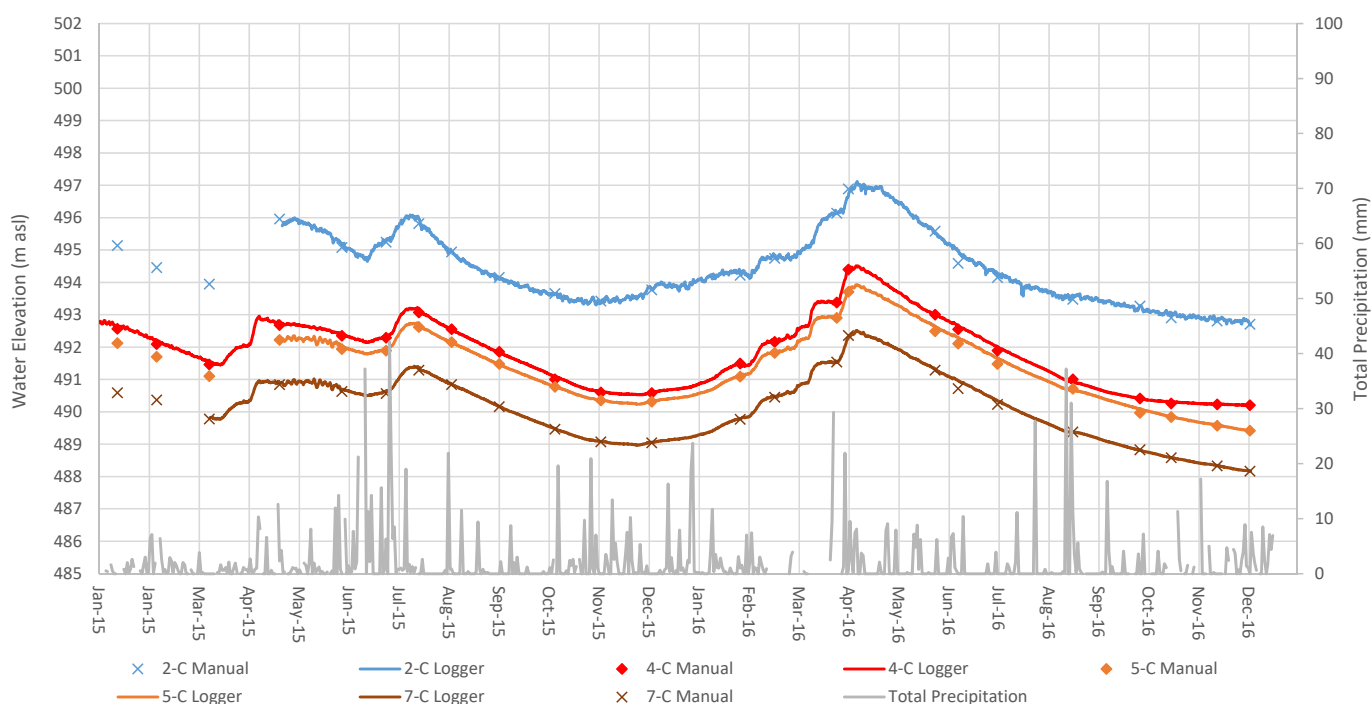


**FIGURE 5: GROUNDWATER ELEVATIONS (TAVISTOCK TILL)**

### 2.2.2 Bedrock Groundwater Elevations

The bedrock monitoring wells were constructed to monitor the water level in the upper portion of the limestone, with the exception of OW2-C. OW2-C was drilled to a total depth of 72 m, 1 m into the Cabot Head Formation. This well was constructed as an open-hole through the entire limestone sequence (i.e., Amabel and Fossil Hill Formations). In heterogeneous fractured rock aquifers, the water level in an open hole is a composite hydraulic head that represents a weighted average of hydraulic heads based upon the transmissivity of different bedding plane fractures. This composite head is typically dominated by the most permeable fracture intersecting the bedrock well. The water level in OW2-C ranges between a high of 497 masl and a low of 492.7 masl (water level range of 4.3 m)

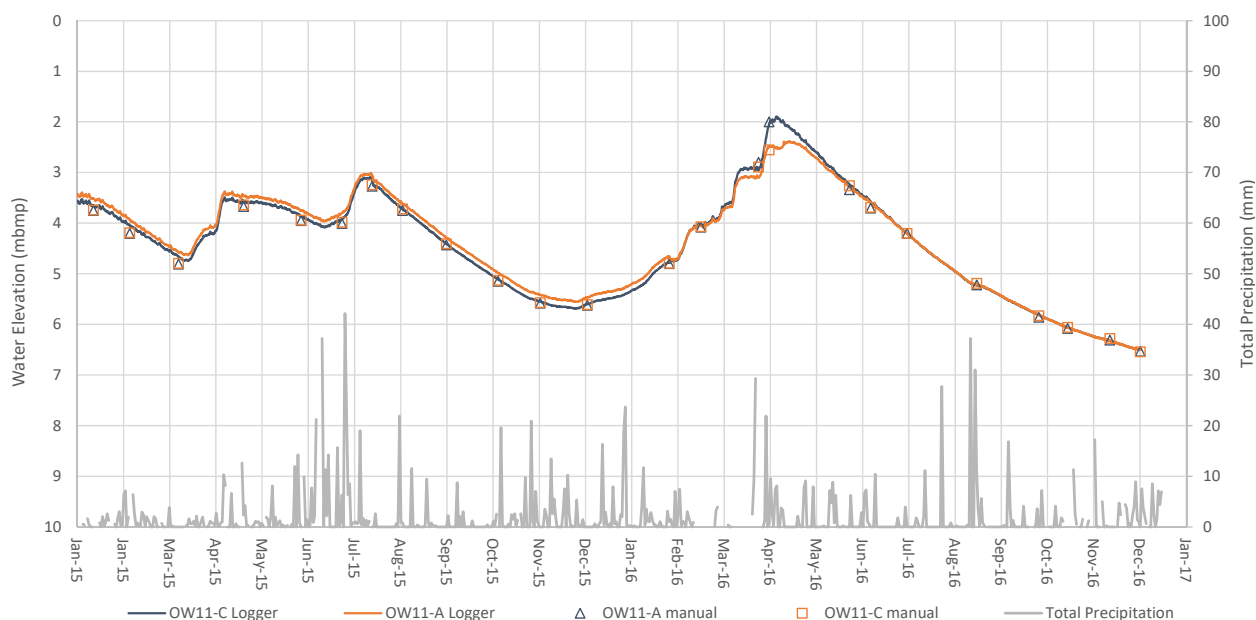
The groundwater elevation in the upper bedrock system ranges between 489 masl and 493.5 masl during the drier periods, which increases to between 491 masl and 496 masl during the wet periods of the year (spring freshet or storm events).



**FIGURE 6: GROUNDWATER ELEVATIONS (BEDROCK)**

#### 2.2.1 OW11 Well Nest

The OW11 well nest has not been geodetically surveyed. As a result, the continuous and manual water level measurements have not been included on the groundwater elevation hydrographs presented above. Water levels in OW11-A and OW11-C mimic conditions reported in the overburden and bedrock aquifers. The water level data is presented on Figure 7. Geodetic measuring point elevations will be collected in 2017 and revised water levels will be presented in the 2017 groundwater monitoring report.



**FIGURE 7: GROUNDWATER HYDROGRAPH (OW11)**

## 2.3 Groundwater Flow

The shallow groundwater pattern mimics the topographic surface. Generally groundwater in the water table aquifer flows from a high along the western property boundary towards the east and southeast (Figure 8). Groundwater elevations range from approximately 498 masl to 491 masl

## 2.4 Groundwater Quality

### 2.4.1 Groundwater Monitoring Wells

Groundwater quality sampling at the Shelburne South Pit is completed on a semi-annual basis. In 2016, the monitoring program was completed on May 12<sup>th</sup> and December 3<sup>th</sup>. Samples were collected and analyzed for general water chemistry, volatile organic compounds (VOCs) and petroleum hydrocarbons (PHC).

Groundwater samples were collected from dedicated monitoring wells following purging of at least three borehole volumes of water from each monitoring well (or until well pumped dry) using dedicated check valve pumps and tubing. Groundwater samples for inorganic analysis were also filtered using disposable 0.45 µm filters (where permissible). The samples obtained for VOC/PHC analyses were obtained from the top of the water column within the well utilizing dedicated bailers prior to any purging.

The groundwater geochemistry at the site is characterized by relatively low concentrations for most parameters. This is illustrated by the fact many inorganic parameters have a concentration that is below laboratory detection limits.

In addition to the inorganic sampling discussed above, several petroleum hydrocarbon parameters were analyzed. In the spring of 2016, the laboratory reported low level detections of F1 (less BTEX) at all monitoring locations with the exception of MW10-A, MW11-A and MW12-A. Similarly, low levels of F3 hydrocarbons were detected at MW2-C, MW4-C, MW7-C, and MW13-C. Low levels of F4 hydrocarbons were detected at MW7-C and MW11-C. OW1, MW1A, MW5A and MW5B. A review of the chromatograms by the analyst at the laboratory reported that a consistent peak in F1 is present but is not of a petroleum product. It may be

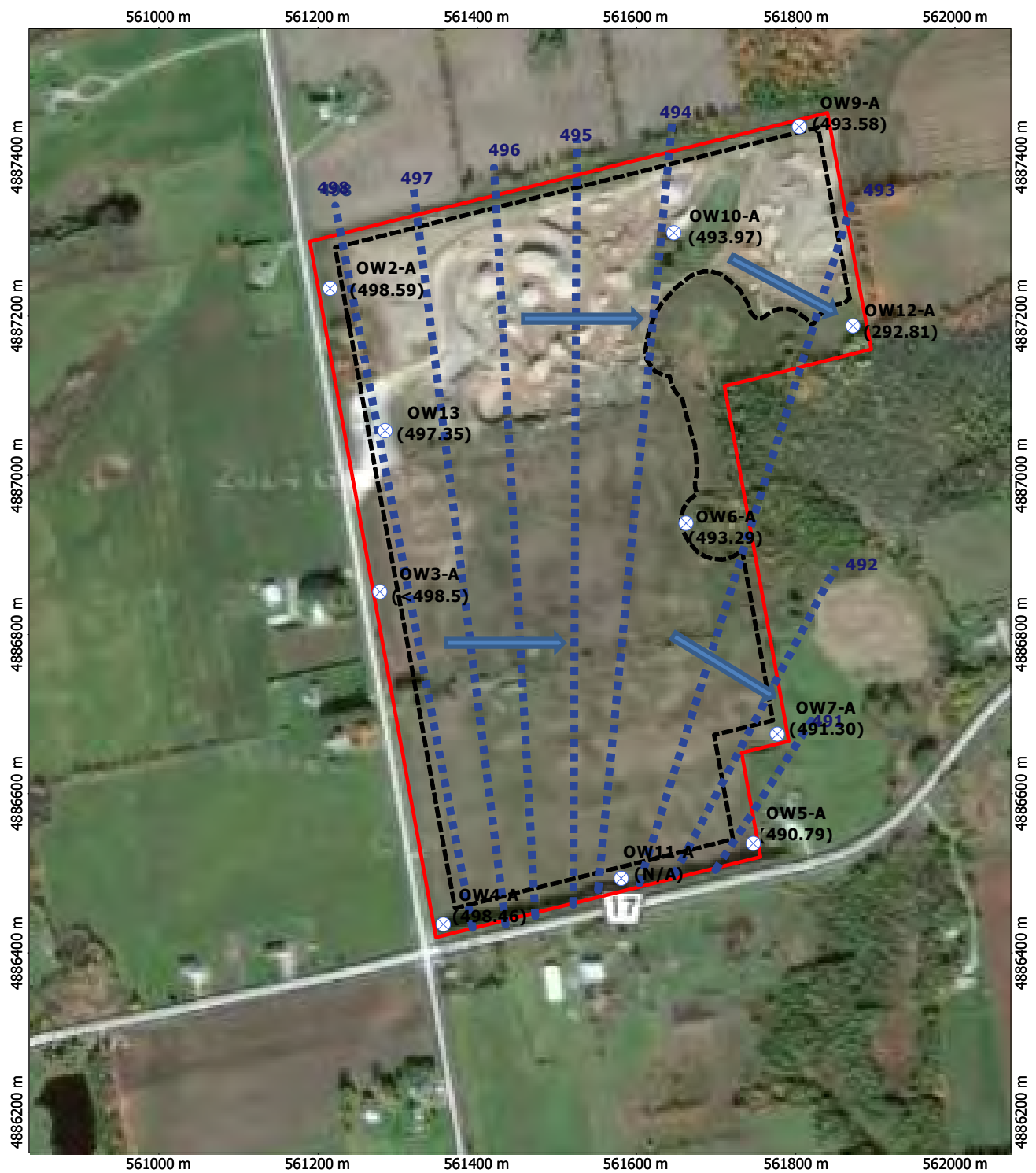


FIGURE 8: GROUNDWATER FLOW MAP (SAND AND GRAVEL AQUIFER)



contamination of vial or preservative and is a false positive hit. Furthermore, low level hits in F3 region which is typical and most likely does not indicate presence of petroleum products

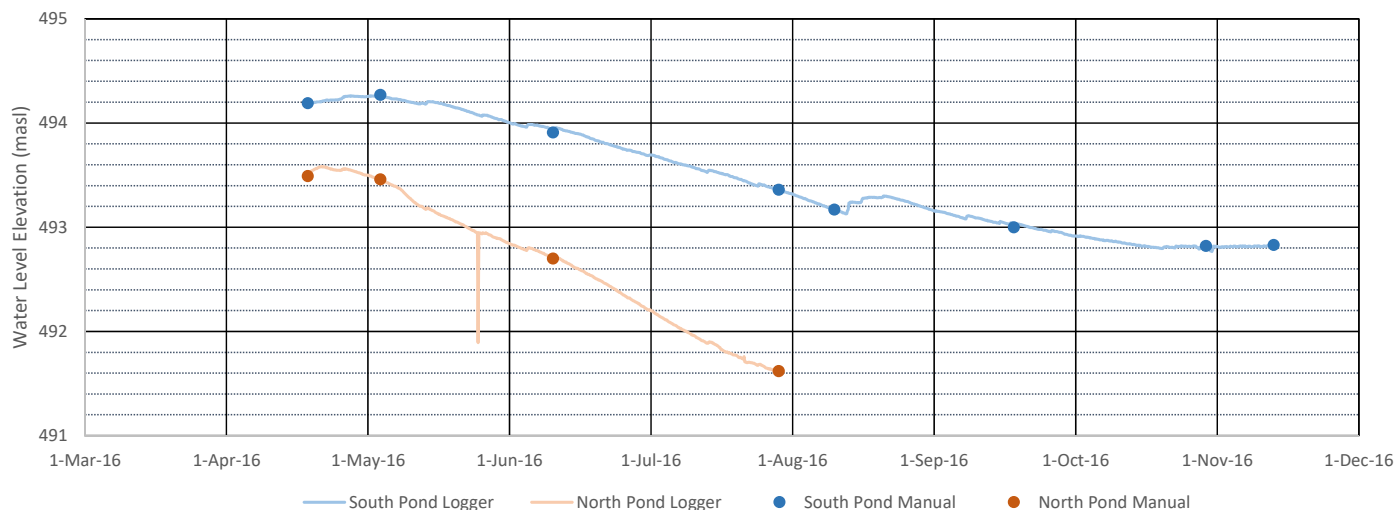
The results of the December 3, 2016 samples had detections of F3 hydrocarbons at MW7-C and F3 and F4 hydrocarbons at MW11-C. A review of the chromatograms by the analyst at the laboratory reported that a low level positives for F3 and F4 regions were typical to petroleum products. However, the samples contained sediment and organisms and did not contain a notable hydrocarbon smell. Testmark noted that F2-F4 will give positive hits for most organic matter contained in the samples and the client should not be worried about these small positive hits. Re-sampling may improve results if more care is taken to not include organic matter. Samples MW7-C and MW11-C were identified as locations that should be re-sampled.

New dedicated sampling equipment was installed in MW7-C and MW11-C and were resampled on December 22, 2016. F2-F4 petroleum hydrocarbons were not detected.

The reports presenting the results from Testmark are provided in Appendix B.

## 2.5 Surface Water Levels

Continuous water levels from two on-site ponds have been collected over the course of the study period. The data indicates that the water levels peaked in April 2016. The water level in the North Pond reached 493.2 masl, while the water level in the South Pond peaked around 493.0 masl. Both ponds have historically gone dry during periods of drought. However, in 2015 both ponds remained wet throughout the ice-free conditions. Dataloggers were removed in the late fall to limit damage to the devices.



**FIGURE 9: SURFACE WATER ELEVATIONS**

## 2.6 Surface Water Quality

Surface water quality sampling at the Shelburne South Pit is completed on a semi-annual basis (spring and fall). In 2016, the monitoring program was completed only May 25<sup>th</sup> as both surface water features were dry for the fall sampling event. Samples were collected and analyzed for general water chemistry, volatile organic compounds (VOCs) and petroleum hydrocarbons (PHC).



The surface water quality from the North and South Pond exhibits a Ca-HCO<sub>3</sub> signature. Based on Gibbs (1970) classification of surface water; surface water chemistry in closed lakes (or wetlands) is controlled by rainfall, rock weathering, and/or evaporation and fractional crystallization. The primary source of HCO<sub>3</sub> in the North Pond is the generation in the soil zone from CO<sub>2</sub>, which is carried into the pond during runoff and bank erosion. The quality of the North and South Pond is typical of fresh surface water.

In addition to the inorganic sampling discussed above, several petroleum hydrocarbon parameters were analyzed. In the spring of 2016, the laboratory reported low level detections (just at detection limit) of F3 hydrocarbons in both the North and South Pond. A review of the chromatograms by the analyst at the laboratory reported that low level hits in F3 region most likely does not indicate presence of petroleum products.

### 3.0 CONCLUSIONS AND RECOMMENDATIONS

1. The operation of the Shelburne South Pit is currently not having any measureable impacts on the groundwater regime (water quality or quantity).
2. It is recommended that the compliance monitoring program continue as stipulated on the Site Plans and in agreement with the Township of Melancthon.

## **APPENDIX A**

### **BOREHOLE LOGS**

Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-4				<p>Open Hole</p> <p>C</p> <p>B A</p>
0	508		TOP SOIL	
4	504		SILTY SAND: Brown, occasional stone, loose, dry	
8	500		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
12	496			
16	492			
20	488		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
24	484			
28	480			
32	476			
36	472			
40	468			
44	464			
48	460		AMABEL FORMATION: Dolostone, buff to white, fossiliferous	
52	456			
56	452			
60	448			
64	444			
68	440			
72	436		CABOT HEAD SHALE: Green, soft, damp	
76	432			

Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

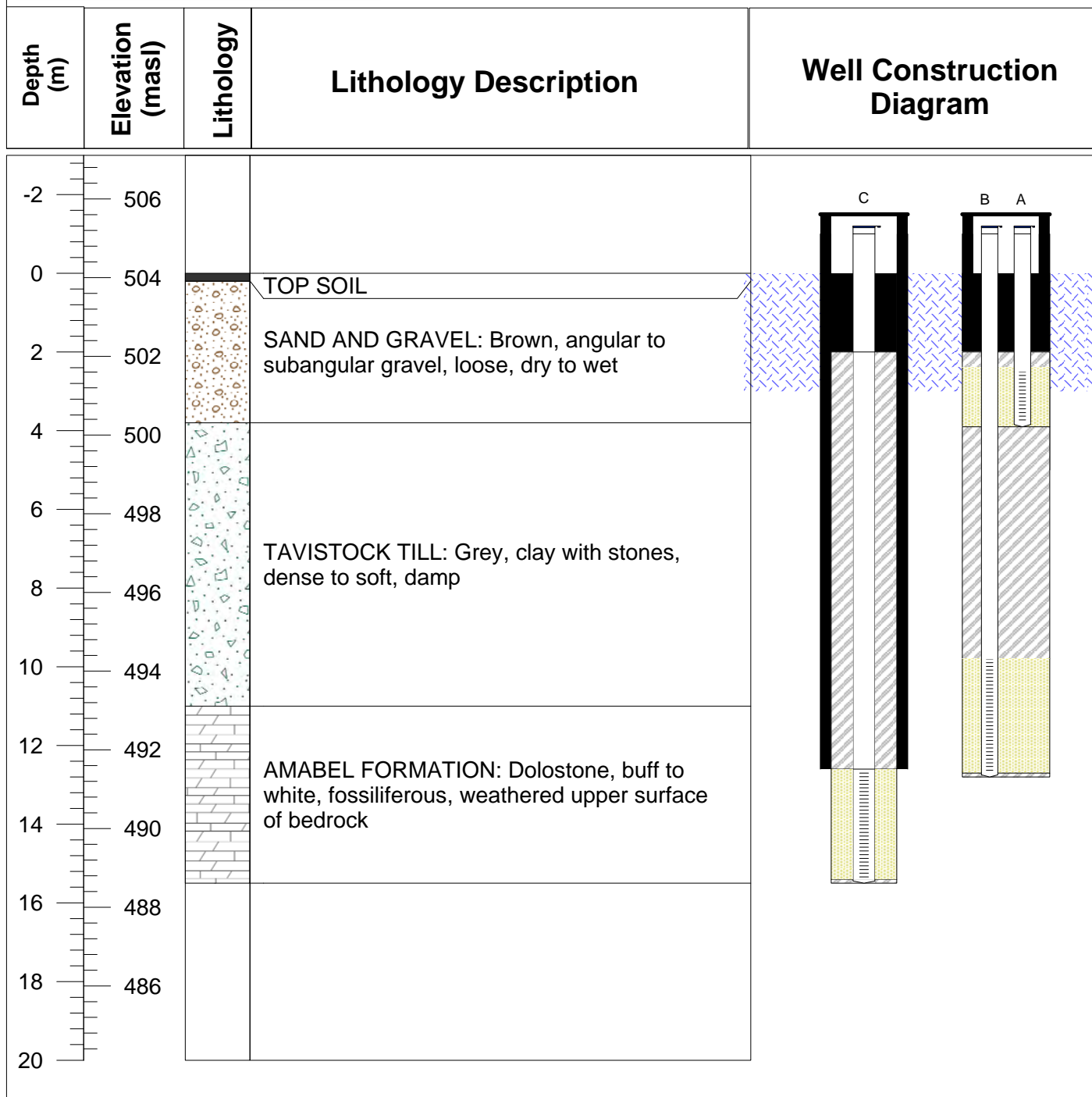
Geologist: Ken Goff / Tecia White

Location: Township of Melancthon

Easting: 561,689

Northing: 4,887,097





Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

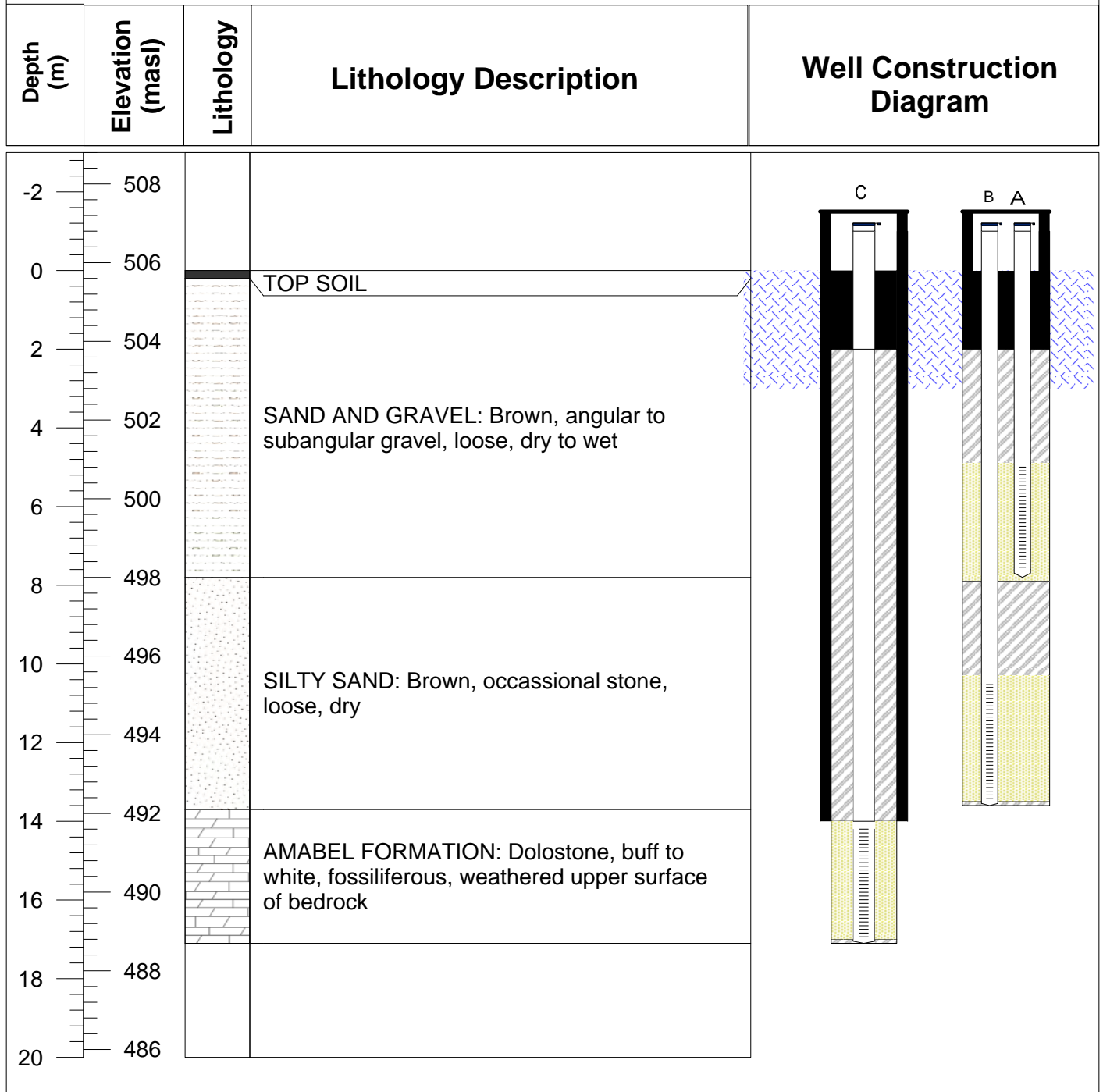
Geologist: Ken Goff / Tecia White

Location: Township of Melancthon

Easting: 561,272

Northing: 4,886,849





Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

Geologist: Ken Goff / Tecia White

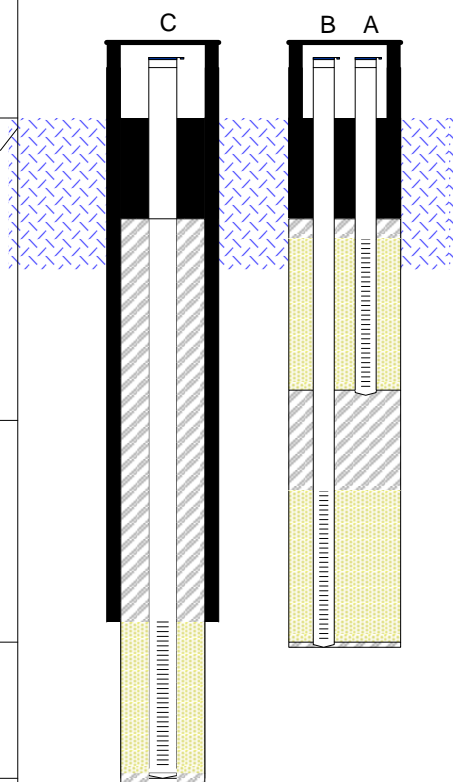
Location: Township of Melancthon

Easting: 561,313

Northing: 4,886,400



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-4				
-2	496			
0	494		TOP SOIL	
2	492		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
4	490			
6	488			
8	486		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
10	484			
12	482		AMABEL FORMATION: Dolostone, buff to white, fossiliferous, weathered upper surface of bedrock	
14	480			
16	478			
18	476			
20	474			



Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

Geologist: Ken Goff / Tecia White

Location: Township of Melancthon

Easting: 561,742

Northing: 4,886,523



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2	497			
-1	496			
0	495			
1	494		SILTY SAND: Brown, occasional stone, loose, dry	
2	493			
3	492			
4	491			
5	490		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
6	489			
7	488			
8	487			
9	486			
10	485			
11	484			
12	483			

Drilling Date: Jun-15

Drilling Company: Keith Lang Drilling

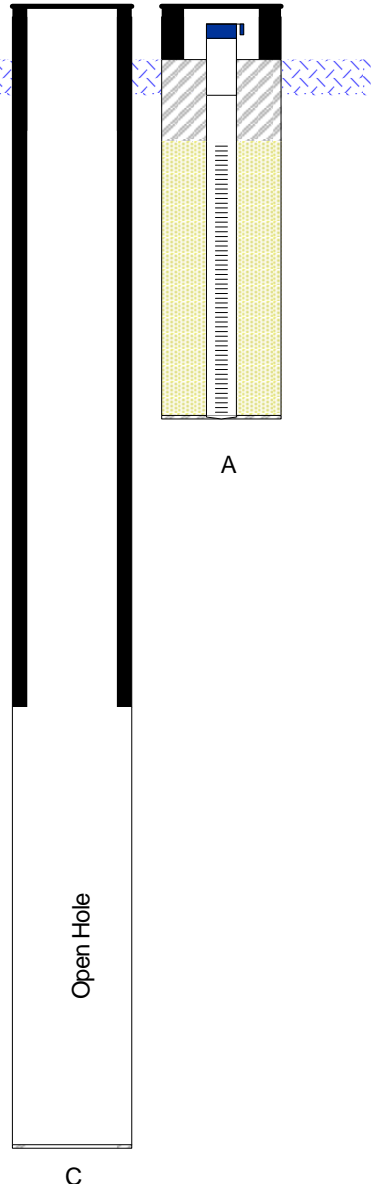
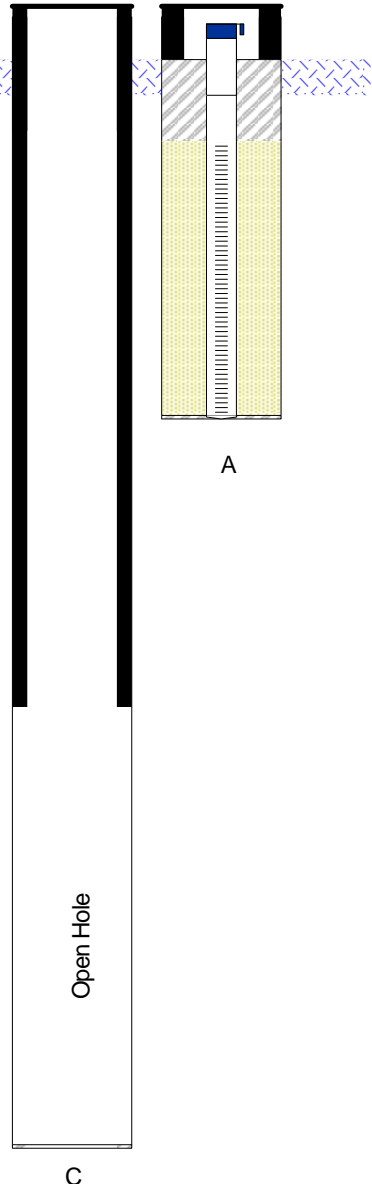
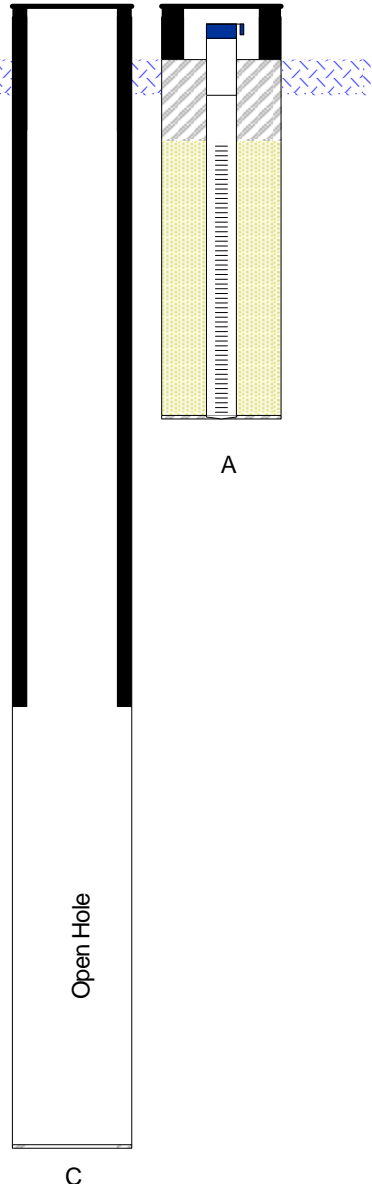
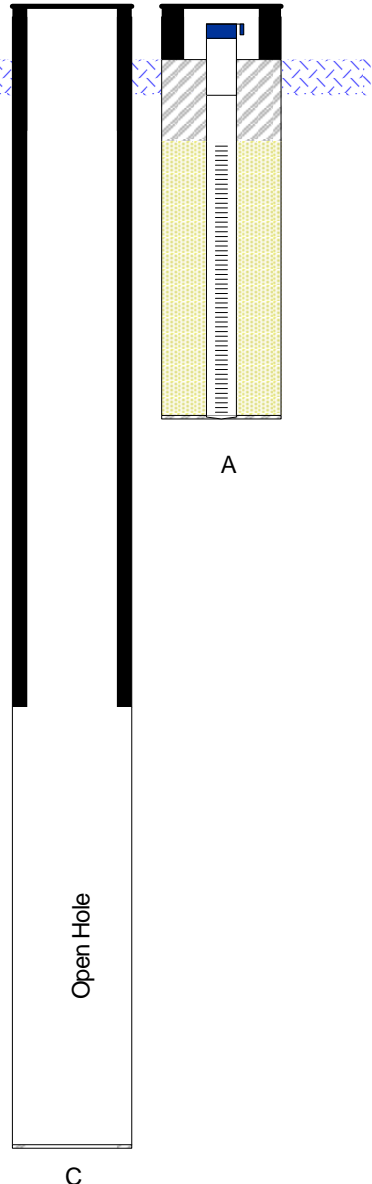
Geologist: Tecia White

Location: Township of Melancthon

Easting: 561,660

Northing: 4,886,939



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2	-2			
0	0			
2	2		SILTY SAND: Brown, occasional stone, loose, dry	
4	4			
6	6		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
8	8			
10	10			
12	12		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
14	14			
16	16			
18	18			
20	20			
22	22			
24	24		AMABEL FORMATION: Dolostone, buff to white, fossiliferous, weathered upper surface of bedrock	
26	26			
28	28			
30	30			
32	32			

Drilling Date: Jun-15

Drilling Company: Keith Lang Drilling

Geologist: Tecia White

Location: Township of Melancthon

Easting:

Northing:





Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2	498			
0	496	TOP SOIL		
2	494			
4	492		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
6	490			
8	488			
10	486			
12	484			
14	482		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
16	480			
18	478			
20	476			
22	474		AMABEL FORMATION: Dolostone, buff to white, fossiliferous, weathered upper surface of bedrock	
24	472			

Drilling Date: Jun-15

Drilling Company: Lantech Drilling Services

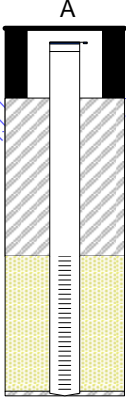
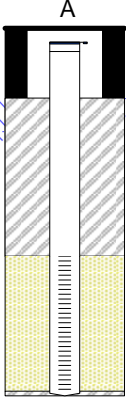
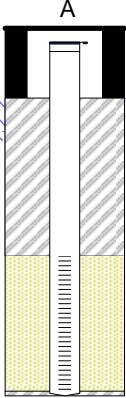
Geologist: Tecia White

Location: Township of Melancthon

Easting: 561,881

Northing: 4,887,192



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2	498			
0	496			
2	494			
4	492			
6	490			
8	488			
10	486			
12	484			
14	482			
16	480			
18	478			
20	476			
22				

Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

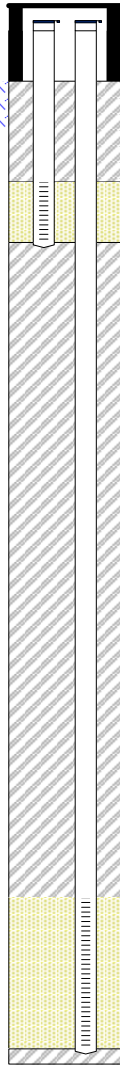
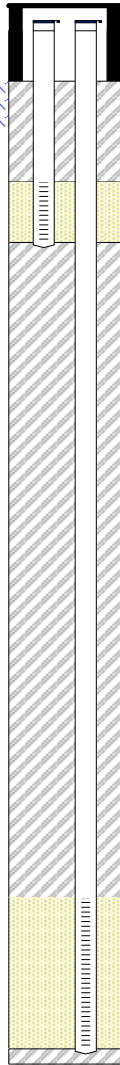
Geologist: Ken Goff / Tecia White

Location: Township of Melancthon

Easting: 561,806

Northing: 4,887,468



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2	496			
0	494		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
2	492			
4	490		SILTY CLAY: Brown, compact, moist	
6	488			
8	486		SILTY SAND: Brown, occasional stone, loose, dry	
10	484			
12	482			
14	480		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
16	478			
18	476			
20	474		AMABEL FORMATION: Dolostone, buff to white, fossiliferous, weathered upper surface of bedrock	
22				

Drilling Date: March 2007 / April 2008

Drilling Company: Keith Lang Drilling

Geologist: Ken Goff / Tecia White

Location: Township of Melancthon

Easting: 561,628

Northing: 4,887,239



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
2	2			
0	0			
-2	-2		SILTY SAND: Brown, occasional stone, loose, dry	
-4	-4		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
-6	-6			
-8	-8		TAVISTOCK TILL: Grey, clay with stones, dense to soft, damp	
-10	-10			
-12	-12		AMABEL FORMATION: Dolostone, buff to white, fossiliferous, weathered upper surface of bedrock	
-14	-14			
-16	-16			
-18	-18			
-20	-20			

Drilling Date: Jun-15

Drilling Company: Keith Lang Drilling

Geologist: Tecia White

Location: Township of Melancthon

Easting:

Northing:



Depth (m)	Elevation (masl)	Lithology	Lithology Description	Well Construction Diagram
-2				
-1	507			
0	506			
1	505		SILTY SAND: Brown, occasional stone, loose, dry	
2	504			
3	503			
4	502			
5	501			
6	500			
7	499		SAND AND GRAVEL: Brown, angular to subangular gravel, loose, dry to wet	
8	498			
9	497			
10	496			
11	495			
12	494			
13	493			

Drilling Date: Jun-15

Drilling Company: Lantech Drilling Services

Geologist: Tecia White

Location: Township of Melancthon

Easting: 561,282

Northing: 4,887,057



## **APPENDIX B**

### **WATER QUALITY RESULTS**

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 270328  
PO #:  
Regulation: Information not provided  
Project #: shelburne Pit South  
DWS #:  
Sampled By:

Date Order Received: 4/14/2016  
Arrival Temperature: 9.8 °C

Analysis Started: 4/14/2016  
Analysis Completed: 4/21/2016

**WORK ORDER SUMMARY**

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
2-A	711111	Ground Water	None		4/12/2016	
2-B	711112	Ground Water	None		4/12/2016	
2-C	711113	Ground Water	None		4/12/2016	
13-A	711114	Ground Water	None		4/12/2016	
4-A	711115	Ground Water	None		4/11/2016	
4-B	711116	Ground Water	None		4/11/2016	
4-C	711117	Ground Water	None		4/11/2016	
5-A	711118	Ground Water	None		4/11/2016	
5-B	711119	Ground Water	None		4/11/2016	
6-A	711120	Ground Water	None		4/11/2016	
7-A	711121	Ground Water	None		4/11/2016	
7-C	711122	Ground Water	None		4/11/2016	
8-A	711123	Ground Water	None		4/11/2016	
10-A	711124	Ground Water	None		4/11/2016	
11-A	711125	Ground Water	None		4/11/2016	
11-C	711126	Ground Water	None		4/11/2016	
12-A	711127	Ground Water	None		4/11/2016	

**METHODS AND INSTRUMENTATION**

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
A26-Colour	Mississauga	Determination of Colour by Spectrophotometry	Modified from APHA-2120C
A42-Ammonia Water	Mississauga	Determination of Ammonia/Ammonium in Water	Modified from APHA-4500-NH3
A55-TOC Water	Mississauga	Determination of Total Organic Carbon in Water	Modified from APHA-5310
OP Water	Garson	Determination of Ortho-Phosphate in Water	Based on APHA-4500P
PHC F2-F4 Water	Garson	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME
T01-Alkalinity	Mississauga	Determination of Alkalinity in Water	Modified from APHA-2320
T02-pH Water	Mississauga	Determination of pH in Water	Modified from APHA-4500-H+B
T05-Anions Water	Mississauga	Determination of Anions by Ion Chromatography	Modified from SW846-9056
T12-Cond Water	Mississauga	Determination of Conductivity in Water	Modified from APHA-2510
T127-BTEX Water	Mississauga	Determination of BTEX in Water by Headspace GC/MS	Modified from EPA 624
T13-Hardness	Mississauga	Determination of Total Hardness	Modified from APHA-2340B
T13-ICPMS Dis Water FF	Mississauga	Determination of Dissolved (Field Filtered) Metals in Water by ICPMS	Modified from SW846-6020
T13-ICPMS Water	Mississauga	Determination of Metals in Water by ICPMS	Modified from SW846-6020
T21-Turbidity	Mississauga	Determination of Turbidity by Nephelometry	Modified from APHA-2130 B
T27-TDS	Mississauga	Determination of Total Dissolved Solids in water by gravimetry	Modified from APHA-2540
T94-Carbonate	Mississauga	Determination of Carbonate and Bi-Carbonate	Based on APHA-2330
TP Water	Garson	Determination of Total Phosphorus in Water	Based on APHA-4500P
VOC Water	Garson	Determination of Volatile Organic Compounds in Water by P&T/GC/MS	Based on EPA 624

**REPORT COMMENTS**

Report revised as the F1 data was reassessed and determined to be non-detect. 20160503 BWH.  
For Ammonia samples 711112,711113,711115,711116,711118,711119,711120,711121,711123 and 711124 were filtered to prevent turbidity interference. BMB 05/03/2016

This report has been approved by:

Mark Charbonneau, Ph.D.  
Laboratory Director



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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

**WORK ORDER RESULTS**

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	5.22	0.05	14.6	0.05	1.23	0.05	15.3	0.05	mg/L
Fluoride	1.21	0.05	<0.05	0.05	0.55	0.05	<0.05	0.05	mg/L
Nitrate (as N)	1.19	0.02	4.54	0.02	<0.02	0.02	5.79	0.02	mg/L
Nitrite (as N)	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	8.26	0.05	6.55	0.05	1.82	0.05	9.27	0.05	mg/L

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	6.33	0.05	25.9	0.05	35.2	0.05	4.51	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Nitrate (as N)	1.64	0.02	5.52	0.02	4.04	0.02	4.82	0.02	mg/L
Nitrite (as N)	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	6.56	0.05	15.8	0.05	14.4	0.05	8.94	0.05	mg/L

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	61	0.05	5.5	0.05	6.62	0.05	2.44	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	3.93	0.02	2.26	0.02	4.61	0.02	<0.02	0.02	mg/L
Nitrite (as N)	<0.02	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	10.9	0.05	7.61	0.05	10.2	0.05	1.52	0.05	mg/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Chloride	1.21	0.05	7.31	0.05	17.4	0.05	52	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	<0.05	0.05	0.93	0.05	mg/L
Nitrate (as N)	4.77	0.02	3.85	0.02	3.93	0.02	<0.02	0.02	mg/L
Nitrite (as N)	0.16	0.02	<0.02	0.02	<0.02	0.02	<0.02	0.02	mg/L
Phosphate	<0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05	0.05	mg/L
Sulphate	4.44	0.05	6.29	0.05	11	0.05	<0.05	0.05	mg/L

Sample Description	12 - A		
Lab ID	711127		
Anions	Result	MDL	Units
Bromide	<0.05	0.05	mg/L
Chloride	0.53	0.05	mg/L
Fluoride	<0.05	0.05	mg/L
Nitrate (as N)	0.766	0.02	mg/L
Nitrite (as N)	0.17	0.02	mg/L
Phosphate	<0.05	0.05	mg/L
Sulphate	3.49	0.05	mg/L

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Work Order Number: 270328

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	100	N/A	99	N/A	98	N/A	99	N/A	ug/L
Benzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	20	5	37	5	20	5	9	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Toluene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	0.6	0.4	ug/L
undecane (Surr)	120	N/A	130	N/A	130	N/A	130	N/A	ug/L

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	98	N/A	95 [96]	N/A	96	N/A	97	N/A	ug/L
Benzene	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	61	5	20 [20]	5	32	5	35	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10 [<10]	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L
Toluene	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	<0.4 [<0.4]	0.4	<0.4	0.4	<0.4	0.4	ug/L

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Work Order Number: 270328

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
undecane (Surr)	110	N/A	140 [130]	N/A	130	N/A	130	N/A	ug/L

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	96	N/A	95	N/A	97	N/A	96	N/A	ug/L
Benzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	20	5	66.3	5	43	5	20	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Toluene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	0.7	0.4	<0.4	0.4	<0.4	0.4	ug/L
undecane (Surr)	130	N/A	92	N/A	140	N/A	140	N/A	ug/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	86	N/A	86	N/A	87	N/A	88	N/A	ug/L
Benzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	<5	5	<5	5	<5	5	41	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	<10	10	<10	10	<10	10	ug/L
m+p-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L

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Work Order Number: 270328

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
BTEX	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Toluene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
undecane (Surr)	140	N/A	130	N/A	140	N/A	140	N/A	ug/L

Sample Description	12 - A		
Lab ID	711127		
BTEX	Result	MDL	Units
1,4-dichlorobenzene-d4 (Surr)	89	N/A	ug/L
Benzene	<0.4	0.4	ug/L
Ethylbenzene	<0.4	0.4	ug/L
F1 (C6-C10) - Less BTEX	<5	5	ug/L
F1 (C6-C10) Incl. BTEX	<10	10	ug/L
m+p-Xylene	<0.4	0.4	ug/L
o-Xylene	<0.4	0.4	ug/L
Toluene	<0.4	0.4	ug/L
Total Xylenes	<0.4	0.4	ug/L
undecane (Surr)	140	N/A	ug/L

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.312	0.01	0.173	0.01	0.172	0.01	0.214	0.01	mg/L
Bicarbonate	270	1	387	1	86.7	1	319	1	mg/L
Carbonate	3	1	3.6	1	8.1	1	2	1	mg/L
Conductivity	459.3	1	725.1 [720.3]	1	171.4	1	556.2	1	µS/cm

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
M-Alkalinity (pH 4.5)	273	2	391 [441]	2	95.3	2	321	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.043	0.005	0.027	0.005	<0.005	0.005	0.0525	0.005	mg/L
P-Alkalinity (pH 8.3)	<2	2	<2 [<2]	2	<2	2	<2	2	mg/L as CaCO <sub>3</sub>
pH	8	N/A	8 [7.9]	N/A	9	N/A	7.8	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	185	0.1	387	0.1	40.8	0.1	290	0.1	mg/L
Total Organic Carbon	0.8	0.4	1.3	0.4	0.6	0.4	1.4	0.4	mg/L
Total Phosphorus (as P)	0.133	0.002	0.161	0.002	0.0074	0.002	1.56	0.02	mg/L
True Colour	<1	1	<1	1	<1	1	<1	1	TCU
Turbidity	86	0.1	135	0.1	57	0.1	1600	1	NTU

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	mg/L
Bicarbonate	541	1	349	1	304	1	288	1	mg/L
Carbonate	4	1	3	1	3	1	3	1	mg/L
Conductivity	497.4	1	647.3	1	643.1	1	502.6	1	µS/cm
M-Alkalinity (pH 4.5)	545	2	352	2	307	2	291	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.034	0.005	0.042	0.005	0.021	0.005	0.017	0.005	mg/L
P-Alkalinity (pH 8.3)	<2	2	<2	2	<2	2	<2	2	mg/L as CaCO <sub>3</sub>
pH	7.9	N/A	7.9	N/A	8	N/A	8	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	243	0.1	285	0.1	272	0.1	214	0.1	mg/L
Total Organic Carbon	1.7	0.4	1	0.4	1.9	0.4	1.3	0.4	mg/L
Total Phosphorus (as P)	0.0757	0.002	0.458	0.002	0.0329	0.002	0.638	0.002	mg/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
True Colour	<1	1	<1	1	<1	1	<1	1	TCU
Turbidity	450	1	690	1	28	0.1	900	1	NTU

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	<0.01	0.01	<0.01	0.01	<0.01	0.01	mg/L
Bicarbonate	385	1	282	1	293	1	111	1	mg/L
Carbonate	3.6	1	3.3	1	3	1	1	1	mg/L
Conductivity	762.6	1	418.5	1	498	1	206.2	1	µS/cm
M-Alkalinity (pH 4.5)	389	2	285	2	296	2	112	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.019	0.005	0.022	0.005	0.025	0.005	<0.005	0.005	mg/L
P-Alkalinity (pH 8.3)	<2	2	<2	2	<2	2	<2	2	mg/L as CaCO <sub>3</sub>
pH	8	N/A	8.1	N/A	8	N/A	8.1	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	313	0.1	195	0.1	229	0.1	89.7	0.1	mg/L
Total Organic Carbon	1.9	0.4	0.9	0.4	1	0.4	1.3	0.4	mg/L
Total Phosphorus (as P)	0.18	0.002	0.518	0.002	1.3	0.01	0.0085	0.002	mg/L
True Colour	1	1	2	1	<1	1	<1	1	TCU
Turbidity	1210	1	440	1	1050	1	50.5	0.1	NTU

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	<0.01	0.01	0.133	0.01	0.98	0.01	mg/L
Bicarbonate	263	1	246	1	322	1	94.5	1	mg/L
Carbonate	3.1	1	3	1	2	1	1	1	mg/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Conductivity	447	1	459.5	1	788.1	1	323.4	1	µS/cm
M-Alkalinity (pH 4.5)	266	2	249	2	324	2	95.7	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.0644	0.005	0.0599	0.005	0.025 [0.028]	0.005	<0.005	0.005	mg/L
P-Alkalinity (pH 8.3)	<2	2	<2	2	<2	2	<2	2	mg/L as CaCO <sub>3</sub>
pH	8.1	N/A	8.1	N/A	7.9	N/A	8.1	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	197	0.1	203	0.1	285	0.1	95.3	0.1	mg/L
Total Organic Carbon	1.3	0.4	1	0.4	1.4	0.4	8.93 [9.2]	0.4	mg/L
Total Phosphorus (as P)	0.43	0.002	0.175	0.002	0.0899	0.002	0.005	0.002	mg/L
True Colour	<1	1	<1	1	<1	1	<1	1	TCU
Turbidity	445	1	111	0.1	40	0.1	52	0.1	NTU

Sample Description	12 - A		
Lab ID	711127		
General Chemistry	Result	MDL	Units
Ammonia (as N)	<0.01	0.01	mg/L
Bicarbonate	199	1	mg/L
Carbonate	2	1	mg/L
Conductivity	336.3 [337.2]	1	µS/cm
M-Alkalinity (pH 4.5)	201 [199]	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.01	0.005	mg/L
pH	8 [8]	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	146	0.1	mg/L
Total Organic Carbon	3	0.4	mg/L
Total Phosphorus (as P)	17.8	0.2	mg/L



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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A
Lab ID	711127

General Chemistry	Result	MDL	Units
True Colour	<1 [<1]	1	TCU
Turbidity	1730	1	NTU

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	44000	50	113000	50	3010	50	72800	50	ug/L
Magnesium	18200	4	25500	4	8080	4	26400	4	ug/L

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	73500	50	82700	50	73900	50	66200	50	ug/L
Magnesium	14400	4	19000	4	21300	4	11900	4	ug/L

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	88100	50	57700	50	68900	50	11200	50	ug/L
Magnesium	22500	4	12300	4	13900	4	15000	4	ug/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Calcium	63200	50	65500	50	82500	50	10800	50	ug/L
Magnesium	9440	4	9600	4	19200	4	16600	4	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Metals	Result	MDL	Units
Calcium	50900	50	ug/L
Magnesium	4500	4	ug/L

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	2	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	46.8	1	139	1	<1	1	81.1	1	ug/L
Dissolved Boron	196	2	4	2	106	2	<2	2	ug/L
Dissolved Calcium	44000	50	113000	50	3010	50	72800	50	ug/L
Dissolved Copper	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Iron	<20	20	<20	20	120	20	<20	20	ug/L
Dissolved Magnesium	18200	4	25500	4	8080	4	26400	4	ug/L
Dissolved Manganese	3.9	1	<1	1	7.6	1	<1	1	ug/L
Dissolved Molybdenum	11.6	1	<1	1	3	1	<1	1	ug/L
Dissolved Nickel	1	1	2	1	2	1	2	1	ug/L
Dissolved Potassium	3480	100	2090	100	1260	100	850	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	26000	100	6380	100	24000	100	3140	100	ug/L
Dissolved Tin	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Zinc	8.7	1	7.8	1	11.2	1	4.4	1	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	4 - A 711115		4 - B 711116		4 - C 711117		5 - A 711118		
Lab ID									
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	2 [<2]	2	<2	2	<2	2	5	2	ug/L
Dissolved Antimony	<0.5 [<0.5]	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1 [<1]	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	25.9 [26.5]	1	56.9	1	42.5	1	50.9	1	ug/L
Dissolved Boron	<2 [<2]	2	<2	2	<2	2	<2	2	ug/L
Dissolved Calcium	73500 [64400]	50	82700	50	73900	50	66200	50	ug/L
Dissolved Copper	<1 [<1]	1	<1	1	2	1	1	1	ug/L
Dissolved Iron	<20 [<20]	20	<20	20	<20	20	<20	20	ug/L
Dissolved Magnesium	14400 [12900]	4	19000	4	21300	4	11900	4	ug/L
Dissolved Manganese	<1 [<1]	1	<1	1	<1	1	<1	1	ug/L
Dissolved Molybdenum	<1 [<1]	1	<1	1	<1	1	<1	1	ug/L
Dissolved Nickel	2 [2]	1	2	1	2	1	2	1	ug/L
Dissolved Potassium	1620 [1430]	100	740	100	700	100	4720	100	ug/L
Dissolved Selenium	<1 [<1]	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1 [<0.1]	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	6090 [5550]	100	12300	100	16000	100	2480	100	ug/L
Dissolved Tin	10.1 [<1]	1	<1	1	4.6	1	<1	1	ug/L
Dissolved Zinc	2 [1]	1	2	1	17.2	1	2	1	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	13	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	48.6	1	64.9	1	64.2	1	4.4	1	ug/L
Dissolved Boron	<2	2	<2	2	<2	2	7.3	2	ug/L
Dissolved Calcium	88100	50	57700	50	68900	50	11200	50	ug/L
Dissolved Copper	1	1	<1	1	1	1	<1	1	ug/L
Dissolved Iron	<20	20	20	20	30	20	677	20	ug/L
Dissolved Magnesium	22500	4	12300	4	13900	4	15000	4	ug/L
Dissolved Manganese	<1	1	9.5	1	3.3	1	379	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	<1	1	6	1	ug/L
Dissolved Nickel	2	1	2	1	2	1	1	1	ug/L
Dissolved Potassium	2410	100	2910	100	1270	100	670	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	30100	100	2620	100	2520	100	2690	100	ug/L
Dissolved Tin	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Zinc	27	1	2	1	2	1	<1	1	ug/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	20.2	1	36.6	1	49.2	1	9.1	1	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Boron	<2	2	<2	2	<2	2	7.8	2	ug/L
Dissolved Calcium	63200	50	65500	50	82500	50	10800	50	ug/L
Dissolved Copper	<1	1	<1	1	1	1	<1	1	ug/L
Dissolved Iron	<20	20	<20	20	<20	20	312	20	ug/L
Dissolved Magnesium	9440	4	9600	4	19200	4	16600	4	ug/L
Dissolved Manganese	3	1	<1	1	<1	1	179	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	<1	1	7.2	1	ug/L
Dissolved Nickel	2	1	2	1	2	1	<1	1	ug/L
Dissolved Potassium	510	100	350	100	2210	100	2780	100	ug/L
Dissolved Selenium	<1	1	<1	1	2	1	2	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	2490	100	2670	100	33600	100	22100	100	ug/L
Dissolved Tin	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Zinc	<1	1	<1	1	20.9	1	3.4	1	ug/L

Sample Description	12 - A		
Lab ID	711127		
Metals (Dissolved - Field Filtered)	Result	MDL	Units
Dissolved Aluminum	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	ug/L
Dissolved Barium	5.3	1	ug/L
Dissolved Boron	<2	2	ug/L
Dissolved Calcium	50900	50	ug/L
Dissolved Copper	<1	1	ug/L
Dissolved Iron	<20	20	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Metals (Dissolved - Field Filtered)	Result	MDL	Units
Dissolved Magnesium	4500	4	ug/L
Dissolved Manganese	<1	1	ug/L
Dissolved Molybdenum	<1	1	ug/L
Dissolved Nickel	2	1	ug/L
Dissolved Potassium	310	100	ug/L
Dissolved Selenium	2	1	ug/L
Dissolved Silver	<0.1	0.1	ug/L
Dissolved Sodium	3620	100	ug/L
Dissolved Tin	<1	1	ug/L
Dissolved Zinc	<1	1	ug/L

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<30	30	<30	30	<40	40	<40	40	ug/L
F3 (C16-C34)	<30	30	<30	30	50	40	90	40	ug/L
F4 (C34-C50)	<30	30	<30	30	<40	40	<40	40	ug/L
o-Terphenyl (Surr.)	86	N/A	87	N/A	97	N/A	92	N/A	% Rec

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<40	40	<30	30	<40	40	<30	30	ug/L
F3 (C16-C34)	<40	40	<30	30	60	40	<30	30	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
F4 (C34-C50)	<40	40	<30	30	<40	40	<30	30	ug/L
o-Terphenyl (Surr.)	95	N/A	66	N/A	60	N/A	60	N/A	% Rec

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<30	30	<30	30	<30	30	<30	30	ug/L
F3 (C16-C34)	<30	30	<30	30	<30	30	150	30	ug/L
F4 (C34-C50)	<30	30	<30	30	<30	30	96	30	ug/L
o-Terphenyl (Surr.)	67	N/A	61	N/A	61	N/A	71	N/A	% Rec

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<30	30	<40	40	<30	30	<30	30	ug/L
F3 (C16-C34)	<30	30	<40	40	<30	30	<30	30	ug/L
F4 (C34-C50)	<30	30	<40	40	<30	30	30	30	ug/L
o-Terphenyl (Surr.)	91	N/A	85	N/A	92	N/A	92	N/A	% Rec

Sample Description	12 - A		
Lab ID	711127		
Petroleum Hydrocarbons	Result	MDL	Units
Baseline @ C50	Yes	N/A	NA
F2 (C10-C16)	<40	40	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A
Lab ID	711127

Petroleum Hydrocarbons	Result	MDL	Units
F3 (C16-C34)	<40	40	ug/L
F4 (C34-C50)	<40	40	ug/L
o-Terphenyl (Surr.)	89	N/A	% Rec

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	251	3	419	4	92	3	500	30	mg/L

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	306 [307]	6	186	3	371	3	304	6	mg/L

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	436	6	238	3	298	8	100	3	mg/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	265	8	279	4	455	3	160	3	mg/L



**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Solids	Result	MDL	Units
Total Dissolved Solids	200	20	mg/L

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr.)	120	N/A	110	N/A	110	N/A	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	90	N/A	91	N/A	91	N/A	91	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	0.5	0.3	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	2 - A		2 - B		2 - C		13 - A		
Lab ID	711111		711112		711113		711114		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Toluene-d8 (Surr.)	75	N/A	74	N/A	73	N/A	73	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	110	N/A	120	N/A	120	N/A	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	92	N/A	93	N/A	93	N/A	91	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	4 - A		4 - B		4 - C		5 - A		
Lab ID	711115		711116		711117		711118		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	75	N/A	73	N/A	73	N/A	73	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	120	N/A	120	N/A	120	N/A	120	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	92	N/A	91	N/A	92	N/A	91	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	5 - B		6 - A		7 - A		7 - C		
Lab ID	711119		711120		711121		711122		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	75	N/A	73	N/A	74	N/A	74	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	120	N/A	120	N/A	120	N/A	100	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	90	N/A	91	N/A	92	N/A	91	N/A	% Rec
Acetone	<30	30	<30	30	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L



**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	8 - A		10 - A		11 - A		11 - C		
Lab ID	711123		711124		711125		711126		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	<0.8	0.8	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	73	N/A	75	N/A	76	N/A	77	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Volatile Organic Compounds	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	110	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	91	N/A	% Rec
Acetone	<30	30	ug/L
Benzene	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Volatile Organic Compounds	Result	MDL	Units
Chloroethane	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	ug/L
Dichloromethane	<1	1	ug/L
Ethylbenzene	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	ug/L
m+p-Xylene	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	ug/L
n-Hexane	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	ug/L
Styrene	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	ug/L
Toluene	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	77	N/A	% Rec
Total Xylenes	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	ug/L



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## CERTIFICATE OF ANALYSIS - REVISED

Whitewater Hydrogeology Ltd.

Work Order Number: 270328

Sample Description	12 - A		
Lab ID	711127		
Volatile Organic Compounds	Result	MDL	Units
Trichlorofluoromethane	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	ug/L

## LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

F1-BTEX, F2-NAPTH, and F3-PAH: BTEX and selected PAHs have been subtracted from the appropriate fractions only if the parameter names are F1-BTEX, F2-NAPTH, and F3-PAH, otherwise these compounds have not been subtracted from their respective fractions.

MDL: Method detection limit or minimum reporting limit.

[ ]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.

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## CERTIFICATE OF ANALYSIS

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 274229  
PO #:  
Regulation: Information not provided  
Project #: shelburne Pit South  
DWS #:  
Sampled By:

Date Order Received: 5/27/2016  
Arrival Temperature: 21.6 °C

Analysis Started: 5/30/2016  
Analysis Completed: 6/3/2016

### WORK ORDER SUMMARY

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
North Pond	721223	Surface Water	None		5/25/2016	12:00 PM
South Pond	721224	Surface Water	None		5/25/2016	12:00 PM

### METHODS AND INSTRUMENTATION

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
A23-OP Water	Mississauga	Determination of Ortho-Phosphate in Water	Based on APHA-4500P
A23-TP Water	Mississauga	Determination of Total Phosphorus in Water	Based on APHA-4500P
A26-Colour	Mississauga	Determination of Colour by Spectrophotometry	Modified from APHA-2120C
A27-TDS	Mississauga	Determination of Total Dissolved Solids in water by gravimetry	Modified from APHA-2540
A42-Ammonia Water	Mississauga	Determination of Ammonia/Ammonium in Water	Modified from APHA-4500-NH3
A55-TOC Water	Mississauga	Determination of Total Organic Carbon in Water	Modified from APHA-5310
BTEX/F1-Water	Mississauga	Determination of PHC BTEX/F1 in Water - Tier 1 CCME	CWS PHC Tier I CCME
Hardness	Mississauga	Determination of Total Hardness	Based on APHA-2340B
ICPMS Water	Mississauga	Determination of Metals in Water by ICP/MS	Based on SW846-6020A
T01-Alkalinity	Mississauga	Determination of Alkalinity in Water	Modified from APHA-2320
T02-pH Water	Mississauga	Determination of pH in Water	Modified from APHA-4500-H+B
T05-Anions Water	Mississauga	Determination of Anions by Ion Chromatography	Modified from SW846-9056



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Whitewater Hydrogeology Ltd.

Work Order Number: 274229

Method	Lab	Description	Reference
T12-Cond Water	Mississauga	Determination of Conductivity in Water	Modified from APHA-2510
T21-Turbidity	Mississauga	Determination of Turbidity by Nephelometry	Modified from APHA-2130 B
T59-PHC F2-F4 Water	Mississauga	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME
T94-Carbonate	Mississauga	Determination of Carbonate and Bi-Carbonate	Based on APHA-2330
VOC Water	Mississauga	Determination of Volatile Organic Compounds in Water by P&T/GC/MS	Based on EPA 624

This report has been approved by:

Mark Charbonneau, Ph.D.

Laboratory Director

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**CERTIFICATE OF ANALYSIS**

Whitewater Hydrogeology Ltd.

Work Order Number: 274229

**WORK ORDER RESULTS**

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Anions	Result	MDL	Result	MDL	Units
Bromide	<0.05	0.05	<0.05	0.05	mg/L
Chloride	8.42	0.05	0.5	0.05	mg/L
Fluoride	<0.05	0.05	<0.05	0.05	mg/L
Nitrate (as N)	<0.02	0.02	<0.02	0.02	mg/L
Nitrite (as N)	<0.02	0.02	0.13	0.02	mg/L
Sulphate	4.88	0.05	0.84	0.05	mg/L

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
BTEX	Result	MDL	Result	MDL	Units
F1 (C6-C10) - Less BTEX	<5	5	<5	5	ug/L
F1 (C6-C10) Incl. BTEX	<5	5	<5	5	ug/L

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.08	0.01	0.047 [0.037]	0.01	mg/L
Bicarbonate	233	1	182	1	mg/L
Carbonate	2	1	1	1	mg/L
Conductivity	456.3	1	327.7 [326.9]	1	µS/cm
M-Alkalinity (pH 4.5)	235	2	183 [196]	2	mg/L as CaCO3
Orthophosphate (as P)	0.01	0.005	0.009	0.005	mg/L
pH	8	N/A	7.91 [7.92]	N/A	pH

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Whitewater Hydrogeology Ltd.

Work Order Number: 274229

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
General Chemistry	Result	MDL	Result	MDL	Units
Total Hardness (as CaCO <sub>3</sub> )	242	0.1	163	0.1	mg/L
Total Organic Carbon	4.39 [4.5]	0.4	4.69	0.4	mg/L
Total Phosphorus (as P)	0.0216	0.002	0.0205	0.002	mg/L
True Colour	13.2	1	10.8	1	TCU
Turbidity	0.7	0.1	0.6 [0.57]	0.1	NTU

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Metals	Result	MDL	Result	MDL	Units
Aluminum	23.1	1	7.5	1	ug/L
Antimony	<0.5	0.5	<0.5	0.5	ug/L
Arsenic	<1	1	<1	1	ug/L
Barium	30.6	1	10.5	1	ug/L
Boron	8.4	2	8.1	2	ug/L
Calcium	77300	50	58300	50	ug/L
Copper	1	1	<1	1	ug/L
Iron	77	20	85	20	ug/L
Magnesium	11800	4	4320	4	ug/L
Manganese	34.3	1	13.3	1	ug/L
Molybdenum	<1	1	<1	1	ug/L
Nickel	1	1	1	1	ug/L
Potassium	1500	100	1080	100	ug/L
Selenium	<1	1	<1	1	ug/L
Silver	<0.1	0.1	<0.1	0.1	ug/L
Sodium	2640	100	650	100	ug/L



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**CERTIFICATE OF ANALYSIS**

Whitewater Hydrogeology Ltd.

Work Order Number: 274229

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Units
Baseline @ C50	Yes	N/A	Yes	N/A	NA
F2 (C10-C16)	<50	50	<60	60	ug/L
F3 (C16-C34)	60	50	60	60	ug/L
F4 (C34-C50)	<50	50	<60	60	ug/L
o-Terphenyl (Surr.)	60.7	N/A	70.7	N/A	% Rec

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Solids	Result	MDL	Result	MDL	Units
Total Dissolved Solids	243	3	179	3	mg/L

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Volatile Organic Compounds	Result	MDL	Result	MDL	Units
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.2	0.2	<0.2	0.2	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.4	0.4	<0.4	0.4	ug/L
1,2-Dibromo-3-chloropropane	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichloroethane-d4 (Surr)	113	N/A	113	N/A	% Rec

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**CERTIFICATE OF ANALYSIS**

Whitewater Hydrogeology Ltd.

Work Order Number: 274229

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Volatile Organic Compounds	Result	MDL	Result	MDL	Units
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.2	0.2	<0.2	0.2	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	107	N/A	108	N/A	% Rec
Acetone	<30	30	<30	30	ug/L
Benzene	<0.2	0.2	<0.2	0.2	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.2	0.2	<0.2	0.2	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.2	0.2	<0.2	0.2	ug/L
Chlorobenzene	<0.5	0.5	<0.5	0.5	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.2	0.2	<0.2	0.2	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.2	0.2	<0.2	0.2	ug/L
Dichlorodifluoromethane	<0.2	0.2	<0.2	0.2	ug/L
Dichloromethane	<1	1	<1	1	ug/L
Ethylbenzene	<0.4	0.4	<0.4	0.4	ug/L
Hexachlorobutadiene	<0.4	0.4	<0.4	0.4	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 274229

Sample Description	North Pond		South Pond		
Lab ID	721223		721224		
Volatile Organic Compounds	Result	MDL	Result	MDL	Units
m+p-Xylene	<0.8	0.8	<0.8	0.8	ug/L
Methyl ethyl ketone	<5	5	<5	5	ug/L
Methyl isobutyl ketone (MIBK)	<5	5	<5	5	ug/L
Methyl tert-butyl ether (MTBE)	<2	2	<2	2	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	ug/L
o-Xylene	<0.4	0.4	<0.4	0.4	ug/L
Styrene	<0.3	0.3	<0.3	0.3	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	97	N/A	97.2	N/A	% Rec
Total Xylenes	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,2-dichloroethylene	<0.4	0.4	<0.4	0.4	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.2	0.2	<0.2	0.2	ug/L
Trichlorofluoromethane	<0.4	0.4	<0.4	0.4	ug/L
Vinyl chloride	<0.2	0.2	<0.2	0.2	ug/L



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## CERTIFICATE OF ANALYSIS

Whitewater Hydrogeology Ltd.

Work Order Number: 274229

### LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

F1-BTEX, F2-NAPTH, and F3-PAH: BTEX and selected PAHs have been subtracted from the appropriate fractions only if the parameter names are F1-BTEX, F2-NAPTH, and F3-PAH, otherwise these compounds have not been subtracted from their respective fractions.

MDL: Method detection limit or minimum reporting limit.

[ ]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 292288  
PO #:  
Regulation: Information not provided  
Project #: shelburne Pit South  
DWS #:  
Sampled By:

Date Order Received: 12/7/2016  
Arrival Temperature: 13.3 °C

Analysis Started: 12/7/2016  
Analysis Completed: 12/14/2016

**WORK ORDER SUMMARY**

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
OW2A	833990	Water	None		12/3/2016	
OW13A	833991	Water	None		12/3/2016	
OW2C	833992	Water	None		12/3/2016	
OW4B	833993	Water	None		12/3/2016	
OW5A	833994	Water	None		12/3/2016	
OW5B	833995	Water	None		12/3/2016	
OW6A	833996	Water	None		12/3/2016	
OW7A	833997	Water	None		12/3/2016	
OW7C	833998	Water	None		12/3/2016	
OW8A	833999	Water	None		12/3/2016	
OW10B	834000	Water	None		12/3/2016	
OW11A	834001	Water	None		12/3/2016	
OW11C	834002	Water	None		12/3/2016	
OW12A	834003	Water	None		12/3/2016	

**METHODS AND INSTRUMENTATION**

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Method	Lab	Description	Reference
A26-Colour	Mississauga	Determination of Colour by Spectrophotometry	Modified from APHA-2120C
A27-TDS	Mississauga	Determination of Total Dissolved Solids in water by gravimetry	Modified from APHA-2540
A42-Ammonia Water	Mississauga	Determination of Ammonia/Ammonium in Water	Modified from APHA-4500-NH3
A55-TOC Water	Mississauga	Determination of Total Organic Carbon in Water	Modified from APHA-5310
Anions Water	Garson	Determination of Anions by Ion Chromatography	Based on SW846-9056A
OP Water	Garson	Determination of Ortho-Phosphate in Water	Based on APHA-4500P
T01-Alkalinity	Mississauga	Determination of Alkalinity in Water	Modified from APHA-2320
T02-pH Water	Mississauga	Determination of pH in Water	Modified from APHA-4500-H+B
T12-Cond Water	Mississauga	Determination of Conductivity in Water	Modified from APHA-2510
T127-BTEX Water	Mississauga	Determination of F1/ BTEX in Water by Headspace GC/MS/FID	Modified from CWS/ EPA 624
T13-Hardness	Mississauga	Determination of Total Hardness	Modified from APHA-2340B
T13-ICPMS Dis Water FF	Mississauga	Determination of Dissolved (Field Filtered) Metals in Water by ICPMS	Modified from SW846-6020
T13-ICPMS Water	Mississauga	Determination of Metals in Water by ICPMS	Modified from SW846-6020
T14-VOC water	Mississauga	Determination of Volatile Organic Compounds in Water by P&T/GC/MS	Modified from EPA SW846-8260 B
T21-Turbidity	Mississauga	Determination of Turbidity by Nephelometry	Modified from APHA-2130 B
T59-PHC F2-F4 Water	Mississauga	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME
T94-Carbonate	Mississauga	Determination of Carbonate and Bi-Carbonate	Based on APHA-2330
TP Water	Garson	Determination of Total Phosphorus in Water	Based on APHA-4500P

**REPORT COMMENTS****As per client remove sample 834004. 12/20/16 JO**

This report has been approved by:

Mark Charbonneau, Ph.D.  
Laboratory Director

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

**WORK ORDER RESULTS**

Sample Description	OW2A		OW13A		OW2C		OW4B		
Lab ID	833990		833991		833992		833993		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.1	0.1	<0.1	0.1	<0.1 [<0.1]	0.1	<0.1	0.1	mg/L
Chloride	1.9	0.2	7.37	0.2	1.2 [1.2]	0.2	28.9	0.2	mg/L
Fluoride	1.2	0.1	<0.1	0.1	0.51 [0.54]	0.1	<0.1	0.1	mg/L
Nitrate (as N)	<0.1	0.1	7.9	0.1	<0.1 [<0.1]	0.1	2.52	0.1	mg/L
Nitrite (as N)	<0.03	0.03	<0.03	0.03	<0.03 [<0.03]	0.03	0.11	0.03	mg/L
Sulphate	11.4	1	6.7	1	2 [1]	1	9.2	1	mg/L

Sample Description	OW5A		OW5B		OW6A		OW7A		
Lab ID	833994		833995		833996		833997		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	mg/L
Chloride	8.91	0.2	35.2	0.2	8.53	0.2	7.18	0.2	mg/L
Fluoride	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	mg/L
Nitrate (as N)	5.1	0.1	2.6	0.1	3.19	0.1	3.6	0.1	mg/L
Nitrite (as N)	<0.03	0.03	<0.03	0.03	<0.03	0.03	<0.03	0.03	mg/L
Sulphate	9.3	1	11.4	1	7.7	1	8.1	1	mg/L

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromide	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	mg/L
Chloride	2.44	0.2	2.33	0.2	5.46	0.2	63.7	0.2	mg/L
Fluoride	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	mg/L

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
Anions	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Nitrate (as N)	<0.1	0.1	7.58	0.1	1.46	0.1	1.9	0.1	mg/L
Nitrite (as N)	<0.03	0.03	<0.03	0.03	<0.03	0.03	<0.03	0.03	mg/L
Sulphate	<1	1	2	1	20.3	1	27.7	1	mg/L

Sample Description	OW11C		OW12A		
Lab ID	834002		834003		
Anions	Result	MDL	Result	MDL	Units
Bromide	<0.1	0.1	<0.1	0.1	mg/L
Chloride	47.1	0.2	0.96	0.2	mg/L
Fluoride	<0.1	0.1	<0.1	0.1	mg/L
Nitrate (as N)	<0.1	0.1	2.16	0.1	mg/L
Nitrite (as N)	<0.03	0.03	<0.03	0.03	mg/L
Sulphate	<1	1	3	1	mg/L

Sample Description	OW2A		OW13A		OW2C		OW4B		
Lab ID	833990		833991		833992		833993		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.204	0.01	0.03	0.01	0.01	0.01	0.031	0.01	mg/L
Bicarbonate	179	1	273	1	77.2	1	299	1	mg/L
Carbonate	1	1	1	1	7.3	1	1	1	mg/L
Conductivity	395.4	1	582.1	1	174.9	1	683	1	µS/cm
M-Alkalinity (pH 4.5)	180	2	274	2	85	2	300	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.01	0.005	0.015	0.005	<0.005	0.005	0.01	0.005	mg/L
pH	7.79	N/A	7.7	N/A	9	N/A	7.7	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	145	0.1	6900	0.1	54.9	0.1	403	0.1	mg/L
Total Organic Carbon	0.8	0.4	2	2	2	2	1	0.4	mg/L



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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW2A		OW13A		OW2C		OW4B		
Lab ID	833990		833991		833992		833993		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Phosphorus (as P)	0.0695 [0.0669]	0.001	4.69	0.01	0.0129	0.001	0.0848	0.001	mg/L
True Colour	<1	1	<1	1	1	1	3	1	TCU
Turbidity	59.4 [59.8]	0.1	1400	1	76.4	0.1	99.3	0.1	NTU

Sample Description	OW5A		OW5B		OW6A		OW7A		
Lab ID	833994		833995		833996		833997		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.01	0.01	0.117	0.01	0.066	0.01	0.145	0.01	mg/L
Bicarbonate	255	1	300	1	187	1	244	1	mg/L
Carbonate	2	1	2	1	2	1	2	1	mg/L
Conductivity	561.7	1	701.3	1	440.7	1	517.4	1	µS/cm
M-Alkalinity (pH 4.5)	257	2	302	2	189	2	246	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.015	0.005	0.01	0.005	0.017	0.005	0.01	0.005	mg/L
pH	7.88	N/A	7.79	N/A	7.99	N/A	7.9	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	626	0.1	951	0.1	997	0.1	1140	0.1	mg/L
Total Organic Carbon	3	2	3	2	4	2	3	2	mg/L
Total Phosphorus (as P)	1.01	0.01	0.87	0.001	1.93	0.01	1.17	0.01	mg/L
True Colour	2	1	3	1	3.5	1	3.1	1	TCU
Turbidity	537	1	755	1	147	0.1	1180	1	NTU

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.088	0.01	0.01	0.01	<0.01	0.01	0.03	0.01	mg/L
Bicarbonate	120	1	199	1	240	1	282	1	mg/L

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
General Chemistry	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Carbonate	<1	1	2	1	2	1	2	1	mg/L
Conductivity	237.2	1	469.3	1	506.6	1	869.1 [868.6]	1	µS/cm
M-Alkalinity (pH 4.5)	121	2	201	2	242	2	284 [272]	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.01	0.005	0.016	0.005	0.016	0.005	0.01 [0.01]	0.005	mg/L
pH	7.85	N/A	7.99	N/A	8.01	N/A	7.8 [7.84]	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	107	0.1	541	0.1	959	0.1	417	0.1	mg/L
Total Organic Carbon	2.5	0.4	0.9	0.4	5	2	1.7 [1.8]	0.4	mg/L
Total Phosphorus (as P)	0.0089	0.001	0.515	0.001	0.988	0.01	0.29	0.001	mg/L
True Colour	2	1	3	1	5.3	1	2	1	TCU
Turbidity	52.8	0.1	418	1	1330	1	65.3	0.1	NTU

Sample Description	OW11C		OW12A		
Lab ID	834002		834003		
General Chemistry	Result	MDL	Result	MDL	Units
Ammonia (as N)	0.876	0.01	0.03	0.01	mg/L
Bicarbonate	76	1	147	1	mg/L
Carbonate	2	1	1	1	mg/L
Conductivity	351	1	341.6	1	µS/cm
M-Alkalinity (pH 4.5)	77.8	2	148	2	mg/L as CaCO <sub>3</sub>
Orthophosphate (as P)	0.009	0.005	0.02	0.005	mg/L
pH	8.36	N/A	7.98	N/A	pH
Total Hardness (as CaCO <sub>3</sub> )	87.8	0.1	1780	0.1	mg/L
Total Organic Carbon	10.3	0.4	10	8	mg/L
Total Phosphorus (as P)	<0.001	0.001	2.66	0.01	mg/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW11C		OW12A		Units
Lab ID	834002		834003		
General Chemistry	Result	MDL	Result	MDL	
True Colour	1	1	2	1	TCU
Turbidity	36.6	0.1	1980	1	NTU

Sample Description	OW2A		OW13A		OW2C		OW4B		Units
Lab ID	833990		833991		833992		833993		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
Calcium	27500	500	2390000	500	7030	500	125000	500	ug/L
Magnesium	18500	40	226000	40	9060	40	22100	40	ug/L

Sample Description	OW5A		OW5B		OW6A		OW7A		Units
Lab ID	833994		833995		833996		833997		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
Calcium	219000	500	310000	500	347000	500	401000	500	ug/L
Magnesium	19300	40	42900	40	31700	40	32600	40	ug/L

Sample Description	OW7C		OW8A		OW10B		OW11A		Units
Lab ID	833998		833999		834000		834001		
Metals	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
Calcium	20600	500	186000	500	304000	500	125000	500	ug/L
Magnesium	13500	40	18600	40	48600	40	25500	40	ug/L

Sample Description	OW11C		OW12A		Units
Lab ID	834002		834003		
Metals	Result	MDL	Result	MDL	
Calcium	11900	500	673000	500	ug/L
Magnesium	14100	40	24200	40	ug/L

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW2A 833990		OW13A 833991		OW2C 833992		OW4B 833993		
Lab ID									
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	2	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	9.4	1	73.2	1	<1	1	50.1	1	ug/L
Dissolved Boron	390	2	<2	2	146	2	<2	2	ug/L
Dissolved Calcium	22000	50	79500	500	3270	50	105000	500	ug/L
Dissolved Copper	<1	1	1	1	3.7	1	1	1	ug/L
Dissolved Iron	110	20	62	20	580	20	96	20	ug/L
Dissolved Magnesium	17500	4	25000	4	7360	4	18000	4	ug/L
Dissolved Manganese	25.4	1	<1	1	6.1	1	<1	1	ug/L
Dissolved Molybdenum	14.1	1	<1	1	3	1	<1	1	ug/L
Dissolved Nickel	<1	1	1	1	<1	1	2	1	ug/L
Dissolved Potassium	4640	100	1030	100	1340	100	750	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	35900	100	2440	100	23300	100	17200	100	ug/L
Dissolved Strontium	404	1	133	1	19.5	1	146	1	ug/L
Dissolved Zinc	<1	1	<1	1	2	1	<1	1	ug/L

Sample Description	OW5A 833994		OW5B 833995		OW6A 833996		OW7A 833997		
Lab ID									
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	221	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	52.3	1	35.2	1	61.5	1	62.3	1	ug/L

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW5A 833994		OW5B 833995		OW6A 833996		OW7A 833997		
Lab ID									
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Boron	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Calcium	88600	500	96300	500	66000	500	90300	500	ug/L
Dissolved Copper	2	1	2	1	4.4	1	3	1	ug/L
Dissolved Iron	76	20	110	20	440	20	320	20	ug/L
Dissolved Magnesium	13600	4	20600	4	11400	4	14800	4	ug/L
Dissolved Manganese	<1	1	6.9	1	127	1	27.9	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Nickel	1	1	2	1	1	1	2	1	ug/L
Dissolved Potassium	6410	100	2440	100	2960	100	1460	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	2760	100	17800	100	3020	100	2510	100	ug/L
Dissolved Strontium	131	1	133	1	102	1	133	1	ug/L
Dissolved Zinc	2	1	26.3	1	2	1	2	1	ug/L

Sample Description	OW7C 833998		OW8A 833999		OW10B 834000		OW11A 834001		
Lab ID									
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	<2	2	<2	2	<2	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Barium	7.4	1	18.5	1	49	1	40.7	1	ug/L
Dissolved Boron	5	2	<2	2	5	2	<2	2	ug/L
Dissolved Calcium	21300	50	77600	500	64700	500	103000	500	ug/L
Dissolved Copper	<1	1	1	1	1	1	2	1	ug/L
Dissolved Iron	3440	200	62	20	130	20	88	20	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dissolved Magnesium	14400	4	10400	4	21200	4	22800	4	ug/L
Dissolved Manganese	269	1	8.4	1	18.2	1	2	1	ug/L
Dissolved Molybdenum	<1	1	<1	1	1	1	<1	1	ug/L
Dissolved Nickel	<1	1	1	1	1	1	2	1	ug/L
Dissolved Potassium	610	100	610	100	1140	100	2210	100	ug/L
Dissolved Selenium	<1	1	<1	1	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	2300	100	1500	100	8230	100	21600	100	ug/L
Dissolved Strontium	31.9	1	132	1	185	1	152	1	ug/L
Dissolved Zinc	1	1	1	1	9.2	1	19.1	1	ug/L

Sample Description	OW11C		OW12A		
Lab ID	834002		834003		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Units
Dissolved Aluminum	<2	2	476	2	ug/L
Dissolved Antimony	<0.5	0.5	<0.5	0.5	ug/L
Dissolved Arsenic	<1	1	2	1	ug/L
Dissolved Barium	13.5	1	9.1	1	ug/L
Dissolved Boron	<2	2	<2	2	ug/L
Dissolved Calcium	10300	50	64200	500	ug/L
Dissolved Copper	<1	1	5.1	1	ug/L
Dissolved Iron	60	20	500	200	ug/L
Dissolved Magnesium	14400	4	5050	4	ug/L
Dissolved Manganese	59.4	1	68.2	1	ug/L
Dissolved Molybdenum	3.8	1	<1	1	ug/L
Dissolved Nickel	<1	1	2	1	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW11C		OW12A		
Lab ID	834002		834003		
Metals (Dissolved - Field Filtered)	Result	MDL	Result	MDL	Units
Dissolved Potassium	2560	100	1470	100	ug/L
Dissolved Selenium	<1	1	<1	1	ug/L
Dissolved Silver	<0.1	0.1	<0.1	0.1	ug/L
Dissolved Sodium	21200	100	920	100	ug/L
Dissolved Strontium	13.2	1	125	1	ug/L
Dissolved Zinc	<1	1	3	1	ug/L

Sample Description	OW2A		OW13A		OW4B		OW5A		Units
Lab ID	833990		833991		833993		833994		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
F1 (C6-C10) Incl. BTEX	<20 [<20]	20	<20	20	<20	20	<20	20	ug/L
F2 (C10-C16)	<60	60	<80	80	<60	60	<80	80	ug/L
F3 (C16-C34)	<60	60	<80	80	<60	60	<80	80	ug/L
F4 (C34-C50)	<60	60	<80	80	<60	60	<80	80	ug/L
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
1,4-dichlorobenzene-d4 (Surr)	93.2 [94.8]	N/A	95.1	N/A	96	N/A	94.6	N/A	% Rec
o-Terphenyl (Surr.)	60	N/A	70.1	N/A	54.3	N/A	74.6	N/A	% Rec
undecane (Surr)	140 [136]	N/A	139	N/A	136	N/A	139	N/A	% Rec

Sample Description	OW5B		OW6A		OW7A		OW7C		Units
Lab ID	833995		833996		833997		833998		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
F1 (C6-C10) Incl. BTEX	<20	20	<20	20	<20	20	<20	20	ug/L
F2 (C10-C16)	<70	70	<50	50	<50	50	<40	40	ug/L
F3 (C16-C34)	<70	70	<50	50	<50	50	50	40	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW5B		OW6A		OW7A		OW7C		
Lab ID	833995		833996		833997		833998		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
F4 (C34-C50)	<70	70	<50	50	<50	50	<40	40	ug/L
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
1,4-dichlorobenzene-d4 (Surr)	96.6	N/A	96.2	N/A	96.6	N/A	98.3	N/A	% Rec
o-Terphenyl (Surr.)	88.5	N/A	63.4	N/A	70.5	N/A	57.4	N/A	% Rec
undecane (Surr)	135	N/A	136	N/A	140	N/A	139	N/A	% Rec

Sample Description	OW8A		OW11A		OW11C		OW12A		
Lab ID	833999		834001		834002		834003		
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
F1 (C6-C10) Incl. BTEX	<20	20	<20	20	<20	20	<20	20	ug/L
F2 (C10-C16)	<40	40	<60	60	<60	60	<60	60	ug/L
F3 (C16-C34)	<40	40	<60	60	270	60	<60	60	ug/L
F4 (C34-C50)	<40	40	<60	60	230	60	<60	60	ug/L
Baseline @ C50	Yes	N/A	Yes	N/A	Yes	N/A	Yes	N/A	NA
1,4-dichlorobenzene-d4 (Surr)	96.8	N/A	97.2	N/A	98.5	N/A	98.2	N/A	% Rec
o-Terphenyl (Surr.)	54	N/A	58.3	N/A	77.6	N/A	45.1	N/A	% Rec
undecane (Surr)	135	N/A	135	N/A	137	N/A	138	N/A	% Rec

Sample Description	OW2A		OW13A		OW2C		OW4B		
Lab ID	833990		833991		833992		833993		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	224 [226]	3	445	20	107	3	383	3	mg/L



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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW5A		OW5B		OW6A		OW7A		
Lab ID	833994		833995		833996		833997		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	400	10	420	6	264	6	340	20	mg/L

Sample Description	OW7C		OW8A		OW10B		OW11A		
Lab ID	833998		833999		834000		834001		
Solids	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Dissolved Solids	130	3	272	6	315	20	450	3	mg/L

Sample Description	OW11C		OW12A		
Lab ID	834002		834003		
Solids	Result	MDL	Result	MDL	Units
Total Dissolved Solids	172	3	230	30	mg/L

Sample Description	OW2A		OW13A		OW4B		OW5A		Units
Lab ID	833990		833991		833993		833994		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	
Benzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Ethylbenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
m+p-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
o-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

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Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW2A 833990		OW13A 833991		OW4B 833993		OW5A 833994		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromo-3-chloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane-d4 (Surr)	109	N/A	140	N/A	110	N/A	120	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	102	N/A	104	N/A	96.4	N/A	97.4	N/A	% Rec
Acetone	<10	10	<10	10	<10	10	<10	10	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW2A 833990		OW13A 833991		OW4B 833993		OW5A 833994		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichlorodifluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichloromethane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Hexachlorobutadiene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Methyl ethyl ketone	<2	2	<2	2	<2	2	<2	2	ug/L
Methyl isobutyl ketone (MIBK)	<1	1	<1	1	<1	1	<1	1	ug/L
Methyl tert-butyl ether (MTBE)	<1	1	<1	1	<1	1	<1	1	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Styrene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	114	N/A	96.1	N/A	111	N/A	104	N/A	% Rec
Trans-1,2-dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichlorofluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Vinyl chloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

Sample Description	OW5B 833995		OW6A 833996		OW7A 833997		OW7C 833998		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Benzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Ethylbenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
m+p-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
o-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW5B 833995		OW6A 833996		OW7A 833997		OW7C 833998		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromo-3-chloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane-d4 (Surr)	112	N/A	114	N/A	110	N/A	114	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	94.4	N/A	107	N/A	101	N/A	103	N/A	% Rec
Acetone	<10	10	<10	10	<10	10	<10	10	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromodichloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW5B 833995		OW6A 833996		OW7A 833997		OW7C 833998		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichlorodifluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichloromethane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Hexachlorobutadiene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Methyl ethyl ketone	<2	2	<2	2	<2	2	<2	2	ug/L
Methyl isobutyl ketone (MIBK)	<1	1	<1	1	<1	1	<1	1	ug/L
Methyl tert-butyl ether (MTBE)	<1	1	<1	1	<1	1	<1	1	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Styrene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	103	N/A	107	N/A	96.9	N/A	102	N/A	% Rec
Trans-1,2-dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichlorofluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Vinyl chloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

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**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW8A 833999		OW11A 834001		OW11C 834002		OW12A 834003		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Benzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Ethylbenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
m+p-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
o-Xylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Total Xylenes	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
1,1,1,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,1-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2,2-Tetrachloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1,2-Trichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,1-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2,4-Trichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromo-3-chloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dibromoethane	<0.2	0.2	<0.2	0.2	<0.2	0.2	<0.2	0.2	ug/L
1,2-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,2-Dichloroethane-d4 (Surr)	112	N/A	108	N/A	103	N/A	106	N/A	% Rec
1,2-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,3-Dichloropropane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1,4-Dichlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
1-Bromo-4-fluorobenzene (Surr.)	102	N/A	108	N/A	97.2	N/A	98.1	N/A	% Rec
Acetone	<10	10	<10	10	<10	10	<10	10	ug/L
Bromobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW8A 833999		OW11A 834001		OW11C 834002		OW12A 834003		
Lab ID									
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Bromodichloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromoform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Bromomethane	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Carbon tetrachloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chlorobenzene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloroform	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Chloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis - + trans-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,2-Dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
cis-1,3-Dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromochloromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dibromomethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichlorodifluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Dichloromethane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Hexachlorobutadiene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Methyl ethyl ketone	<2	2	<2	2	<2	2	<2	2	ug/L
Methyl isobutyl ketone (MIBK)	<1	1	<1	1	<1	1	<1	1	ug/L
Methyl tert-butyl ether (MTBE)	<1	1	<1	1	<1	1	<1	1	ug/L
n-Hexane	<0.5	0.5	<0.5	0.5	<0.5	0.5	<0.5	0.5	ug/L
Styrene	<0.4	0.4	<0.4	0.4	<0.4	0.4	<0.4	0.4	ug/L
Tetrachloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Toluene-d8 (Surr.)	100	N/A	112	N/A	98.8	N/A	103	N/A	% Rec
Trans-1,2-dichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trans-1,3-dichloropropene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Trichloroethylene	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**TESTMARK Laboratories***Committed to Quality and Service***CERTIFICATE OF ANALYSIS - REVISED**

Whitewater Hydrogeology Ltd.

Work Order Number: 292288

Sample Description	OW8A		OW11A		OW11C		OW12A		
Lab ID	833999		834001		834002		834003		
Volatile Organic Compounds	Result	MDL	Result	MDL	Result	MDL	Result	MDL	Units
Trichlorofluoromethane	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L
Vinyl chloride	<0.3	0.3	<0.3	0.3	<0.3	0.3	<0.3	0.3	ug/L

**LEGEND**

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

[ ]: Results for laboratory replicates are shown in square brackets immediately below the associated sample result for ease of comparison.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.



**TESTMARK Laboratories**

Committed to Quality and Service

**CERTIFICATE OF ANALYSIS**

Client: Tecia White  
Company: Whitewater Hydrogeology Ltd.  
Address: 80 Chamberlain Cres  
Collingwood, Ontario, L9Y 0C8  
Phone: (705) 888-7064  
Email: tecia@white-water.ca

Work Order Number: 293538  
PO #:  
Regulation: ODWS  
Project #:  
DWS #:  
Sampled By:

Date Order Received: 12/23/2016  
Arrival Temperature: 12.5 °C

Analysis Started: 12/28/2016  
Analysis Completed: 12/28/2016

**WORK ORDER SUMMARY**

ANALYSES WERE PERFORMED ON THE FOLLOWING SAMPLES. THE RESULTS RELATE ONLY TO THE ITEMS TESTED.

Sample Description	Lab ID	Matrix	Type	Comments	Date Collected	Time Collected
OW11-C	836899	Water	None		12/22/2016	10:00 AM
OW7-C	836900	Water	None		12/22/2016	10:15 AM

**METHODS AND INSTRUMENTATION**

THE FOLLOWING METHODS WERE USED FOR YOUR SAMPLE(S):

Method	Lab	Description	Reference
T59-PHC F2-F4 Water	Mississauga	Determination of PHC (F2-F4) in Water - Tier 1 CCME by GC/FID	CWS PHC Tier I CCME

This report has been approved by:

Mark Charbonneau, Ph.D.  
Laboratory Director

**TESTMARK Laboratories***Committed to Quality and Service*

## CERTIFICATE OF ANALYSIS

Whitewater Hydrogeology Ltd.

Work Order Number: 293538

### WORK ORDER RESULTS

Sample Description	OW11 - C		OW7 - C			
Lab ID	836899		836900			
Petroleum Hydrocarbons	Result	MDL	Result	MDL	Units	Criteria: ODWS
F2 (C10-C16)	<40	40	<50	50	ug/L	~
F3 (C16-C34)	<40	40	<50	50	ug/L	~
F4 (C34-C50)	<40	40	<50	50	ug/L	~
Baseline @ C50	Yes	N/A	Yes	N/A	NA	~
o-Terphenyl (Surr.)	61.1	N/A	60.1	N/A	% Rec	~

### LEGEND

Dates: Dates are formatted as mm/dd/year throughout this report.

MDL: Method detection limit or minimum reporting limit.

% Rec: Surrogate compounds are added to the sample in some cases and the recovery is reported as a % recovered.

~: In a criteria column indicates the criteria is not applicable for the parameter row..

Total Petroleum Hydrocarbons: For the analysis of Total Petroleum Hydrocarbons, the Chromatogram descended to the baseline at or before nC50; if F4G results are reported, they are not to be added to the C6 to C50 results.

Quality Control: All associated Quality Control data is available on request.



January 16, 2017

**Via: Mail**

Ms. Wendy Atkinson  
Treasurer/Deputy Clerk  
Township of Melancthon  
157101 Highway 10  
Melancthon ON L9V 2E6

Dear Wendy:

**Re: Drainage Superintendent Services**  
**File No.: D-ME-SUP**  
**Project No.: MSO019743.2016**

As we are into a new calendar year, we would appreciate updating our account for Professional Services. The enclosed invoice covers the time period from October 1, 2016 through December 31, 2016.

The work undertaken during this period includes the following:

**October 2016**

- Received Contractor's invoice for cleanout of the first part of the James Foley Drain. Review and verify invoice. Review and by letter, authorize invoice for payment and deliver all to Township.
- On-site with Contractor to Christie Johnston Extension Drain to commence cleanout work. Check progress of work and general discussion with owners.
- On-site with Contractor to James Foley Drain to commence leveling of the cleanout material for the first part. Notify owners and check progress of the work.
- Obtain utility locates for balance of James Foley Drain cleanout work.
- Request from Department of Fisheries and Oceans for site inspection review of completed drain cleanouts. On-site to Levi Allen Drain with DFO representatives regarding compliance with cleanout approval.
- Site meeting with Contractor to review cleanout work needed on the Westcott Drain.

**November 2016**

- Inspections and discussions with the affected owners and Dufferin Wind Power representative during the cleanout of the Westcott Drain.
- Received Hanna and Hamilton's invoice for completing the Westcott Drain cleanout. Review and authorize invoice and forward to Treasurer for payment.

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FEB 02 2017

- Received Contractor's invoice for levelling the first part of the James Foley Drain cleanout work. Review and by letter, authorize invoice for payment.
- General discussion with County representative regarding concerns and permit approval for completing the balance of the James Foley Drain cleanout along County Road No. 9. Further discussion with Contractor regarding timing and permits for balance of cleanout work. Also general discussion with owner and renter regarding cleanout concerns.
- Notify utility regarding outstanding locates for James Foley Drain cleanout.
- Request from Department of Fisheries and Oceans for site meetings regarding compliance on drain maintenance for Henderson Drain and for the Ballinger Drain.
- Received permit requirements for James Foley Drain cleanout adjacent to County Road No. 9 from County representative and forward to Contractor for submission.
- Received Contractor's invoices for cleanout work on Christie Johnston Extension Drain. Reviewed and verified the invoices and by letter authorized them for payment. Forward all to the Treasurer.
- Request from B. Besley regarding culvert crossing at Lot 2, Concession 10 OS, on Besley Drain. General discussion regarding procedures under the Drainage Act.
- Received Contractor's invoice for beaver dam and debris removals on Broster Drain. General discussion with Public Works and Treasurer regarding the invoice.
- Received from staff, nuisance beaver application on Shier Drain. General discussion with trapper regarding trapping status including new dammed location.
- Assist with preparation of Christie Johnston Extension Drain levying assessment schedule and by-law.
- General discussion with Contractor regarding the County permit application for James Foley Drain cleanout. Forward to Contractor utility locates received to date. On-site with Contractor to commence balance of drain cleanout. Notify renters regarding concerns and check progress of the work.
- On-site to James Foley Drain to assist Contractor with grade control on lowering McCarthy's driveway culvert. General discussion with owners and check progress of the work.
- Request from Department of Fisheries and Oceans for review of completed drain maintenance and repair work. On-site with DFO to Henderson Drain and to Ballinger Drain regarding compliance with cleanout approvals.

#### **December 2016**

- Site meeting with Ministry of Transportation representatives regarding the cleanout of the west road ditch on Highway No. 10 as a result of flooding concerns expressed by R. Pezzo, owner of Pt. Lot 279 and 280, Concession 1 SW.
- Received Demman's Excavating Inc. invoice for levelling balance of cleaned out material on James Foley Drain. Review and verify invoice for payment.
- General discussion with Hanna & Hamilton Construction Co. regarding itemized billing for balance of cleanout work completed for James Foley Drain maintenance. Received Hanna & Hamilton's final invoice for the completed work. Review and verify invoice and by letter, authorize invoice for payment. Deliver Contractors' final invoices to Township office and general discussion with Treasurer regarding procedures.
- Update ownerships for James Foley Drain cleanout work. Assist staff with preparation of levying assessment schedule and by-law.

As you are aware, the cost of employing a Drainage Superintendent is eligible for a 50% grant. The Ministry has requested that these grant applications be submitted yearly. As such, we will complete and forward the grant application to you shortly.

We trust we have handled the Township's drainage matters satisfactorily and look forward to being of service again this year. Should you have any questions or if we can be of any further assistance in the meantime, please call.

Yours truly,

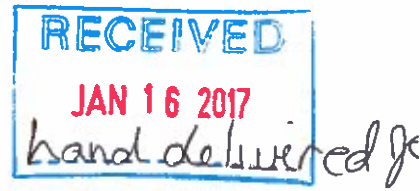
**R.J. Burnside & Associates Limited**  
Drainage Superintendent

A handwritten signature in dark ink, appearing to read 'T.M. Pridham', is written over the printed name.

T.M. Pridham, P.Eng.  
Drainage Engineer  
TMP:kc

Enclosure(s)      Invoice No. MSO019743.2016 – 4

019743.2016\_WAtkinson\_Ltr\_170112.docx  
16/01/2017 10:07 AM



January 11, 2017

Tracey Henderson  
Appeal Tribunal  
1 Stone Road West  
Guelph, Ontario N1G 4Y2

Dear Tracey Henderson,

**Re: Late Filing of Section 65(11) Appeal -McCue Drainage Works, Repair and Improvement, 1989**

I ask that the Tribunal exercise the ability under Section 100 of the *Drainage Act* to grant an extension of the time to appeal under Section 65 of the *Drainage Act* since regular contact with the Clerk, the Drainage Engineer, the Provincial Drainage Coordinator and the Municipal Council was kept from the time The Notice of Assessment was received until the time a formal appeal was filed. A formal appeal was not filed within the typical 40 day period since it was the intention to rectify the dispute over the amount on The Assessment Schedule in a pragmatic manner with the Municipality and Drainage Engineer. A formal appeal to the Tribunal was not foreseeable at the onset of this dispute however, when all reasonable alternatives to rectify the disagreement with the Municipality were exhausted, a formal appeal was filed without delay. Please find below the chronology in which demonstrates the reasons for a delay in submitting an appeal:

- April 11, 2016 – Date of The Notice of Assessment;
- April 19, 2016 - Contacted the clerk at the Municipality inquiring for rationale for the assessment amount. Directed by the Municipality to contact the Drainage Engineer, Tom Pridham;
- Spoke with Drainage Engineer via telephone who could not rationalize with tangible evidence how the assessment amount was determined. Was informed that an appeal of the assessment under any format within the *Drainage Act* could not be done;
- April 28, 2016 - Contacted the Provincial Drainage Coordinator, Sid Vander Veen via email. Was provided information on how a request to council for consideration of a new assessment schedule given changes to the use of the drainage works could be made;
- Early May- Drafted written report to be heard for Council's consideration;
- Mid May - Request to the Municipality under Section 65(3) of the *Drainage Act* to instruct the engineer to inspect the land and assess it for a just proportion of the drainage works, given that the nature of the use of the drainage works had changed;
- June 2, 2016- Council meeting. Letter requesting new assessment was read;
- June- Received letter from the municipality with direction to contact a realtor or a lawyer to resolve this matter. A request for delegation was immediately sent to the municipality to dispute this response;
- July 7, 2016 - Delegation at the Council meeting. Council agreed to instruct the engineer to re-evaluate the assessment amount on the property under Section 65(3) of the *Drainage Act*;

- September 8, 2016 - Letter from the Drainage Engineer at RJ Burnside which indicated no changes to The Assessment Schedule would be made;
- Early October - Requested meeting with the Mayor and the Drainage Engineer to discuss The Assessment Schedule;
- October 20, 2016 – Meeting held with the Mayor, Clerk and Engineer in efforts to prevent a formal appeal to the Tribunal. No resolution was found;
- Filed a formal appeal to the Tribunal, since due consideration was not provided for the current use of the land and that the assessment for benefit is too high.

Please note that the chronology of events clearly demonstrates that no delay was made to rectify the dispute from the time the Notice of Assessment was received until the time a formal appeal was filed. I ask that the Municipality exercise good judgment and that the Tribunal exercise its authority under Section 100 of the *Drainage Act* to allow for the extension of the time to appeal under Section 65(11) of the *Drainage Act*.

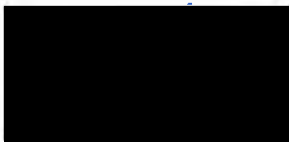
I ask that the Tribunal hear rationale and evidence that supports the opinion that due consideration has not been granted to the current use being made of the land and to adjust the Assessment Schedule for a just portion of the drainage works. The lands directly adjacent to the drain on the property will not be used for agricultural purposes as is now dedicated for protection through the Conservation Land Tax Incentive Program, as it is considered to be a Provincially Significant Wetland (PSW) and the current assessment for benefit is too high.

In addition, part of the drain adjacent to and through the property is negatively influencing the ecological function of the PSW. Since these lands are to be protected, not being used for agricultural purposes and do not require assisted drainage to function; I ask that the Tribunal explore opportunities under Section 84 of the *Drainage Act* to close parts of the drain that do not require drainage or to explore opportunities under Section 78 of the *Drainage Act* to better afford for the restoration/enhancement of the PSW lands.

I trust this information is sufficient to move forward with an appeal to the Tribunal under Section 65 of the *Drainage Act*.

Thank you for your time and consideration.

Regards,



Evan Bearss



(Lot 11 Concession 4 NE)

cc. Denise Holmes, CAO/Clerk, Township of Melancthon



Agriculture, Food and Rural Affairs  
Appeal Tribunal  
1 Stone Road West  
Guelph, Ontario N1G 4Y2  
Tel: (519) 826-3433, Fax: (519) 826-4232  
Email: AFRAAT@ontario.ca

Tribunal d'appel de l'agriculture, de  
l'alimentation et des affaires rurales  
1 Stone Road West  
Guelph (Ontario) N1G 4Y2  
Tél.: (519) 826-3433, Téléc.: (519) 826-4232  
Courriel: AFRAAT@ontario.ca



December 21, 2016

Evan Bearss  
643132 270 Sideroad  
Melancthon, Ontario  
K9V 2M6



Dear Mr. Bearss

**Re: Late Filing of Section 65(11) Appeal – McCue Drain Works, Repair and Improvement, 1989**

The Agriculture, Food and Rural Affairs Appeal Tribunal has received your appeal which was submitted to the Clerk of the Municipality on October 24, 2016 and received at the Tribunal December 1, 2016. Your notice of appeal identifies an appeal under Sections 65 of the *Drainage Act*. This appeal under Section 65 of the *Drainage Act* appears to have been filed late.

Section 65(11) under the *Drainage Act* states:

*"(11) If the engineer's assessment is for an amount greater than \$500, the owner of the land may appeal to the Tribunal within 40 days after the date the clerk sends a copy of the assessment to the owner."*

The Notice of Assessment provided by the Municipality is dated April 11, 2016. It appears that a significant amount of time has passed since the Notice of Assessment would have been sent to you.

Section 100 under the *Drainage Act* states: "The Tribunal, in any case that it considers proper, may extend the time otherwise limited for application, appeal or reference."

In order for the Tribunal to determine whether it should extend the time for you to appeal under Section 65 of the *Drainage Act*, would you kindly advise the Tribunal and the Clerk of the Municipality in writing by **January 16, 2016** of the reasons for the delay in submitting your appeal, and why the Tribunal should exercise its authority under Section 100 of the Act to extend the period for your appeal. Also, please indicate what relief you are seeking from the Tribunal.

Once the Municipality has been provided with those reasons, the Municipality will be given until **January 30, 2016** to advise the Tribunal and you of its position and reasons, if any, regarding the granting of an extension.

If the Municipality opposes the Tribunal granting an extension of time, you will be given until **February 6, 2016** to reply to their submission.

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If you have any questions about the above, please contact me directly at (519) 826-3431.

Sincerely,

A handwritten signature in black ink that reads "Tracey Henderson". The signature is written in a cursive, flowing style.

Tracey Henderson  
Tribunal Coordinator

cc. Denise Holmes, CAO/Clerk, Township of Melancthon

## Denise Holmes

---

**From:** Henderson, Tracey (OMAFRA) <Tracey.Henderson@ontario.ca>  
**Sent:** Friday, January 20, 2017 7:47 AM  
**To:** Denise Holmes  
**Subject:** RE: Evan Bearss Appeal of the McCue Drainage Works, Repair and Improvement, 1989

Ms. Holmes

The Chair of the Agriculture, Food and Rural Affairs Appeal Tribunal has accepted your request for extension of time. You will be given until Friday, **February 3, 2017** to respond to the Tribunal with copy to the appellant.

The Appellant, Mr. Bearss will then have until Friday, **February 10, 2017** to reply to your submissions.

I ask that both parties please respond to this email to confirm receipt. Any questions, please do not hesitate to contact me directly.

Tracey Henderson  
Tribunal Coordinator  
Agriculture, Food and Rural Affairs Appeal Tribunal  
(519) 826-3431  
[Tracey.henderson@ontario.ca](mailto:Tracey.henderson@ontario.ca)

---

**From:** Denise Holmes [<mailto:dholmes@melancthontownship.ca>]  
**Sent:** January-18-17 2:50 PM  
**To:** Henderson, Tracey (OMAFRA)  
**Subject:** Evan Bearss Appeal of the McCue Drainage Works, Repair and Improvement, 1989

Hi Tracey,

The Township is in receipt of the attached letter from you dated December 21, 2016, as well as the attached letter from Evan Bearss dated January 11, 2017.

The Municipality has been given a deadline of January 30<sup>th</sup> to advise the Tribunal and Mr. Bearss of its position and reasons, if any, regarding the granting of an extension for his appeal. The correspondence from the Appeal Tribunal went to Council on January 12<sup>th</sup> but at that time, we did not have a letter from Mr. Bearss. It was received on January 16<sup>th</sup>.

My Council does not meet until Thursday, February 2<sup>nd</sup>, and I cannot make the decision on behalf of Council as to whether or not they are going to grant an extension to the appeal.

Can you please advise if the Tribunal will extend the Municipality's deadline so that Council can consider this correspondence at its meeting to be held February 2<sup>nd</sup>?

Thank you.


Regards,

*Denise Holmes*



Denise B. Holmes, AMCT | Chief Administrative Officer/Clerk | Township of Melancthon |

[dholmes@melancthontownship.ca](mailto:dholmes@melancthontownship.ca) | PH: 519-925-5525 ext 101 | FX: 519-925-1110 | [www.melancthontownship.ca](http://www.melancthontownship.ca) |

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## Denise Holmes

---

**From:** Amanda Graham  
**Sent:** Monday, January 16, 2017 5:31 PM  
**To:** Denise Holmes  
**Subject:** Melancthon Winter Roads  
**Attachments:** Inclement Weather and Road Closures.docx

Hi Denise,

I have attached an incident that occurred on January 5, 2017, that has prompted my request to council. I would like council to address the problem of community access to Hornings Mills during inclement weather. I would like to pose the question to council during the next meeting "How can we improve safe access to Hornings Mills during inclement weather and road closures" Could you review and let me know what the next step is.

Thanks and regards,

Amanda Graham  
Fieldway Court  
Melancthon, ON, L9V 3G8

---

Total Control Panel

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On January 5, 2017 at 10:00 pm I was returning to my home in Hornings Mills from my place of employment in Mississauga, ON. I took highway 10 Northbound to 89, and continued Northbound on 19 to 17 then east on 17 to 124 with the intent to take 124 the short distance to 14 and the community of Hornings Mills. At the time 124 was the only road that was closed. I arrived at the corner of 124 and 17 and proceeded to turn into the Masonville Convenience store parking lot and then turned Northbound on 124 to travel the 600m to 14 and Hornings Mills.

I was stopped by OPP officer, Jason Mask, approximately 400m onto 124. The officer pulled his vehicle alongside my vehicle and rolled down his window. The officer asked what I was doing and if I realized the road was closed. I explained to him that I lived in Hornings Mills; I made the decision to take this route as it is a paved road, has cellular service in the event of an emergency, and called for me travelling on a stretch of closed roadway for a mere 600 meters, thus, was the most direct and safest option. My husband would be going into work at 3:00 am and I needed to be home as I have two young children. He asked for my license which I provided with my address. He then asked how long I had been living in Hornings Mills. I advised that my family and I have been a part of the community since 2012. He then said that I should know then that 124 is not the only way to get to Hornings Mills, and then advised that I needed to turn around and take River Road. I confirmed with the officer that he was suggesting that instead of continuing the remaining 200m I needed to travel in order to get to the turn off to Hornings Mills, he was instructing me to back track to Prince of Wales Rd. then to go north to River Road and West on River Road. He affirmed and told me that 124 was closed and River Road was not. At this point I refused. I advised that in my opinion this was not a safe route for the reasons stated above, that the proposed route was made up of gravel roads and can be difficult in the middle of summer let alone at 10:00 pm on a winter evening. He then repeated that 124 was closed. I again insisted that his option was not only unreasonable but unsafe and I would not be taking it. We were at a virtual standoff, and I was unsure what the outcome was going to be, as I was not about to put my safety in jeopardy by back tracking and taking the suggested route. He then pulled his vehicle away and continued southbound on 124 without further interaction.

I am aware that I was indeed traveling on a closed road. I also acknowledge that this officer was enforcing the road closure order. However; it is extremely unreasonable and reckless for the inhabitants of Hornings Mills to be denied access to our community over what comes down to 600m of closed road. Our community is made up of a variety of professionals, law enforcement officers, and medical first responders that are travelling into work during winter conditions and it would appear that these individuals are taking undue personal risk to avoid the situation described above. I would also like to question the allocation of our police resource (Constable Jason Mask), specifically the lack of common sense and discretion in cases like this. If officers are in place on this stretch of roadway already for "enforcement" could we not utilize this resource to facilitate safe passage rather than put our community members in harm's way? If this is an unreasonable option then perhaps council needs to rethink the placement of the road closed sign or an addition of a "local traffic only" amendment similar to construction zones. A majority of members in the Melancthon Community are aware of the weather conditions and the dangers they pose. Members are not travelling for recreational purposes but are forced to be on the roads for reasons outside of their control. I'm assuming that these road closures are

in place for travelers passing through and respect the fact that we all want to be out of harm's way. I just feel there are exceptions to every rule and in this case it may be an extremely small exception (600 meters) but outweighs the alternative route which clearly puts our community at higher risk.

I would like council to address the problem of community access to Hornings Mills during inclement weather. I would like to pose the question to council during the next meeting "How can we improve safe access to Hornings Mills during inclement weather and road closures"

Thank you for your time and consideration.

Amanda Graham



**MOTION**  
**MULMUR-MELANCTHON FIRE BOARD**  
**Monday, January 16, 2017**  
**Fire Hall – 6:00 pm**

**Present:** Chair Paul Mills from Mulmur Township  
Vice Chair James Webster from Melancthon Township  
Member Darren White from Melancthon Township  
Member Earl Hawkins from Mulmur Township  
Fire Chief Jim Clayton  
Secretary Kerstin Vroom

**Absent with Regrets:** Deputy Fire Chief Jeff Clayton

**Motion #7-17: Webster – White:** THAT the budget be approved as amended AND FURTHER THAT subject to the audit for 2016, be it resolved that any surplus or deficit of operating funds be allocated to the operating or deficit account in the 2017 budget.

**Carried.**





<b>CAPITAL BUDGET</b>			
		<b>Draft #2</b>	
<b>CAPITAL REVENUE</b>		<b>2017 BUDGET</b>	
02-1094-4140	MM FIRE-CAP REVENUE MELANCHTHON	\$ 47,500	
02-1094-4240	MM FIRE-CAP REVENUE MULMUR	\$ 47,500	
02-1094-4300	MM FIRE-TSFR FROM CAPITAL RESERVES	\$ 26,372	
	<b>Total Capital Revenue</b>	<b>\$ 121,372</b>	
<b>CAPITAL EXPENSES</b>			
02-1094-5128	MM FIRE CAPITAL PURCHASES (TSFR IN FROM	\$ 26,372	
02-1094-5300	MM FIRE TSF TO CAPITAL RESERVES	\$ 95,000	
		<b>\$ 121,372</b>	<b>4%</b>
	<b>Capital Surplus (deficit)</b>	<b>\$ -</b>	

## Denise Holmes

---

**From:** Steven Murphy <smurphy@dufferincounty.ca>  
**Sent:** Thursday, January 19, 2017 1:08 PM  
**To:** Susan Stone; jwilson@townofgrandvalley.ca; Denise Holmes, CAO/Clerk; John Telfer; Terry Horner; Mark Early  
**Subject:** Multi-Year Accessibility Plan 2017-2021  
**Attachments:** MultiYear Accessibility Plan 2017 - 2021 DRAFT Version 5.docx

The Accessibility for Ontarians with Disabilities Act requires every municipality to create and make publicly available a multi-year plan that addresses how the municipality will remove barriers, offer accessible services and prevent exclusion in compliance with the AODA and the Ontario Human Rights Code.

To this end the County of Dufferin's accessibility advisory committee, Access Dufferin, has created the attached DRAFT of a Multi-Year Accessibility Plan for 2017-2021. This plan identifies those goals that have been accomplished as well as those which we will address over the next five years.

Section 4(3.1) of Ontario Regulation 191/11 states "an upper-tier municipality and any lower-tier municipalities that form part of it for municipal purposes may prepare a joint accessibility plan". At the back of the attached plan you will find an annex specific to your municipality and your municipality's accessibility goals for the next five years.

I am asking that you review the plan, add any additional specific goals your municipality may have or be aware of and have your Council approve the Annex that pertains to your municipality prior to February 28<sup>th</sup>, 2017.

This plan will be going to the General Government Services committee in March and then to County Council in April for final approval.

I will be at DMOA tomorrow morning to speak about this document in more detail and to answer any questions you may have.



**Steve Murphy Emergency Management & Communications Coordinator**

**Corporate Services | County of Dufferin**

Phone: 519-941-2816 Ext. 2401

[smurphy@dufferincounty.ca](mailto:smurphy@dufferincounty.ca) | 55 Zina St., Orangeville, ON L9W 1E5

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# Multi-Year Access Plan 2017-2021



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# Contents

I.	<b>Statement from County of Dufferin Warden .....</b>	<b>4</b>
II.	<b>Statement from Access Dufferin Chair .....</b>	<b>4</b>
III.	<b>Background .....</b>	<b>4</b>
	Purpose of the MY Access Plan .....	4
	Definitions .....	5
	Accessibility Advisory Committee .....	7
	Composition of Access Dufferin .....	9
	Terms of reference for Access Dufferin .....	9
	Term of the Chair and Vice Chair .....	9
	Staff Resources .....	9
	Staff Liaison .....	9
	Quorum .....	9
	Access Dufferin's Purpose .....	10
	Duties and Functions of Access Dufferin .....	10
	Parties to this plan .....	11
	Public Input and Feedback .....	11
IV.	<b>Accomplishments to Date .....</b>	<b>12</b>
	2011 Accomplishments .....	12
	2012 Accomplishments .....	12
	2013 Accomplishments .....	13
	2014 Accomplishments .....	13
	2015 Accomplishments .....	13
	2016 Accomplishments .....	13
V.	<b>Goals .....</b>	<b>15</b>
	Goals for 2017 .....	15
	Goals for 2018 .....	16
	Goals for 2019 .....	17
	Goals for 2020 .....	18
	Goals for 2021 .....	19

**MY ACCESS PLAN DRAFT VERSION #5.0**

VI.	<b>Annex A – Township of Amaranth Multi-Year Accessibility Plan .....</b>	<b>21</b>
	Goals for 2017 .....	21
	Goals for 2018 .....	21
	Goals for 2019 .....	22
	Goals for 2020 .....	22
	Goals for 2021 .....	22
VII.	<b>Annex B – Township of East Garafraxa Multi-Year Accessibility Plan .....</b>	<b>23</b>
	Goals for 2017 .....	23
	Goals for 2018 .....	23
	Goals for 2019 .....	24
	Goals for 2020 .....	24
	Goals for 2021 .....	24
VIII.	<b>Annex C – Township of Melancthon Multi-Year Accessibility Plan .....</b>	<b>25</b>
	Goals for 2017 .....	25
	Goals for 2018 .....	25
	Goals for 2019 .....	26
	Goals for 2020 .....	26
	Goals for 2021 .....	26
IX.	<b>Annex D – Township of Mulmur Multi-Year Accessibility Plan .....</b>	<b>27</b>
	Goals for 2017 .....	27
	Goals for 2018 .....	27
	Goals for 2019 .....	28
	Goals for 2020 .....	28
	Goals for 2021 .....	28
X.	<b>Annex E – Town of Grand Valley Multi-Year Accessibility Plan .....</b>	<b>29</b>
	Goals for 2017 .....	29
	Goals for 2018 .....	29
	Goals for 2019 .....	30
	Goals for 2020 .....	30
	Goals for 2021 .....	30

XI.	<b>Annex F – Town of Mono Multi-Year Accessibility Plan .....</b>	<b>31</b>
	Goals for 2017 .....	31
	Goals for 2018 .....	31
	Goals for 2019 .....	32
	Goals for 2020 .....	32
	Goals for 2021 .....	32
XII.	<b>Annex G – Town of Shelburne Multi-Year Accessibility Plan .....</b>	<b>33</b>
	Goals for 2017 .....	33
	Goals for 2018 .....	33
	Goals for 2019 .....	34
	Goals for 2020 .....	34
	Goals for 2021 .....	34

## Statement from County of Dufferin Warden

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Insert statement from WARDEN here

## Statement from Access Dufferin Chair

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Insert statement from Anne here

## Background

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### Purpose of the MY Access Plan

Both the ***Ontario Disability Act (ODA)*** and the ***Accessibility for Ontarians with Disabilities Act (AODA)*** require Ontario government ministries, the broader public sector and other organizations to prepare annual accessibility plans. The intent of these accessibility planning requirements is to improve opportunities for all people, including people with disabilities. The County of Dufferin is committed to working with every sector of society to move towards a community in which no new barriers are created and existing ones are removed.

The purpose of this Multi-Year Accessibility Plan or MY Access Plan is to describe the measures that the County of Dufferin has taken during the previous year, and the measures that will be taken during the coming years, to identify, remove and prevent barriers to **all** people with disabilities.

The Ontario Disability Act specifies five requirements for the content of all annual accessibility plans:

- Report on the measures the organization has taken to identify, remove and prevent barriers to people with disabilities.

## **MY ACCESS PLAN DRAFT VERSION #5.0**

- Describe the measures in place to ensure that the organization assesses its Acts/by-laws, regulations, policies, programs, practices and services to determine their effect on accessibility for people with disabilities.
- List the policies, programs, practices and services that the organization will review in the coming year to identify barriers to people with disabilities.
- Describe the measures the organization intends to take in the coming year to identify, remove and prevent barriers to people with disabilities.
- Make the accessibility plan available to the public by posting on the web.

There are approximately 1.9 million people in Ontario with a disability. This number will increase as our population ages.

The ODA and AODA are designed so that cities, towns and other municipalities; hospitals; school boards; colleges and universities; public transportation providers, government ministries and agencies; the private sector and people with disabilities can work together to make Ontario an accessible province.

The ODA has several important provisions:

- An introduction to explain the goals of the act;
- Sections that outline the purpose and definitions covered in the act;
- Sections that outline the duties of the government of Ontario, municipalities, other organizations, agencies and others;
- A general part that describes accessibility plans; the roles of the Accessibility Advisory Council of Ontario and the Accessibility Directorate of Ontario; offences; regulations and review of the act;

The AODA sets several standards that all organizations in Ontario are required to comply with. These standards include:

- Accessible Customer Service
- Integrated Accessibility Standard (Transportation, Communication and Employment)
- Accessible Public Spaces

## **Definitions**

We have endeavored to use plain language wherever possible throughout this document and in all matters of accessibility definitions we respect the supremacy of the **Accessibility for**

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## **MY ACCESS PLAN DRAFT VERSION #5.0**

**Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11.** There are two definitions provided within the **AODA** that we want to ensure are understood by everyone however and they are as follows:

### **Disability**

P1(2) “disability” means,

- (a) any degree of physical disability, infirmity, malformation or disfigurement that is caused by bodily injury, birth defect or illness and, without limiting the generality of the foregoing, includes diabetes mellitus, epilepsy, a brain injury, any degree of paralysis, amputation, lack of physical co-ordination, blindness or visual impediment, deafness or hearing impediment, muteness or speech impediment, or physical reliance on a guide dog or other animal or on a wheelchair or other remedial appliance or device,
- (b) a condition of mental impairment or a developmental disability,
- (c) a learning disability, or a dysfunction in one or more of the processes involved in understanding or using symbols or spoken language,
- (d) a mental disorder, or
- (e) an injury or disability for which benefits were claimed or received under the insurance plan established under the *Workplace Safety and Insurance Act, 1997*; (“handicap”)

***Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11***

### **Barrier**

P1 (2) barrier” means anything that prevents a person with a disability from fully participating in all aspects of society because of his or her disability, including a physical barrier, an architectural barrier, an information or communications barrier, an attitudinal barrier, a technological barrier, a policy or a practice;

***Accessibility for Ontarians with Disabilities Act, 2005, S.O. 2005, c. 11***

## **Accessibility Advisory Committee**

The County of Dufferin's Accessibility Advisory Committee (AAC) was created as a "Special Purpose Body" and is required under **Accessibility for Ontarians with Disabilities Act** for municipalities with a population of 10,000 or more. In 2016 the County of Dufferin's AAC adopted the name **Access Dufferin** for themselves.

***29. (1) The council of every municipality having a population of not less than 10,000 shall establish an accessibility advisory committee or continue any such committee that was established before the day this section comes into force. 2005, c. 11, s. 29 (1).***

Although municipalities with a population of less than 10,000 are not required to have an Accessibility Advisory Committee the legislation does permit them to create one at the discretion of their elected council.

***(2) The council of every municipality having a population of less than 10,000 may establish an accessibility advisory committee or continue any such committee that was established before the day this section comes into force. 2005, c. 11, s. 29 (2).***

The Accessibility for Ontarians with Disabilities Act does require the Accessibility Advisory Committee to be comprised of members of the public, a majority of whom shall be people with a disability.

***(3) A majority of the members of the committee shall be persons with disabilities. 2005, c. 11, s. 29 (3).***

The act stipulates the broader responsibilities of the Accessibility Advisory Committee to provide advice, review site plans and perform other functions as specified in legislation.

***(4) The committee shall,***

***(a) advise the council about the requirements and implementation of accessibility standards and the preparation of accessibility reports and such other matters for which the council may seek its advice under subsection (5);***

***(b) review in a timely manner the site plans and drawings described in section 41 of the Planning Act that the committee selects; and***

***(c) perform all other functions that are specified in the regulations. 2005, c. 11, s. 29 (4).***

### **MY ACCESS PLAN DRAFT VERSION #5.0**

The requirements of the municipal council in regard to working with the AAC are also legislated and they include seeking advice from the committee on accessibility matters.

***(5) The council shall seek advice from the committee on the accessibility for persons with disabilities to a building, structure or premises, or part of a building, structure or premises,***

***(a) that the council purchases, constructs or significantly renovates;***

***(b) for which the council enters into a new lease; or***

***(c) that a person provides as municipal capital facilities under an agreement entered into with the council in accordance with section 110 of the Municipal Act, 2001 or section 252 of the City of Toronto Act, 2006. 2005, c. 11, s. 29 (5); 2006, c. 32, Sched. C, s. 1.***

The municipal council is also required to provide site plans to the AAC so that they may be reviewed.

***(6) When the committee selects site plans and drawings described in section 41 of the Planning Act to review, the council shall supply them to the committee in a timely manner for the purpose of the review. 2005, c. 11, s. 29 (6).***

#### **Access Dufferin Vision Statement**

To make the County of Dufferin the leading example of a jurisdiction with full accessibility for all people with disabilities.

#### **Access Dufferin Mission Statement**

To raise awareness of employees and citizens of the County of Dufferin about the accessibility needs of people with disabilities: communicational, intellectual, sensory, physical and mental health related. To provide support and training to employees to ensure that all citizens enjoy a barrier free County.

## **Composition of Access Dufferin**

The composition of Access Dufferin shall include citizen members, a majority of whom will have a disability. The 2014-2018 Access Dufferin committee members are:

- Anne Jordan – Chair
- Anthony Kilmartin
- Frank Hunt Jr.
- Mike Gravelle
- Peggy Bond
- Trevor Lewis
- Walter Benotto

## **Terms of reference for Access Dufferin**

The Terms of Reference for Access Dufferin are detailed in By-Law 2008-15.

## **Term of the Chair and Vice Chair**

The positions of Chair and Vice Chair shall be elected annually by the Committee at the first meeting of each year.

## **Staff Resources**

Committee Secretariat will be provided by County Staff.

## **Staff Liaison**

The Chief Building Official will liaise with the Committee on matters relating to the accessibility to County facilities.

The Community Services Director will liaise with the Committee on matters relating to the social housing component of the *Ontarians with Disabilities Act*.

Other staff members as required.

## **Quorum**

The quorum for all meetings of the AAC shall be a majority of voting members.

## **Access Dufferin's Purpose**

The purpose of the Accessibility Advisory Committee are to encourage and facilitate accessibility on behalf of all people by:

- Promoting public awareness and sensitivity;
- Encouraging cooperation among all service and interest groups to ensure a barrier free community for all persons;
- Identifying, documenting and advising on relevant issues and concerns within the corporate structure;
- Improving access to housing, transportation, education, recreation and employment, which are the qualities of a five star community in so far as these activities are within the areas of responsibility of the County of Dufferin;
- Improving communication among all levels of government and service agencies to make recommendations regarding policy and legislation, and;
- Recognizing that the needs of all persons are constantly changing.

## **Duties and Functions of Access Dufferin**

The Accessibility Advisory Committee assists Council by advising, reviewing and making comment and recommendations of interest to people with disabilities and dealing with community issues relevant to disabled persons within the framework of the goals and objectives.

Some of the items that may be reviewed by the Committee include:

- Providing advice each year about the preparation, implementation and effectiveness of the accessibility plan.
- Commenting on accessibility to County of Dufferin owned or leased facilities.
- Commenting on how the needs of people with disabilities can be better served through the municipality's purchasing of goods and/or services.
- Commenting on any municipal decisions relating to the purchase, construction, renovation or lease of new municipal facilities.
- Monitoring federal and provincial government directives and regulations and advising Council regarding same.
- Conducting research on accessibility issues.
- Recruiting new members as needed.

## **MY ACCESS PLAN DRAFT VERSION #5.0**

The Accessibility Advisory Committee acts as an advisory body to Council for the preparation, implementation and effectiveness of its accessibility plan.

Council will seek advice from the committee on the accessibility for persons with disabilities to a building, structure or premises, or a part of a building, structure or premises:

- a) That the Council purchases, constructs or significantly renovates
- b) For which the Council enters into a new lease; or
- c) That a person provides as municipal capital facilities under an agreement entered into with the council in accordance with the Municipal Act.

### **Parties to this plan**

All municipalities are required under the Integrated Accessibility Standard to develop and maintain a Multi-Year Accessibility Plan. To this end the County of Dufferin, the Towns of Grand Valley, Shelburne and Mono along with the Townships of Amaranth, East Garafraxa, Melancthon and Mulmur have adopted this multi-year accessibility plan, commonly referred to as **MY Access Plan**. Specific goals for each member municipality are attached to this plan as annexes.

### **Public Input and Feedback**

Dufferin County's *MY Access Plan* is your access plan. This means that the goals, objectives and strategies detailed in this plan came from public input. Whether through suggestions, comments, observations or input from the volunteers of the Access Dufferin advisory committee the MY Access Plan is a true public document. It was created by the public, for the municipality to benefit the public. At any time members of the public are welcome to provide feedback, comments and suggestions about this plan or any accessibility related matter by visiting on of the following;

- Any service counter at a County of Dufferin office (Courthouse, W&M Edelbrock Centre, Dufferin Oaks, OEYC – Shelburne, OEYC – Grand Valley, OEYC – Orangeville)
- Any service counter operated by a member municipality (Municipal Office, Community Centre, Library, etc.)
- Online by visiting [www.dufferincounty.ca](http://www.dufferincounty.ca) and selecting the “feedback” option
- In person to any elected official of a Dufferin County municipality

## Accomplishments to Date

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### **2011 Accomplishments**

- ✓ Ensured compliance with accessible website and content regulations
- ✓ Established accessible transportation policy
- ✓ Ensured compliance with regulations regarding accessible taxi services
- ✓ Ensured publicly available emergency information like evacuation plans or brochures were available in an accessible format
- ✓ Ensure compliance with requirement for individualized workplace emergency response information to employees who have disabilities.
- ✓ Toured municipally owned facilities to advise on barrier reduction

### **2012 Accomplishments**

- ✓ Prepare one or more written documents describing accessibility policies; and make the documents publicly available in an accessible format upon request.
- ✓ Establish, implement, maintain and document a multi-year accessibility plan, outlining the organization's strategy to prevent and remove barriers and meet its requirements under legislation.
- ✓ Consulted with Accessibility Advisory Committee members on bus stops, shelters and on-demand accessible taxicabs.
- ✓ Post the accessibility plan on the website and provide the plan in an accessible format upon request.
- ✓ Develop and deliver 'Creating Accessible Documents' train-the-trainer for IMT
- ✓ Incorporate accessibility criteria and features when procuring or acquiring goods, services or facilities, except where it is not practicable to do so.
- ✓ Incorporate accessibility features when designing, procuring or acquiring self-service kiosks.
- ✓ The library board will provide access to, or arrange for the provision of access to, accessible materials where they exist.
- ✓ Consult with its municipal accessibility advisory committee or the public and persons with disabilities to determine the proportion of on-demand accessible taxicabs required in the community.
- ✓ Ensure Accessible Customer Service training for staff is available through HR Department.
- ✓ Review site plans for the Edelbrock Centre and provide advice to the Chief Building Official

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **2013 Accomplishments**

- ✓ Develop and deliver a training program for staff on the Integrated Accessibility Standards
- ✓ Review and revise the existing Feedback Process
- ✓ Assist Human Resources Department to achieve accessible employment practices as required by legislation
- ✓ Reviewed and revised multi-year accessibility plan
- ✓ Posted the multi-year accessibility plan on the County website in an accessible format

### **2014 Accomplishments**

- ✓ Review and, if necessary, revise the existing Alternate Format procedure
- ✓ Reviewed and revised multi-year accessibility plan
- ✓ Reviewed requirement to incorporate accessibility design, criteria and features when purchasing new goods, services or facilities
- ✓ Ensured interactive electronic terminals that people use to job search at the W&M Edelbrock Centre are accessible
- ✓ Ensured new website content is accessible

### **2015 Accomplishments**

- ✓ Ensured a procedure was developed to train all employees and volunteers on the accessibility requirements that apply to their job duties and organization
- ✓ Ensured that surveys, comment cards and other formats used to gather feedback are accessible
- ✓ Ensured that hiring, retention and career development opportunities were accessible
- ✓ Ensured a documented process for developing individual accommodation plans and return to work plans were in place
- ✓ Ensured that the municipality will work with any person requesting public information is accommodated as soon as possible

### **2016 Accomplishments**

- ☐ Train all Access Dufferin committee members on the requirements of the Accessible Public Space standard.
- ☐ Through the development of a compliance checklist advise and assist municipalities on the accessibility of new or redeveloped public spaces including:
  - recreational trails and beach access routes
  - outdoor public use eating areas

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***MY ACCESS PLAN DRAFT VERSION #5.0***

- outdoor play spaces
  - public outdoor paths of travel
  - on and off street parking areas
  - service counters
  - fixed waiting lines
  - waiting areas with fixed seating
- 
- ☐ At meetings of the Access Dufferin Committee, review concerns and achievements generated by the community about access.
  - ☐ Develop a website location that receives comments about access.
  - ☐ As a committee, learn about the legislation and regulations that govern access.
  - ☐ Increase knowledge of the role of Access Dufferin among municipal staff members.
  - ☐ Host an Accessibility Compliance workshop for member municipalities to ensure a complete understanding of requirements.

## Goals

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### Goals for 2017

#### **Accessible Public Spaces**

- ☐ Develop an Accessible Public Spaces self-audit
- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Refine procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
- ☐ Review and revise County of Dufferin accessibility policies and procedures as necessary
- ☐ Investigate and report to Council on public suggestions to remove barriers

#### **Grants and Funding**

- ☐ Research and promote grants that assist municipalities in fulfilling the needs of the accessibility community
- ☐ Promote grants that provide assistance to those who may require help in residential, commercial or industrial retrofits.

#### **Emergency Services**

- ☐ Develop a vulnerable residents registry for people who may require additional assistance during a municipal emergency

#### **Communicate**

- ☐ Broadcast the availability of feedback systems to the public
- ☐ Broaden scope of awareness in all areas of accessibility planning to include developmental and neurological disabilities
- ☐ Meet or speak with leaders in other communities, researching successes and planning for growth of future accessible needs
- ☐ Expand the social media presence of Access Dufferin through greater use of the County's Facebook and Twitter profiles
- ☐ Use #AccessDufferin and/or #MYAccessPlan wherever possible in social media to foster interactive participation with the public

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **National Access Awareness Week**

- ☐ Develop a NAAW theme focused on developmental and neurological disabilities
- ☐ Host a NAAW learning symposium focused on developmental and neurological disabilities
- ☐ Incorporate the needs of developmental and neurological disabilities in customer service standards
- ☐ Improve access to recreational opportunities for persons with physical and neurological disabilities.
- ☐ Develop and implement expanded awareness training for staff on neurological disabilities.

### **Goals for 2018**

#### **Accessible Public Spaces**

- ☐ Investigate and report to Council on public suggestions to remove barriers

#### **Grants and Funding**

- ☐ Research and promote grants that assist municipalities in fulfilling the needs of the accessibility community
- ☐ Promote grants that provide assistance to those who may require help in residential, commercial or industrial retrofits.
- ☐ Review and revise County of Dufferin accessibility policies and procedures as necessary

#### **Emergency Services**

- ☐ Assist/guide emergency services bodies in training and programming with consideration towards physical, developmental and neurological disabilities.

#### **Communicate**

- ☐ Broaden scope of awareness in all areas of accessibility
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Meet or speak with leaders in other communities, researching successes and planning for growth of future accessible needs
- ☐ Use #AccessDufferin and/or #MYAccessPlan wherever possible in social media to foster interactive participation with the public

### **MY ACCESS PLAN DRAFT VERSION #5.0**

- ☐ Prepare articles for publication that feature resources for the public. These might include learning about “Ontario renovates” grants, “how to” guides for interacting with people with disabilities.

#### **National Access Awareness Week**

- ☐ Develop a NAAW theme focused on hearing disabilities
- ☐ Ensure the needs of people with hearing disabilities are reflected in customer service standards
- ☐ Improve access to recreational opportunities for persons with hearing disabilities
- ☐ Develop and implement expanded awareness training for staff on hearing disabilities.

### **Goals for 2019**

#### **Accessible Public Spaces**

- ☐ Investigate and report to Council on public suggestions to remove barriers

#### **Grants and Funding**

- ☐ Research and promote grants that assist municipalities in fulfilling the needs of the accessibility community
- ☐ Promote grants that provide assistance to those who may require help in residential, commercial or industrial retrofits.
- ☐ Review and revise County of Dufferin accessibility policies and procedures as necessary

#### **Communicate**

- ☐ Broaden scope of awareness in all areas of accessibility
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Meet or speak with leaders in other communities, researching successes and planning for growth of future accessible needs
- ☐ Use #AccessDufferin and/or #MYAccessPlan wherever possible in social media to foster interactive participation with the public
- ☐ Prepare articles for publication that feature resources for the public. These might include learning about “Ontario renovates” grants, “how to” guides for interacting with people with disabilities.

#### **National Access Awareness Week**

- ☐ Develop a NAAW theme focused on physical disabilities

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

- ☐ Ensure the needs of people with physical disabilities are reflected in customer service standards
- ☐ Improve access to recreational opportunities for persons with physical disabilities
- ☐ Develop and implement expanded awareness training for staff on physical disabilities.

### **Goals for 2020**

#### **Accessible Public Spaces**

- ☐ Investigate and report to Council on public suggestions to remove barriers

#### **Grants and Funding**

- ☐ Research and promote grants that assist municipalities in fulfilling the needs of the accessibility community
- ☐ Promote grants that provide assistance to those who may require help in residential, commercial or industrial retrofits.
- ☐ Review and revise County of Dufferin accessibility policies and procedures as necessary

#### **Communicate**

- ☐ Broaden scope of awareness in all areas of accessibility
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Meet or speak with leaders in other communities, researching successes and planning for growth of future accessible needs
- ☐ Use #AccessDufferin and/or #MYAccessPlan wherever possible in social media to foster interactive participation with the public
- ☐ Prepare articles for publication that feature resources for the public. These might include learning about “Ontario renovates” grants, “how to” guides for interacting with people with disabilities.

#### **National Access Awareness Week**

- ☐ Develop a NAAW theme focused on visual disabilities
- ☐ Ensure the needs of people with visual disabilities are reflected in customer service standards
- ☐ Improve access to recreational opportunities for persons with visual disabilities
- ☐ Develop and implement expanded awareness training for staff on visual disabilities.

**Goals for 2021**

**Accessible Public Spaces**

- ☐ Investigate and report to Council on public suggestions to remove barriers

**Grants and Funding**

- ☐ Research and promote grants that assist municipalities in fulfilling the needs of the accessibility community
- ☐ Promote grants that provide assistance to those who may require help in residential, commercial or industrial retrofits.
- ☐ Review and revise County of Dufferin accessibility policies and procedures as necessary

**Communicate**

- ☐ Broaden scope of awareness in all areas of accessibility
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Meet or speak with leaders in other communities, researching successes and planning for growth of future accessible needs
- ☐ Use #AccessDufferin and/or #MYAccessPlan wherever possible in social media to foster interactive participation with the public
- ☐ Prepare articles for publication that feature resources for the public. These might include learning about “Ontario renovates” grants, “how to” guides for interacting with people with disabilities.

**National Access Awareness Week**

- ☐ Develop a NAAW theme focused on mental health disabilities
- ☐ Ensure the needs of people with mental health disabilities are reflected in customer service standards
- ☐ Improve access to recreational opportunities for persons with mental health disabilities
- ☐ Develop and implement expanded awareness training for staff on mental health disabilities.

## **Annex A – Township of Amaranth Multi-Year Accessibility Plan**

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**The Township of Amaranth is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### **Goals for 2017**

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Assist in the development of a vulnerable residents registry for people who may require additional assistance during a municipal emergency
- ☐ Improve access to recreational opportunities for persons with physical, developmental and neurological disabilities.
- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2018**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary



## **Annex B – Township of East Garafraxa Multi-Year Accessibility Plan**

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**The Township of East Garafraxa is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### **Goals for 2017**

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Assist in the development of a vulnerable residents registry for people who may require additional assistance during a municipal emergency
- ☐ Improve access to recreational opportunities for persons with physical, developmental and neurological disabilities.
- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2018**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

**THIS DOCUMENT IS AVAILABLE IN ALTERNATE FORMATS UPON REQUEST**

**Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

**Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

**Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## **Annex C – Township of Melancthon Multi-Year Accessibility Plan**

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**The Township of Melancthon is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### **Goals for 2017**

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
- ☐ Broadcast the availability of feedback systems to the public
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- ☐ Assist in the development of a vulnerable residents registry for people who may require additional assistance during a municipal emergency
- ☐ Improve access to recreational opportunities for persons with physical, developmental and neurological disabilities.
- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2018**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## Annex D – Township of Mulmur Multi-Year Accessibility Plan

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**The Township of Mulmur is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### Goals for 2017

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
- ☐ Broadcast the availability of feedback systems to the public
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Assist in the development of a vulnerable residents registry for people who may require additional assistance during a municipal emergency
- ☐ Improve access to recreational opportunities for persons with physical, developmental and neurological disabilities.
- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### Goals for 2018

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## Annex E – Town of Grand Valley Multi-Year Accessibility Plan

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**The Town of Grand Valley is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### Goals for 2017

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
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- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Assist in the development of a vulnerable residents registry for people who may require additional assistance during a municipal emergency
- ☐ Improve access to recreational opportunities for persons with physical, developmental and neurological disabilities.
- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### Goals for 2018

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary



## Annex F – Town of Mono Multi-Year Accessibility Plan

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**The Town of Mono is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### Goals for 2017

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
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- ☐ Consult with public about the need for and design of outdoor public spaces, specifically parks and play areas.
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### Goals for 2018

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## Annex G – Town of Shelburne Multi-Year Accessibility Plan

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**The Township of East Garafraxa is committed to removing barriers and providing accessible services to all people regardless of ability.....**

STATEMENT OF COMMITMENT GOES HERE

### Goals for 2017

- ☐ Develop a policy regarding preventative and emergency maintenance of the accessible parts of their public spaces, such as frequency of inspecting sidewalks for cracks
- ☐ Develop procedures for handling temporary disruptions when an accessible part of their public spaces is not useable, such as putting up a sign explaining the disruption and outlining an alternative
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- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### Goals for 2018

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives in partnership with Access Dufferin
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

## ***MY ACCESS PLAN DRAFT VERSION #5.0***

### **Goals for 2019**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2020**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary

### **Goals for 2021**

- ☐ Comply with all legislated requirements of the AODA and other pertinent legislation
- ☐ Actively participate in National Access Awareness Week initiatives
- ☐ Investigate and report to Council on public suggestions to remove barriers
- ☐ Review and revise municipal accessibility policies and procedures as necessary



400 Clyde Road, P.O. Box 729 Cambridge, ON N1R 5W6

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January 23, 2017

Ms. Denise Holmes, CAO/Clerk-Treasurer  
Township of Melancthon  
157101 Highway #10  
Melancthon, ON L9V 2E6

Dear Sir or Madam,

**Re: 2017 Budget and Levy Meeting**

Please be advised that the Annual General Meeting of the Grand River Conservation Authority will be held on Friday, February 24, 2017, at 9:30 a.m. at the Administration Centre in Cambridge, to consider the 2017 Budget and General Municipal Levy.

The attached report, which includes the most recent draft of the 2017 Budget, will be presented to the General Membership on January 27, 2017. Based on previous board direction to staff, this draft budget includes a General Levy of \$11,075,000 which represents a 2.5% increase over 2016. The Levy, if approved at the Annual General Meeting, will be apportioned to watershed municipalities on the basis of "Modified Current Value Assessment" as outlined in Ontario Regulation 670/00 with an adjustment for the City of Hamilton, based upon a local agreement. The draft budget outlines the programs and services of the Grand River Conservation Authority and how those programs are expected to be funded in 2017. Also enclosed is a calculation of the apportionment of the General Levy to participating municipalities.

Should you have any questions concerning the Preliminary Budget or the process for establishing Levy, please contact the undersigned.

Yours truly,

A handwritten signature in black ink, appearing to read "Keith Murch".

Keith Murch,  
Assistant CAO and Secretary-Treasurer  
Grand River Conservation Authority

# Budget 2017

## Grand River Conservation Authority Summary of Municipal Levy - 2017 Budget

	% CVA in Watershed	2016 CVA (Modified)	CVA in Watershed	CVA-Based Apportionment	2017 Budget Operating Levy	2017 Budget Capital Levy	2017 Budget Total Levy	Actual 2016 Levy	% Change
Brant County	84.0%	5,446,291,473	4,574,884,837	3.20%	320,562	33,575	354,137	338,265	4.7%
Brantford C	100.0%	11,594,112,203	11,594,112,203	8.10%	812,400	85,089	897,489	883,153	1.6%
Amaranth Twp	82.0%	614,567,370	503,945,243	0.35%	35,311	3,698	39,009	37,791	3.2%
East Garafraxa Twp	80.0%	475,595,387	380,476,310	0.27%	26,660	2,792	29,452	28,069	4.9%
Town of Grand Valley	100.0%	352,562,716	352,562,716	0.25%	24,704	2,587	27,291	25,711	6.1%
Melancthon Twp	56.0%	454,303,380	254,409,893	0.18%	17,827	1,867	19,694	18,872	4.4%
Southgate Twp	6.0%	779,464,748	46,767,885	0.03%	3,277	343	3,620	3,501	3.4%
Haldimand County	41.0%	5,769,685,956	2,365,571,242	1.65%	165,756	17,361	183,117	182,875	0.1%
Norfolk County	5.0%	7,965,883,216	398,294,161	0.28%	27,908	2,923	30,831	30,138	2.3%
Halton Region	10.3%	33,945,230,659	3,502,828,212	2.45%	245,443	25,707	271,150	261,428	3.7%
Hamilton City	4.7%	72,428,903,704	3,404,158,474	2.38%	238,529	24,983	263,512	256,502	2.7%
Oxford County	38.1%	3,366,734,453	1,282,809,781	0.90%	89,887	9,415	99,302	97,368	2.0%
North Perth T	2.0%	1,655,467,227	33,109,345	0.02%	2,320	243	2,563	2,479	3.4%
Perth East Twp	40.0%	1,484,036,161	593,614,465	0.41%	41,595	4,357	45,952	44,969	2.2%
Waterloo Region	100.0%	81,573,751,711	81,573,751,711	57.02%	5,715,875	598,673	6,314,548	6,162,317	2.5%
Centre Wellington Twp	100.0%	4,031,002,059	4,031,002,059	2.82%	282,452	29,584	312,036	304,761	2.4%
Erin T	49.0%	2,153,968,898	1,055,444,760	0.74%	73,955	7,746	81,701	79,929	2.2%
Guelph C	100.0%	21,273,327,578	21,273,327,578	14.87%	1,490,623	156,125	1,646,748	1,609,513	2.3%
Guelph Eramosa Twp	100.0%	2,267,426,720	2,267,426,720	1.58%	158,879	16,641	175,520	171,781	2.2%
Mapleton Twp	95.0%	1,305,330,346	1,240,063,828	0.87%	86,891	9,101	95,992	92,664	3.6%
Wellington North Twp	51.0%	1,353,028,411	690,044,489	0.48%	48,351	5,064	53,415	52,263	2.2%
Puslinch Twp	75.0%	2,203,401,702	1,652,551,276	1.16%	115,794	12,128	127,922	124,652	2.6%
<b>Total</b>		<b>262,494,076,075</b>	<b>143,071,157,187</b>	<b>100.00%</b>	<b>10,025,000</b>	<b>1,050,000</b>	<b>11,075,000</b>	<b>10,809,000</b>	<b>2.5%</b>



# **Preliminary 2017 Budget**

January 27th, 2017

## **Grand River Conservation Authority**

### **2017 Budget**

#### **Index**

#### **Schedules**

#### **Pages**

##### **1) Summary Schedules**

• GRCA 2017 Budget Highlights	1-4
• Summary of Revenue and Expenditures	5
• Overview - 2017 Revenue by Source	6
• Overview – 2017 Expenditures by Category	7
• GRCA Per Capita Levy 2007 to 2017	8
• Summary of Expenditures, Funding and Change in Municipal Levy	9
• Summary of Municipal General Levy	10

##### **2) Section A – Operating Budget**

**11-36**

- Table 1: Water Resources Planning and Environment
- Table 2: Flood Forecasting and Warning
- Table 3: Water Control Structures
- Table 4: Planning
- Table 5: Forestry and Conservation Lands Property Tax
- Table 6: Conservation Services
- Table 7: Communications and Foundation
- Table 8: Outdoor Education
- Table 9: Corporate Services
- Table 10: Conservation Lands, Property Rentals, Hydro, Conservation Areas, and other Miscellaneous Revenues and Expenditures
- Other Information (Information Systems and Motor Pool)

##### **3) Section B – Capital Budget**

**37-38**

##### **4) Section C – Special Projects Budget**

**39-40**



## **GRCA 2017 Budget Highlights**

The Grand River Conservation Authority has a successful partnership of municipalities, working together to promote and undertake wise management of the resources of the Grand River watershed.

The Grand River stretches 300 kilometres from Dundalk in Dufferin County to Port Maitland on Lake Erie. It takes in one of the fastest growing regions in the province, with a population of more than 1,000,000. The Grand River watershed is also home to some of the most intensively farmed land in the nation.

The prospect of high growth and the impact on natural resources and the quality of life present an enormous challenge to the GRCA, municipalities and all watershed residents. It creates an urgent need to work co-operatively to care wisely for the Grand River and its resources.

The work of the GRCA is divided into seven business areas:

- Reducing flood damages
- Improving water quality
- Maintaining reliable water supply
- Protecting natural areas and biodiversity
- Watershed planning
- Environmental education
- Outdoor recreation

In order to carry out these functions, the GRCA draws revenues from a variety of sources:

- User fees, such as park admissions, nature centre programs, planning fees and others which are set to offset most, if not all, the cost of these services
- Revenues from property rentals and hydro generation at our dams
- Municipal levies, which are applied primarily to watershed management programs
- Municipal grants dedicated to specific programs, such as the Rural Water Quality Program and Water Quality Monitoring
- Provincial transfer payments for water management operating expenses
- Provincial grants for specific purposes, such as studies on Source Water Protection and Capital Projects related to water management
- Donations from the Grand River Conservation Foundation for programs such as outdoor education, tree nursery operations and various special projects
- Federal grants and other miscellaneous sources of revenue

In 2017, the GRCA will continue to work on the development and implementation of a Drinking Water Source Protection Plan for each of the four watersheds in the Lake Erie Source Protection Region, including the Grand River watershed under the *Clean Water Act, 2006*. All four Source Protection Plans are now approved. The Kettle Creek and Catfish Creek plans came into effect on January 1, 2015, and the plans for the Long Point Region and Grand River watersheds came into effect on July 1, 2016. Besides supporting municipalities and other agencies in implementing the plans, the focus will be to undertake water quantity risk assessment studies, development of water quantity policies, updating water quality vulnerability assessments, and the development of an annual progress reporting framework.

The Water Management Plan was endorsed in 2014 as an update to the 1982 Grand River Basin Study that charts a course of actions to reduce flood damages, ensure water supplies, improve water quality and build resilience to deal with a changing climate. The first annual progress report – A Report on Actions was published in 2015. Municipal, provincial and federal government and Six Nations Water Managers meet quarterly to report on the progress of the commitments they made in the Plan. Annual progress reporting is projected through to 2019.

During 2017 GRCA will continue to address impacts of Emerald Ash Borer on GRCA lands and will seek financial resources to manage this infestation.

At the end of 2014 GRCA received approval for four years of funding for a volunteer coordination program. This program became fully operational during 2015 and will continue through to 2018.

Major water control capital projects planned for 2017 to be finalized with final budget version.

## **1. Watershed Management and Monitoring**

Watershed management and monitoring programs protect watershed residents from flooding and provide the information required to develop appropriate resource management strategies and to identify priority actions to maintain a healthy watershed. Activities include operation of flood and erosion control structures such as dykes and dams; flood forecasting and warning; water quality monitoring; natural heritage restoration and rehabilitation projects; water quantity assessment; watershed and subwatershed studies.

### **Operating Expenditures:**

Water Resources Planning and Environment	\$2,181,300 (Table 1)
Flood Forecasting and Warning	\$ 780,300 (Table 2)
Water Control Structures	\$1,678,900 (Table 3)

**Capital Expenditures:** \$1,800,000 (Section B)

**Total Expenditures:** \$6,440,500

**Revenue sources:** Municipal levies and provincial grants.

## **2. Planning**

Program areas:

- a) **Natural Hazard Regulations**  
The administration of conservation authority regulations related to development in the floodplain, and other natural hazards e.g. wetlands, slopes, shorelines and watercourses.
- b) **Plan Input and Review**  
Planning and technical review of municipal planning documents and recommending environmental policies for floodplains, wetlands and other environmentally significant areas; providing advice and information to municipal councils on development proposals and severances; review of environmental assessments; and providing outside consulting services on a fee-for-service basis to other conservation authorities and agencies.

**Operating Expenditures:** \$1,922,900 (Table 4)

**Capital Expenditures:** NIL

**Revenue sources:** Permit fees, enquiry fees, plan review fees, provincial grants and municipal levy

## **3. Watershed stewardship**

The watershed stewardship program includes those activities associated with providing service and/or assistance to private and public landowners and community groups on sound water and environmental practices that will enhance, restore or protect their properties. Some activities are reforestation through the Burford Tree Nursery and tree planting programs, the Rural Water Quality Program, restoration and rehabilitation projects, providing conservation information through brochures, publications, the web site and media contacts.

**Operating Expenditures:**

Forestry & Conservation Land Taxes	\$ 1,489,700 (Table 5)
Conservation Services	\$ 837,500 (Table 6)
Communications and Foundation	\$ 676,900 (Table 7)

**Capital Expenditures:** NIL

**Total Expenditures:** \$3,004,100

**Revenue sources:**

Municipal levies and grants, provincial grants, tree sales, landowner contributions, donations from the Grand River Conservation Foundation and other donations.

## **4. Conservation Land Management**

This includes expenses and revenues associated with the acquisition and management of land owned or managed by the GRCA including woodlots, provincially significant wetlands (e.g. Luther Marsh, Dunnville Marsh), passive conservation areas, rail-trails and a number of rental properties. Activities include forest management, woodlot thinning, and hydro production at our dams.

**Operating Expenditures:**

Conservation Lands, Rentals, Misc	\$3,279,700 (Table 10-Conservation Lands)
Hydro Production	\$ 200,000 (Table 10-Hydro Production)

**Capital Expenditures:** NIL

**Total Expenditures:** \$3,479,700

**Revenue sources:**

Property rentals, hydro production, timber sales, conservation land income, donations from the Grand River Conservation Foundation

**5. Education**

The GRCA operates six nature centres, which provide curriculum-based programs to about 50,000 students from six school boards and independent schools throughout the watershed. In addition, about 16,000 members of the public attend day camps and weekend family and community events.

**Operating Expenditures:** \$1,245,800 (Table 8)

**Capital Expenditures:** NIL

**Revenue sources:** School boards, nature centre user fees, community event fees, donations from the Grand River Conservation Foundation and municipal general levy.

**6. Recreation**

This includes the costs and revenues associated with operating the GRCA's 11 active conservation areas. The GRCA offers camping, hiking, fishing, swimming, skiing and other activities at its parks. It provides 2,500 campsites, making it the second-largest provider of camping accommodation in Ontario. About 1 million people visit GRCA parks each year. The parks are financially self-sufficient.

**Operating Expenditures:** \$6,700,000 (Table 10)

**Capital Expenditures:** \$ 683,000 (Section B)

**Total Expenditures:** \$7,383,000

**Revenue sources:**

Conservation Area user fees and provincial grants.

**7. Corporate services**

This includes the cost of head office functions such as accounting and human resources, as well as the cost of facilities, insurance, consulting and legal fees and expenses relating to the General Membership.

**Operating Expenditures:** \$3,238,873 (Table 9)

**Capital Expenditures:** \$ 180,400 (Section B)

**Total Expenditures:** \$3,419,273

**Revenue sources:** Municipal levies and provincial grants.

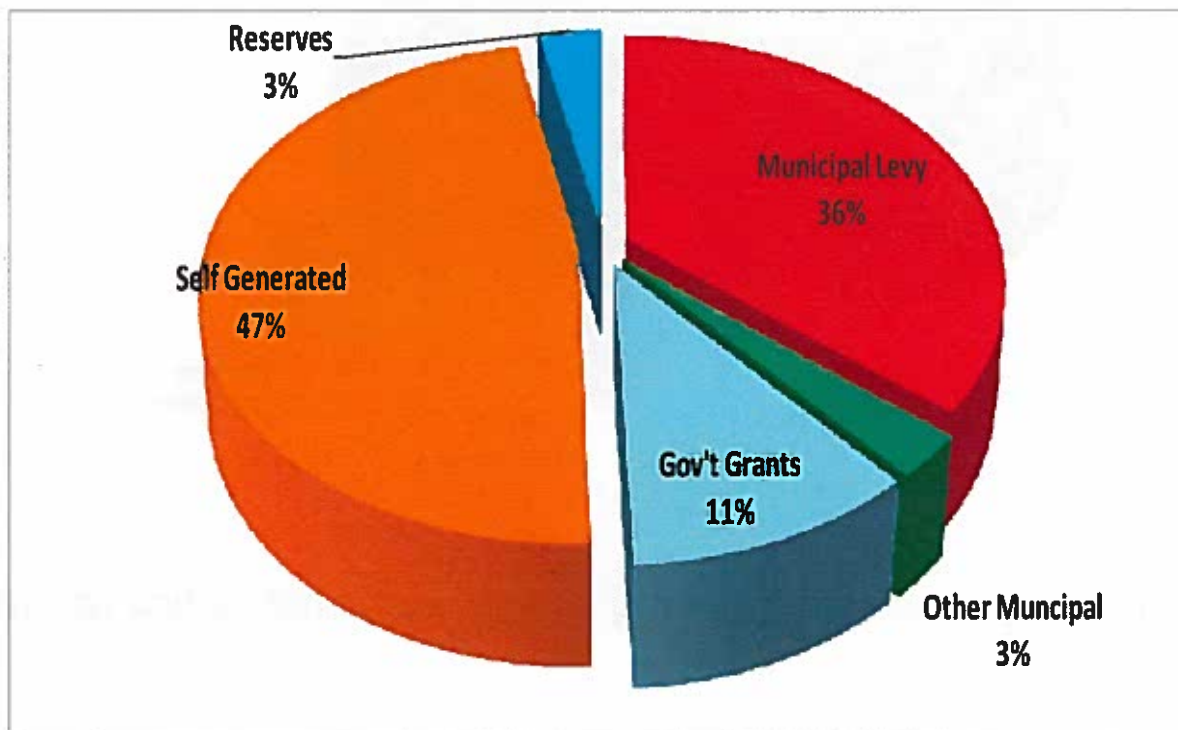
GRAND RIVER CONSERVATION AUTHORITY

**BUDGET 2017 - Summary of Revenue and Expenditures**

FUNDING		Actual 2015	Budget 2016	Budget 2017	Budget Incr/(decr)
	Municipal General Levy Funding	10,548,000	10,809,000	11,075,000	266,000 2.5%
	Other Government Grants	5,266,169	4,425,073	4,093,073	(332,000) -7.5%
	Self-Generated Revenue	15,662,665	14,450,318	14,550,200	99,882 0.7%
	Funding from Reserves	443,363	1,323,000	1,004,400	(318,600) -24.1%
<b>TOTAL FUNDING</b>		<b>31,920,197</b>	<b>31,007,391</b>	<b>30,722,673</b>	<b>(284,718)</b> -0.9%
EXPENDITURES		Actual 2015	Budget 2016	Budget 2017	Budget Incr/(decr)
	Base Programs - Operating includes funding to reserves	25,037,787	24,368,891	24,546,273	177,382 0.73%
	Base Programs - Capital	2,445,284	2,672,000	2,663,400	(8,600) -0.32%
	Special Projects	4,007,508	3,966,500	3,513,000	(453,500) -11.4%
<b>TOTAL EXPENDITURES</b>		<b>31,490,579</b>	<b>31,007,391</b>	<b>30,722,673</b>	<b>(284,718)</b> -0.9%
<b>NET RESULT</b>		<b>429,618</b>	<b>-</b>	<b>-</b>	

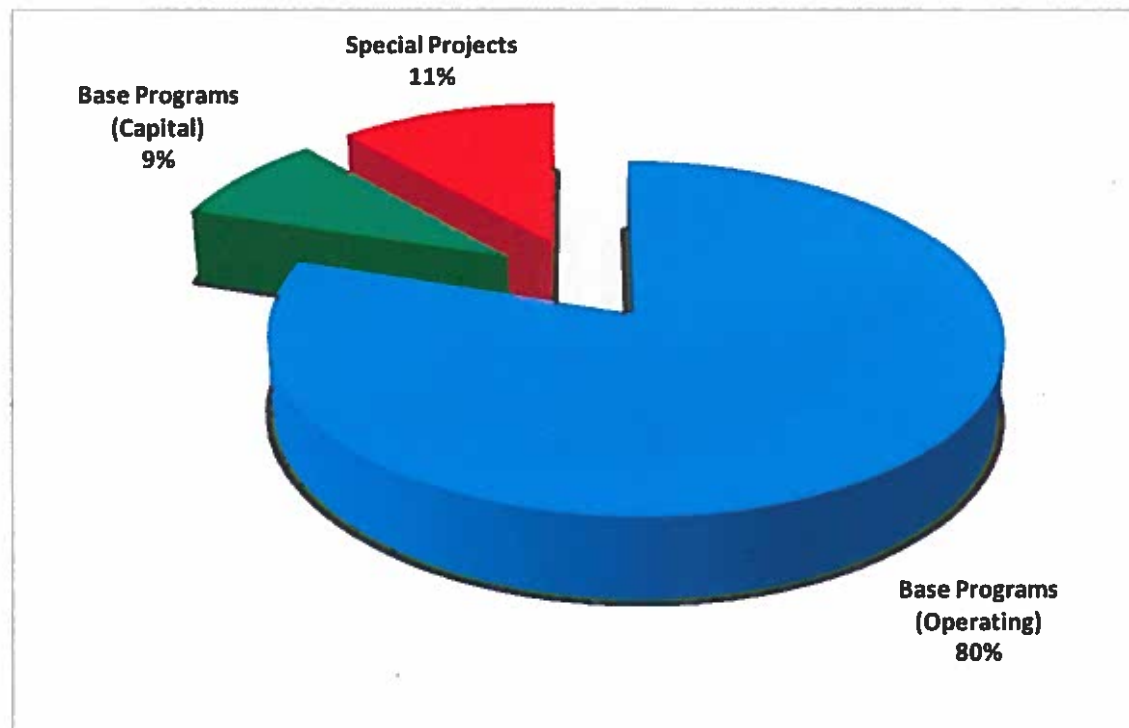
## 2017 Budget – Revenue by Source

Total 2017 Budget Revenue = \$30.7 Million (\$ 31.0 Million in 2015)



## 2017 Budget – Expenditures by Category

2017 Budget Expenditures = \$30.7 Million (\$ 31.0 Million in 2016)



# GRCA Per Capita Levy 2007 to 2017

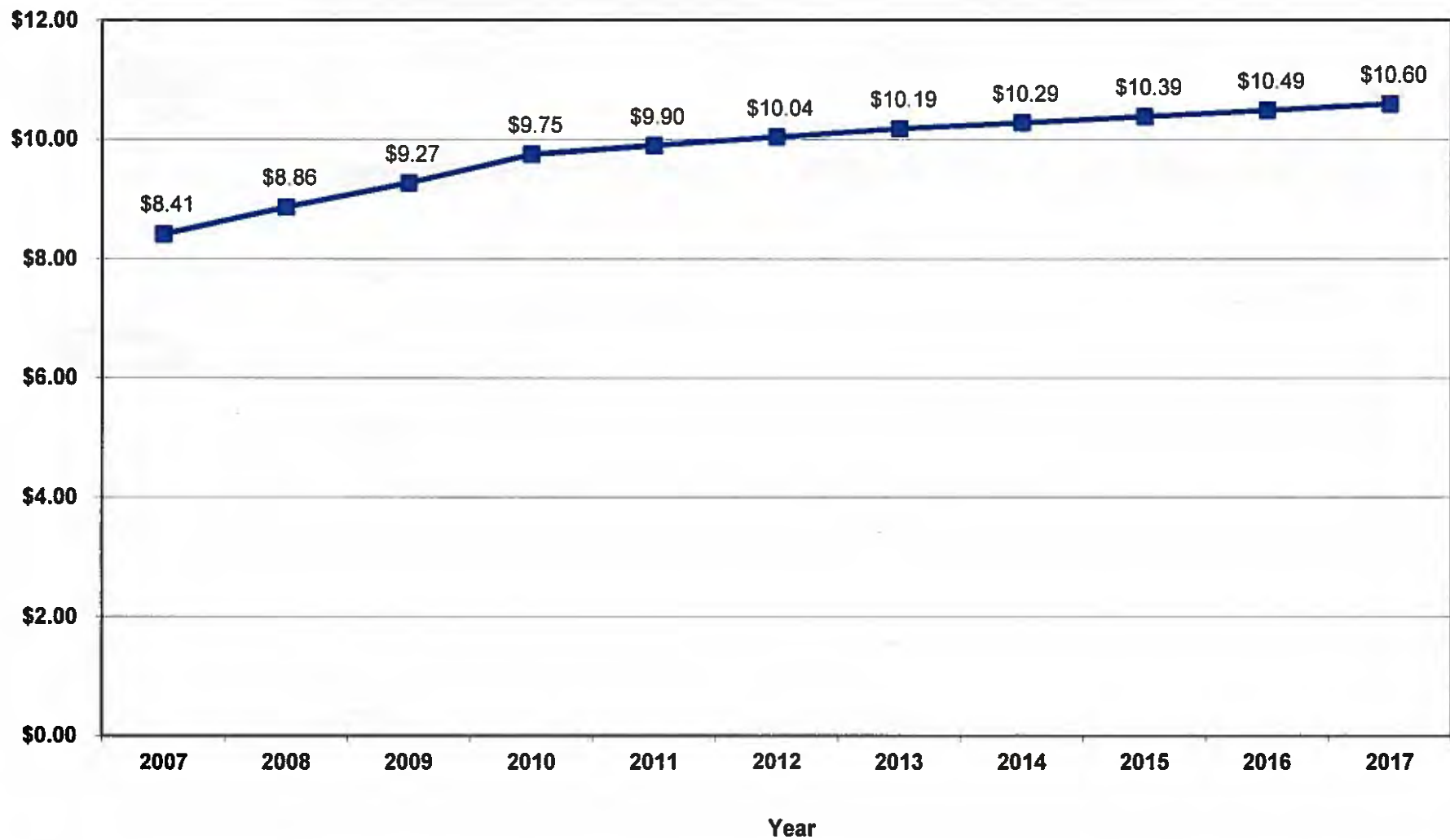




		TABLE 1	TABLE 2	TABLE 3	TABLE 4	TABLE 5	TABLE 6	TABLE 7	TABLE 8	TABLE 9	TABLE 10	TOTAL					
		Water Resources Planning & Environment	Flood Forecasting & Warning	Water Control Structures	Resource Planning	Forestry & Conservation Land Taxes	Conservation Services	Communications & Foundation	Environmental Education	Corporate Services	Surplus available to offset Municipal Levy Increase	Conservation Land and Rental Management and Misc	Hydro Production	Conservation Areas	TOTAL		
<b>2017 OPERATING</b>																	
TOTAL EXPENSES	A	2,181,300	780,300	1,676,900	1,922,900	1,489,700	837,500	676,900	1,245,800	3,238,873		3,594,100	200,000	6,700,000	24,546,273	A	
TOTAL OTHER FUNDING	B	150,700	252,955	400,350	941,068	857,000	148,000	0	926,500	155,000		3,278,700	470,000	6,700,000	14,281,273	B	
"Other Programs" Surplus/(Loss)	B less A											(314,400)	270,000	-	(44,400)		
Loss to be offset with Levy	C										44,400				(44,400)		
Surplus 2016 carried forward to 2017											(240,000)				240,000		
2017 Levy	A less B less C	2,030,600	527,345	1,276,550	981,832	632,700	689,500	676,900	319,300	3,083,873	(195,600)	0	0	0	10,025,000	C	
Lavy increase:															0	NET RESULT	
2017 Levy		2,030,600	527,345	1,276,550	981,832	632,700	689,500	676,900	319,300	3,083,873	(195,600)				10,025,000		
2016 Levy		1,981,700	507,745	1,287,050	1,001,132	626,300	668,700	629,300	303,900	3,106,641	(301,488)				9,809,000		
Lavy increase over prior year		48,900	19,600	[8,500]	[19,300]	6,400	22,800	47,600	15,400	[22,768]	105,868	n/a	n/a	n/a	216,000		
<b>2017 CAPITAL</b>																	
TOTAL EXPENSES	A	110,000	190,000	1,500,000						180,400				683,000	2,663,400		
TOTAL OTHER FUNDING	B	50,000	-	700,000						180,400				583,000	1,613,400		
2016 Levy	A less B	60,000	190,000	800,000						-				-	1,050,000		
Lavy increase:																	
2017 Levy		60,000	190,000	800,000						-				-	1,050,000		
2016 Levy		10,000	190,000	800,000						-				-	1,000,000		
Lavy increase over prior year		50,000	-	-						-				-	50,000		
<b>2017 SPECIAL</b>																	
TOTAL EXPENSES	A	203,000	200,000	835,000		200,000	983,000		220,000			672,000	200,000		3,513,000		
TOTAL OTHER FUNDING	B	203,000	200,000	835,000		200,000	983,000		220,000			672,000	200,000		3,513,000		
2017 Levy	A less B	-	-	-		-	-		-			-	-		-		
															TOTAL EXPENSES TOTAL FUNDING	30,722,673	
															NET RESULT	30,722,673	
																-	

# Budget 2017

## Grand River Conservation Authority Summary of Municipal Levy - 2017 Budget

	% CVA In Watershed	2016 CVA (Modified)	CVA in Watershed	CVA-Based Apportionment	2017 Budget Operating Levy	2017 Budget Capital Levy	2017 Budget Total Levy	Actual 2016 Levy	% Change
Brant County	84.0%	5,446,291,473	4,574,884,837	3.20%	320,562	33,575	354,137	338,265	4.7%
Brantford C	100.0%	11,594,112,203	11,594,112,203	8.10%	812,400	85,089	897,489	883,153	1.6%
Amaranth Twp	82.0%	614,567,370	503,945,243	0.35%	35,311	3,698	39,009	37,791	3.2%
East Garafraxa Twp	80.0%	475,595,387	380,476,310	0.27%	26,660	2,792	29,452	28,069	4.9%
Town of Grand Valley	100.0%	352,562,716	352,562,716	0.25%	24,704	2,587	27,291	25,711	6.1%
Melancthon Twp	56.0%	454,303,380	254,409,893	0.18%	17,827	1,867	19,694	18,872	4.4%
Southgate Twp	6.0%	779,464,748	46,767,885	0.03%	3,277	343	3,620	3,501	3.4%
Haldimand County	41.0%	5,769,685,956	2,365,571,242	1.65%	165,756	17,361	183,117	182,875	0.1%
Norfolk County	5.0%	7,965,883,216	398,294,161	0.28%	27,908	2,923	30,831	30,138	2.3%
Halton Region	10.3%	33,945,230,659	3,502,828,212	2.45%	245,443	25,707	271,150	261,428	3.7%
Hamilton City	4.7%	72,428,903,704	3,404,158,474	2.38%	238,529	24,983	263,512	256,502	2.7%
Oxford County	38.1%	3,366,734,453	1,282,809,781	0.90%	89,887	9,415	99,302	97,368	2.0%
North Perth T	2.0%	1,655,467,227	33,109,345	0.02%	2,320	243	2,563	2,479	3.4%
Perth East Twp	40.0%	1,484,036,161	593,614,465	0.41%	41,595	4,357	45,952	44,969	2.2%
Waterloo Region	100.0%	81,573,751,711	81,573,751,711	57.02%	5,715,875	598,673	6,314,548	6,162,317	2.5%
Centre Wellington Twp	100.0%	4,031,002,059	4,031,002,059	2.82%	282,452	29,584	312,036	304,761	2.4%
Erin T	49.0%	2,153,968,898	1,055,444,760	0.74%	73,955	7,746	81,701	79,929	2.2%
Guelph C	100.0%	21,273,327,578	21,273,327,578	14.87%	1,490,623	156,125	1,646,748	1,609,513	2.3%
Guelph Eramosa Twp	100.0%	2,267,426,720	2,267,426,720	1.58%	158,879	16,641	175,520	171,781	2.2%
Mapleton Twp	95.0%	1,305,330,346	1,240,063,828	0.87%	86,891	9,101	95,992	92,664	3.6%
Wellington North Twp	51.0%	1,353,028,411	690,044,489	0.48%	48,351	5,064	53,415	52,263	2.2%
Puslinch Twp	75.0%	2,203,401,702	1,652,551,276	1.16%	115,794	12,128	127,922	124,652	2.6%
<b>Total</b>		<b>262,494,076,075</b>	<b>143,071,157,187</b>	<b>100.00%</b>	<b>10,025,000</b>	<b>1,050,000</b>	<b>11,075,000</b>	<b>10,809,000</b>	<b>2.5%</b>

# **SECTION A**

## **BASE PROGRAMS – OPERATING**

## SECTION A - Operating Budget

GRAND RIVER CONSERVATION AUTHORITY

### Budget 2017 vs Budget 2016

	Actual 2015	Budget 2016	Budget 2017	Incr/(Decr)	%age change
<b>EXPENDITURES</b>					
OPERATING EXPENSES	25,037,787	24,368,891	24,546,273	177,382	0.73%
<b>Total Expenses</b>	<b>25,037,787</b>	<b>24,368,891</b>	<b>24,546,273</b>	<b>177,382</b>	<b>0.73%</b>
<b>SOURCES OF FUNDING</b>					
MUNICIPAL GENERAL LEVY (NOTE)	9,101,098	9,809,000	10,025,000	216,000	2.20%
MUNICIPAL SPECIAL LEVY	105,264	50,000	50,000	-	0.00%
OTHER GOVT FUNDING	1,560,921	978,573	938,573	(40,000)	-4.09%
SELF-GENERATED	13,947,494	12,777,700	13,168,700	391,000	3.06%
RESERVES	49,846	424,000	124,000	(300,000)	-70.75%
SURPLUS CARRYFORWARD	273,165	329,618	240,000	(89,618)	-27.19%
<b>Total BASE Funding</b>	<b>25,037,787</b>	<b>24,368,891</b>	<b>24,546,273</b>	<b>177,382</b>	<b>0.73%</b>

NOTE: See "Summary of Revenue, Expenditures and Changes in Municipal Levy" for details of \$216,000 levy increase.

## **TABLE 1**

### **(a) Watershed Studies**

This category includes watershed and subwatershed studies. These studies provide the strategic framework for understanding water resources and ecosystem form, functions and linkages. These allow for assessment of the impacts of changes in watershed resources and land use. Watershed studies also identify activities and actions that are needed to minimize the adverse impacts of change. This program supports other plans and programs that promote healthy watersheds.

#### ***Specific Activities:***

- Carry out or partner with municipalities and other stakeholders on integrated subwatershed plans for streams and tributaries. Subwatershed Plans are technical reports which provide comprehensive background on how surface water, groundwater, terrestrial and aquatic ecosystems function in a subwatershed. The plans recommend how planned changes such as urbanization can take place in a sustainable manner.
- Newsletter published.

### **(b) Water Resources Planning and Environment and Support**

This category includes the collection and analysis of environmental data and the development of management plans for protection and management of water resources and natural heritage systems. These programs assist with implementation of monitoring water and natural resources and assessment of changes in watershed health and priority management areas.

#### ***Specific Activities:***

- operate 8 continuous river water quality monitoring stations, 73 stream flow monitoring stations, 27 groundwater monitoring stations, and 37 water quality monitoring stations in conjunction with MOE, apply state-of-the-art water quality assimilation model to determine optimum sewage treatment options in the central Grand, and provide technical input to municipal water quality issues
- analyze and report on water quality conditions in the Grand River watershed
- maintain a water budget to support sustainable water use in the watershed, and maintain a drought response program
- analyze water use data for the watershed and provide recommendations for water conservation approaches
- provide advice to Provincial Ministries regarding water use permits to ensure that significant environmental concerns are identified so that potential impacts can be addressed.

### **(c ) Resource Management Division Support**

Provides support services to the Engineering and Resource Management Divisions including support for Flood Forecasting and Warning and Water Control Structures.

#### ***Specific Spending:***

- administrative services
- travel, communication, staff development and computer
- insurance

### **(d) Natural Heritage Management**

The natural heritage management **program** includes those activities associated with providing service and/or assistance to municipalities, private and public landowners and community groups on sound environmental practices that will enhance, restore or protect the aquatic and terrestrial ecosystems. The program includes watershed scale natural heritage assessments and implements restoration activities on GRCA land..

#### ***Specific Activities:***

- maintain and promote the ‘Grand River Fisheries Management Plan’.
- implement “best bets” for protection and enhancement of fisheries, work with outside agencies, non-government organizations and the public to improve fish habitat through stream rehabilitation projects including the implementation of the recommendations of the watershed studies.
- maintain and implement the Forest Management Plan for the Grand River watershed and develop and implement components of the watershed Emerald Ash Borer strategy
- carry out restoration and rehabilitation projects for aquatic and terrestrial ecosystems e.g. species at risk and ecological monitoring on GRCA lands, and prescribed burn activities and community events such as tree planting and stream restoration
- provide technical input and review services for applications that may affect the watershed ecosystems.

**TABLE 1**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Water Resources Planning & Environment**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget Change</b>
<b>Expenses:</b>				<b>Incr/(decr)</b>
Salary and Benefits	1,332,715	1,496,700	1,541,600	44,900
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	270,400	310,700	306,900	-3,800
Insurance	125,919	122,300	126,000	3,700
Other Operating Expenses	208,851	202,700	206,800	4,100
<b>TOTAL EXPENSE</b>	<b>1,937,885</b>	<b>2,132,400</b>	<b>2,181,300</b>	<b>48,900</b>
<b>Funding</b>				<b>(incr)/decr</b>
Municipal Other	105,031	50,000	50,000	
MNR Grant	33,200	33,200	33,200	0
Prov & Federal Govt	13,614	37,500	37,500	0
Donations	1,250	3,000	3,000	
Funds taken from Reserves		27,000	27,000	
<b>TOTAL FUNDING</b>	<b>153,095</b>	<b>150,700</b>	<b>150,700</b>	<b>-</b>
<b>Net Funded by General Municipal Levy</b>	<b>1,784,790</b>	<b>1,981,700</b>	<b>2,030,600</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>48,900</b>

## **TABLE 2**

### **Flood Forecasting and Warning**

The flood warning system includes the direct costs associated with monitoring the streams, and rivers in order to effectively provide warnings and guidance to municipalities and watershed residents during flood emergencies.

Overall, flood protection services provide watershed residents with an effective and efficient system that will reduce their exposure to the threat of flood damage and loss of life. It is estimated that the existing flood protection in the Grand River watershed saves an average of over \$5.0 million annually in property damage.

#### ***Specific Activities:***

- maintain a 'state of the art' computerized flood forecasting and warning system.
- operate a 24 hour, year-round, on-call duty officer system to respond to flooding matters.
- collect and manage data on rainfall, water quantity, reservoir conditions, water levels from 56 stream flow gauges, 22 rainfall gauges, and 12 snow courses.
- use data radio and Voice Alert system continuously, monitor river conditions and detect warning levels, assist municipalities with emergency planning, and respond to thousands of inquiries each year.



**TABLE 2**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Flood Forecasting & Warning**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>incr/(decr)</b>
Salary and Benefits	393,411	436,600	449,700	13,100
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	240,805	250,700	255,700	5,000
Other Operating Expenses	67,724	73,400	74,900	1,500
Amount set aside to Reserves	30,000			
<b>TOTAL EXPENSE</b>	<b>731,940</b>	<b>760,700</b>	<b>780,300</b>	<b>19,600</b>
<b>Funding</b>				<b>(incr)/decr</b>
MNR Grant	252,955	252,955	252,955	-
Prov & Federal Govt	6,740	-	-	-
<b>TOTAL FUNDING</b>	<b>259,695</b>	<b>252,955</b>	<b>252,955</b>	<b>-</b>
<b>Net Funded by General Municipal Levy</b>	<b>472,245</b>	<b>507,745</b>	<b>527,345</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>19,600</b>

### **TABLE 3**

#### **Water Control Structures**

This category includes costs associated with the capital and maintenance of structures, the primary purpose of which is to provide protection to life and property. These structures include dams, dykes, berms and channels etc. Also included in this category are non-flood control dams and weirs, which maintain upstream water levels.

Overall, flood protection services provide watershed residents with an effective and efficient system that will reduce their exposure to the threat of flood damage and loss of life. It is estimated that the existing flood protection in the Grand River watershed saves an average of over \$5.0 million annually in property damage.

#### ***Specific Activities:***

- operate and maintain 7 major multi-purpose reservoirs, which provide flood protection and flow augmentation, and 25 kilometres of dykes in 4 major dyke systems
- ensure structural integrity of flood protection infrastructure through dam safety reviews, inspections and monitoring, reconstruction of deteriorating sections of floodwalls and refurbishing of major components of dams
- carry out capital upgrades to the flood control structures in order to meet Provincial standards
- operate and maintain 22 non-flood control dams, which are primarily for aesthetic, recreational, or municipal water supply intake purposes
- develop and implement plans to decommission failing or obsolete dams
- ice management activities to prevent or respond to flooding resulting from ice jams
- develop and implement public safety plans for structures

**TABLE 3**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Water Control Structures**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>incr/(decr)</b>
Salary and Benefits	1,086,916	1,102,900	1,136,000	33,100
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	21,911	32,400	28,000	(4,400)
Property Taxes	167,255	178,200	183,500	5,300
Other Operating Expenses	283,154	373,900	331,400	(42,500)
Amount set aside to Reserves	130,000	-	-	-
<b>TOTAL EXPENSE</b>	<b>1,689,236</b>	<b>1,687,400</b>	<b>1,678,900</b>	<b>(8,500)</b>
<b>Funding</b>				<b>(Incr)/decr</b>
MNR Grant	400,350	400,350	400,350	-
<b>TOTAL FUNDING</b>	<b>400,350</b>	<b>400,350</b>	<b>400,350</b>	<b>-</b>
<b>Net Funded by General Municipal Levy</b>	<b>1,288,886</b>	<b>1,287,050</b>	<b>1,278,550</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>(8,500)</b>

## **TABLE 4**

### **(a) PLANNING - Regulations**

This category includes costs and revenues associated with administering the *Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation* made under the *Conservation Authorities Act*. This includes permit review, inspections, permit issuance, enforcement and follow-up, which may include defending appeals.

#### ***Specific Activities:***

- Process over 700 permits each year related to development, alteration or activities that may interfere with the following types of lands:
  - ravines, valleys, steep slopes
  - wetlands including swamps, marshes, bogs, and fens
  - any watercourse, river, creek, floodplain or valley land
  - the Lake Erie shoreline
- The regulation applies to the development activities listed below in the areas listed above:
  - the construction, reconstruction, erection or placing of a building or structure of any kind,
  - any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure
  - site grading
  - the temporary or permanent placing, dumping or removal of any material originating on the site or elsewhere.
- maintain policies and guidelines to assist in the protection of sensitive environmental lands (i.e. Policies for the Administration of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation)
- enforcement of the Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation and maintain compliance policies and procedures
- update and maintain flood line mapping; develop natural hazards mapping in digital format to be integrated into municipal planning documents and Geographic Information Systems

**(b) PLANNING - Municipal Plan Input and Review**

This program includes costs and revenues associated with reviewing Official Plans, Secondary and Community Plans, Zoning Bylaws, Environmental Assessments, development applications and other proposals, in accordance with Conservation Authority and provincial or municipal agreements. It also includes watershed management consulting outside of the Grand River watershed, which is done from time-to-time on a fee-for-service basis.

***Specific Activities:***

- review municipal planning and master plan documents and recommend environmental policies and designations for floodplains, wetlands, natural heritage areas, fisheries habitat, hazard lands and shorelines, which support GRCA regulations and complement provincial policies and federal regulations
- provide advice to municipalities regarding environmental assessments, and other proposals such as aggregate and municipal drain applications to ensure that all environmental concerns are adequately identified and that any adverse impacts are minimized or mitigated
- provide information and technical advice to Municipal Councils and Committees and Land Division Committees regarding development applications to assist in making wise land use decisions regarding protection of people and property from natural hazard areas such as flood plains and erosion areas and protection and enhancement of wetlands, fish and wildlife habitat and natural heritage systems

**TABLE 4**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Resource Planning**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>incr/(decr)</b>
Salary and Benefits	1,549,144	1,608,300	1,656,500	48,200
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT Insurance	192,577	209,600	213,800	4,200
Property Taxes				
Other Operating Expenses	22,532	51,600	52,600	1,000
Amount set aside to Reserves	30,000			
<b>TOTAL EXPENSE</b>	<b>1,794,253</b>	<b>1,869,500</b>	<b>1,922,900</b>	<b>53,400</b>
<b>Funding</b>				<b>(incr)/decr</b>
MNR Grant	114,568	114,568	114,568	-
Donations	-	-	-	-
Self Generated	894,624	753,800	826,500	(72,700)
<b>TOTAL FUNDING</b>	<b>1,009,192</b>	<b>868,368</b>	<b>941,068</b>	<b>(72,700)</b>
<b>Net Funded by General Municipal Levy</b>	<b>785,061</b>	<b>1,001,132</b>	<b>981,832</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>(19,300)</b>

## **TABLE 5**

### **Forestry**

The forestry program includes those activities associated with providing service and/or assistance to private and public landowners and community groups on sound environmental practices that will enhance, restore or protect their properties.

This category includes direct delivery of remediation programs including tree planting/reforestation.

#### ***Specific Activities:***

- plant trees on private lands (cost recovery from landowner)
- operate Burford Tree Nursery to grow and supply native and threatened species
- carry out tree planting and other forest management programs on over 7,000 hectares of managed forests on GRCA owned lands
- manage Emerald Ash Borer infestation

**TABLE 5**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Forestry & Conservation Land Taxes**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>Incr/(decr)</b>
Salary and Benefits	500,380	508,900	524,200	15,300
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	41,945	56,400	42,500	(13,900)
Property Taxes	162,428	167,600	172,600	5,000
Other Operating Expenses	561,703	750,400	750,400	0
Amount set aside to Reserves	20,000	-	-	0
<b>TOTAL EXPENSE</b>	<b>1,286,456</b>	<b>1,483,300</b>	<b>1,489,700</b>	<b>6,400</b>
<b>Funding</b>				<b>(Incr)/decr</b>
Donations	-	57,000	57,000	-
Self Generated	696,985	800,000	800,000	-
<b>TOTAL FUNDING</b>	<b>696,985</b>	<b>857,000</b>	<b>857,000</b>	<b>0</b>
<b>Net Funded by General Municipal Levy</b>	<b>589,471</b>	<b>626,300</b>	<b>632,700</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>6,400</b>



## **TABLE 6**

### **Conservation Services**

The conservation service program includes those activities associated with providing service and/or assistance to private and public landowners and community groups on sound environmental practices that will enhance, restore or protect their properties.

This category includes the Rural Quality program and Forestry extension services.

#### ***Specific Activities:***

- Co-ordinate the Rural Water Quality Program. This involves landowner contact, promotion/education and providing grants to assist farmers with capital improvements to address manure containment, livestock fencing, soil conservation, and other rural non-point sources of river water pollution. Funding for this important initiative comes from watershed municipalities and other government grants.
- Carry out tree planting, restoration and rehabilitation projects with private landowners
- Co-ordinate community events e.g. children's water festivals and agricultural and rural landowner workshops to promote water and environmental initiatives
- Co-ordinate GRCA Volunteer Program to enable public participation in community and GRCA environmental activities

**TABLE 6**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Conservation Services**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>Incr/(decr)</b>
Salary and Benefits	589,401	653,300	672,900	19,600
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	105,151	105,700	107,800	2,100
Other Operating Expenses	26,201	55,700	56,800	1,100
Amount set aside to Reserves	36,000			
<b>TOTAL EXPENSE</b>	<b>756,753</b>	<b>814,700</b>	<b>837,500</b>	<b>22,800</b>
<b>Funding</b>				<b>(Incr)/decr</b>
Municipal Other	233			
Prov & Federal Govt	32,911	30,000	30,000	-
Donations	55,942	87,000	87,000	-
Funds taken from Reserves	20,962	31,000	31,000	-
<b>TOTAL FUNDING</b>	<b>110,048</b>	<b>148,000</b>	<b>148,000</b>	<b>-</b>
<b>Net Funded by General Municipal Levy</b>	<b>646,705</b>	<b>666,700</b>	<b>689,500</b>	
<b>Net Incr/(decr) to Municipal Levy</b>				<b>22,800</b>

## **TABLE 7**

### **Communications & Foundation**

The communications program includes those activities associated with providing service and/or assistance to private and public landowners and community groups on sound environmental practices that will enhance, restore or protect their properties.

This category includes watershed-wide communication and promotion of conservation issues to watershed residents, municipalities and other agencies.

The Grand River Conservation Foundation provides private sector funding for GRCA projects with limited or no other sources of revenue. This category includes operational costs related to fundraising.

#### ***Specific Activities:***

- prepare and distribute brochures and publications; maintain displays and the website.
- respond to media inquiries and prepare media releases.
- make presentations to municipal councils, private and public landowners, community groups, service clubs, and the general public.
- approach potential donors for financial support.
- orient and train volunteers to assist with fund raising
- provide site tours and other events to stakeholders

**TABLE 7**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Communications & Foundation**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>incr/(decr)</b>
Salary and Benefits	481,220	466,300	504,300	38,000
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	68,233	77,600	74,000	(3,600)
Other Operating Expenses	75,419	110,400	98,600	(11,800)
Amount set aside to Reserves	-	-	-	-
<b>TOTAL EXPENSE</b>	<b>624,872</b>	<b>654,300</b>	<b>676,900</b>	<b>22,600</b>
<b>Funding</b>				<b>(Incr)/decr</b>
Donations	10,000	25,000	-	25,000
Self Generated	8,314	-	-	-
Funds taken from Reserves	-	-	-	-
<b>TOTAL FUNDING</b>	<b>18,314</b>	<b>25,000</b>	<b>-</b>	<b>25,000</b>
<b>Net Funded by General Municipal Levy</b>	<b>606,558</b>	<b>629,300</b>	<b>676,900</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>47,600</b>

## **TABLE 8**

### **Environmental Education**

This category includes costs and revenues associated with outdoor education facilities, which provide education and information about conservation, the environment and the Conservation Authority's programs to 50,000 students in 6 school boards and 16,000 members of the general public annually. The majority of funding for this program comes from school boards, the Grand River Conservation Foundation and public program fees.

#### ***Specific Activities:***

- operate 6 outdoor education centres under contract with watershed school boards, providing hands-on, curriculum-based, outdoor education (App's Mills near Brantford, Taquanyah near Cayuga, Guelph Lake, Laurel Creek in Waterloo, Shade's Mills in Cambridge and Rockwood)
- offer curriculum support materials and workshops to watershed school boards
- offer conservation day camps to watershed children and interpretive community programs to the public (user fees apply)

**TABLE 8**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Environmental Education**

<b>OPERATING</b>	<b>Actual 2015</b>	<b>Budget 2016</b>	<b>Budget 2017</b>	<b>Budget change</b>
<b>Expenses:</b>				<b>incr/(decr)</b>
Salary and Benefits	885,100	816,600	876,100	59,500
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	63,130	71,400	72,800	1,400
Insurance	9,387	12,700	13,100	400
Property Taxes	15,363	18,300	18,800	500
Other Operating Expenses	274,516	255,400	265,000	9,600
Amount set aside to Reserves	0	4,500		(4,500)
<b>TOTAL EXPENSE</b>	<b>1,247,496</b>	<b>1,178,900</b>	<b>1,245,800</b>	<b>66,900</b>
<b>Funding</b>				<b>(Incr)/decr</b>
Provincial & Federal Grants	4,238	0	0	0
Donations	79,778	50,000	50,000	0
Self Generated	872,398	825,000	876,500	(51,500)
<b>TOTAL FUNDING</b>	<b>956,414</b>	<b>875,000</b>	<b>926,500</b>	<b>(51,600)</b>
<b>Net Funded by General Municipal Levy</b>	<b>291,082</b>	<b>303,900</b>	<b>319,300</b>	
<b>Net incr/(decr) to Municipal Levy</b>				<b>15,400</b>

## **TABLE 9**

### **CORPORATE SERVICES**

This category includes the costs for goods and services, as listed below, that are provided corporately. A small portion of these costs is recovered from provincial grants, namely from source protection program funding and from the MNR operating grant.

#### **Specific Activities:**

This category includes the following departments:

- Office of the Chief Administrative Officer and the Assistant Chief Administrative Officer/Secretary-Treasurer
- Finance
- Human Resources
- Payroll
- Health & Safety
- Office Services

In addition, this category includes expenses relating to:

- The General Membership
- Head Office Building
- Office Supplies, Postage, Bank fees
- Head Office Communication systems
- Insurance
- Audit fees
- Consulting, Legal, Labour Relations fees
- Health and Safety Equipment, Inspections, Training
- Conservation Ontario fees
- Corporate Professional Development
- General expenses

**TABLE 9**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**Corporate Services**

**Budget 2017**

Surplus available to  
offset Municipal  
Levy Increase

**Expenses:**

Salary and Benefits	1,834,900
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	330,700
Insurance	55,000
Other Operating Expenses	1,018,273
Amount set aside to Reserves	
<b>TOTAL EXPENSE</b>	<b>3,238,873</b>

**Funding**

MNR Grant	70,000
Recoverable Corporate Services Expenses	70,000
Funds taken from Reserves	15,000
<b>TOTAL FUNDING</b>	<b>155,000</b>

Net Result before surplus adjustments	3,083,873
Surplus from Other Programs	(44,400)
2016 Surplus Carried Forward to 2017 used to reduce Levy	240,000
<b>Net Funded by General Municipal Levy</b>	<b>3,083,873</b>

**195,600**

**Budget 2016**

Surplus available to  
offset Municipal  
Levy Increase

**Expenses:**

Salary and Benefits	1,781,500
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	344,200
Insurance	53,400
Other Operating Expenses	1,082,541
Amount set aside to Reserves	
<b>TOTAL EXPENSE</b>	<b>3,261,641</b>

**Funding**

MNR Grant	70,000
Recoverable Corporate Services Expenses	70,000
Funds taken from Reserves	15,000
<b>TOTAL FUNDING</b>	<b>155,000</b>

Net Result before surplus adjustments	3,106,641
Deficit from Other Programs offset by 2015 Surplus Carryforward	(28,150)
2015 Surplus Carried Forward to 2016 used to reduce Levy	329,618
<b>Net Funded by General Municipal Levy</b>	<b>3,106,641</b>

**301,468**

**ACTUAL 2015**

Surplus available to  
offset Municipal  
Levy Increase

**Expenses:**

Salary and Benefits	1,676,349
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	310,358
Insurance	54,843
Other Operating Expenses	686,282
Amount set aside to Reserves	270,000
<b>TOTAL EXPENSE</b>	<b>2,997,832</b>

**Funding**

MNR Grant	70,000
Donations	-
Recoverable Corporate Services Expenses	80,743
<b>TOTAL FUNDING</b>	<b>150,743</b>

Net Result before surplus adjustments	2,847,089
Surplus from Other Programs	62,376
2014 Surplus Carried Forward to 2015 used to reduce Levy	273,165
<b>Net Funded by General Municipal Levy</b>	<b>2,847,089</b>

**335,541**



## **TABLE 10 (a)**

### **Conservation Lands, Rental Properties, Forestry & Misc**

The Conservation Land Management Program includes all expenses and revenues associated with acquisition and management of land owned/managed by the Authority. This includes protection of *Provincially Significant Conservation Lands*, woodlot management, rental/lease agreements and other revenues generated from managing lands and facilities. These expenses do not include those associated with recreation and education programs on GRCA lands.

#### ***Specific Activities:***

- acquire and manage significant wetlands and floodplain lands, e.g. the Luther Marsh Wildlife Management Area, the Keldon Source Area, the Bannister-Wrigley Complex, and the Dunnville Marsh
- operate “passive” conservation areas in order to conserve forests and wildlife habitat. Some are managed by municipalities or private organizations (Chicopee Ski Club in Kitchener, Scott Park in New Hamburg, etc.)
- develop and maintain extensive trail network on former rail lines owned by GRCA and municipalities (much of this is part of the Trans-Canada Trail network). Necessary funding is raised by The Grand River Conservation Foundation
- rent 733 cottage lots at Belwood Lake and Conestogo Lake; hold leases on over 1200 hectares of agricultural land and 48 residential units, and over 50 other agreements for use of GRCA lands. Income from these rentals aids in the financing of other GRCA programs
- host controlled hunts at various locations including Luther Marsh Wildlife Management Area and Conestogo Lake
- carry out forestry disease control, woodlot thinning and selective harvesting on GRCA lands in accordance with the Forest Management Plan while generating income from sale of timber. Income generated helps pay for future forest management activities
- where appropriate, dispose of lands that have been declared surplus and continue to identify and plan for disposition of other surplus lands. Proceeds from future dispositions will be used for acquisition of “Environmentally Significant Conservation Lands” and for other core programs
- Summer Experience Program and other provincial or federal programs
- payment of non-insured losses and deductibles for vandalism, loss or theft; miscellaneous amounts recovered from insurance settlements

- amounts received by us for distribution to other agencies, where expenditures and revenues are equal (e.g. receipts from provincial ministries to pay for contracts on their behalf)
- special projects funded by donations or government funding
- investment income arising from reserves and funds received in advance of program expenses
- General Municipal Levy funds the property tax for GRCA owned natural areas/passive lands.

### **TABLE 10 (b)**

#### **HYDRO PRODUCTION**

This program generates revenue from 'hydro production'.

##### ***Specific Activities:***

- generate hydro from turbines in 3 large dams, Shand, Conestogo and Guelph; the income is used to fund GRCA programs and repay reserves accordingly for the cost of building/repairing turbines.

### **TABLE 10 (c)**

#### **CONSERVATION AREAS**

These programs include costs and revenues associated with delivering recreational programs on GRCA lands and include the costs and revenues associated with day-use, camping, concessions and other activities at GRCA active Conservation Areas.

##### ***Specific Activities:***

- operate 11 "active" Conservation Areas (8 camping and 3 exclusively day-use) that are enjoyed by over 1 million visitors annually. It is estimated that these visitors also help generate significant revenues for the local tourism industry
- offer camping, hiking, fishing, swimming, boating, picnicking, skiing and related facilities
- provide 2,500 campsites – second only to the provincial park system as a provider of camping accommodation in Ontario

**TABLE 10**  
**GRAND RIVER CONSERVATION AUTHORITY**  
**OTHER PROGRAMS - OPERATING - SUMMARY of Results**

	Conservation Lands	Property Rentals	MISC	(a) Cons Lands, Rental, Misc	(b) Hydro Production	(c) Conservation Areas	TOTAL Other Programs
<b>Budget 2017 - OPERATING</b>							
<b>Expenses:</b>							
Salary and Benefits	1,012,200	602,500	-	1,614,700	41,300	3,763,800	
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	153,400	71,500	-	224,900	-	169,500	
Insurance	167,600	11,300	-	178,900	-	-	
Property Taxes	-	98,000	-	98,000	-	58,700	
Other Operating Expenses (consulting etc)	593,000	814,600	70,000	1,477,600	23,700	2,558,000	
Amount set aside to Reserves	-	-	-	-	135,000	150,000	
<b>TOTAL EXPENSE</b>	<b>1,926,200</b>	<b>1,597,900</b>	<b>70,000</b>	<b>3,594,100</b>	<b>200,000</b>	<b>6,700,000</b>	<b>10,494,100</b>
<b>Funding</b>							
Provincial Funding	-	-	-	-	-	-	
Donations	65,000	-	-	65,000	-	-	
Self Generated	86,000	2,929,700	148,000	3,163,700	470,000	6,700,000	
Funds taken from Reserves	1,000	50,000	-	51,000	-	-	
<b>TOTAL FUNDING</b>	<b>152,000</b>	<b>2,979,700</b>	<b>148,000</b>	<b>3,279,700</b>	<b>470,000</b>	<b>6,700,000</b>	<b>10,449,700</b>
<b>NET Surplus/(Deficit) for programs not funded by general levy</b>	<b>(1,774,200)</b>	<b>1,381,800</b>	<b>78,000</b>	<b>(314,400)</b>	<b>270,000</b>	<b>-</b>	<b>(44,400)</b>
<b>Budget 2016 - OPERATING</b>							
<b>Expenses:</b>							
Salary and Benefits	982,700	541,300	-	1,524,000	59,000	3,644,500	
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	156,400	70,100	-	226,500	-	165,800	
Insurance	162,700	15,800	-	178,500	-	-	
Property Taxes	-	138,900	-	138,900	-	57,000	
Other Operating Expenses (consulting etc)	556,400	1,120,000	70,000	1,746,400	34,000	2,462,700	
Amount set aside to Reserves	3,750	-	-	3,750	135,000	150,000	
<b>TOTAL EXPENSE</b>	<b>1,881,950</b>	<b>1,866,100</b>	<b>70,000</b>	<b>3,818,050</b>	<b>228,000</b>	<b>6,480,000</b>	<b>10,528,050</b>
<b>Funding</b>							
Provincial Funding	-	-	-	-	-	30,000	
Donations	65,000	-	-	65,000	-	-	
Self Generated	86,000	3,067,900	98,000	3,251,900	500,000	6,300,000	
Funds taken from Reserves	1,000	200,000	-	201,000	-	150,000	
<b>TOTAL FUNDING</b>	<b>152,000</b>	<b>3,267,900</b>	<b>98,000</b>	<b>3,517,900</b>	<b>500,000</b>	<b>6,480,000</b>	<b>10,497,900</b>
<b>NET Surplus/(Deficit) for programs not funded by general levy</b>	<b>(1,709,950)</b>	<b>1,381,800</b>	<b>28,000</b>	<b>(300,150)</b>	<b>272,000</b>	<b>-</b>	<b>(28,150)</b>
<b>Actual 2015 - OPERATING</b>							
<b>Expenses:</b>							
Salary and Benefits	984,147	528,141	-	1,512,288	49,902	3,625,321	
Travel, Motor Pool, Expenses, Telephone, Training and Development, IT	99,844	71,282	-	171,126	500	160,766	
Insurance	155,578	13,825	-	169,403	-	-	
Property Taxes	-	137,168	-	137,168	-	52,061	
Other Expenses	407,712	933,579	34,780	1,376,071	58,264	2,777,015	
Amount set aside to Reserves	490,179	305,000	120,000	915,179	290,000	676,000	
<b>TOTAL EXPENSE</b>	<b>2,137,460</b>	<b>1,988,995</b>	<b>154,780</b>	<b>4,281,236</b>	<b>398,666</b>	<b>7,291,163</b>	<b>11,971,064</b>
<b>Funding</b>							
Provincial/Federal	298,770	244,725	615	544,110	-	45,735	
Donations	61,083	20,000	-	81,083	-	141,073	
Self Generated	86,856	3,071,295	184,242	3,342,393	620,317	7,105,094	
Funds taken from Reserves	-	28,883	-	28,883	-	-	
<b>TOTAL FUNDING</b>	<b>446,709</b>	<b>3,364,903</b>	<b>184,857</b>	<b>3,996,469</b>	<b>620,317</b>	<b>7,291,902</b>	<b>11,908,688</b>
<b>NET Surplus/(Deficit) for programs not funded by general levy</b>	<b>(1,690,751)</b>	<b>1,375,908</b>	<b>30,077</b>	<b>(284,766)</b>	<b>221,651</b>	<b>739</b>	<b>(62,376)</b>

## **OTHER INFORMATION**

### **1. INFORMATION SYSTEMS & TECHNOLOGY - COMPUTER CHARGES**

A computer charge is allocated to the individual programs based on the number of users and the nature of system usage. Effectively, computer costs are included under administrative costs on Tables 1 to 10.

Computer charges include costs associated with implementing and operating corporate information technology.

#### ***Specific Activities:***

- Develop and implement the GRCA's long-term information technology and telecommunications plan. Create and maintain standards for the development and use of corporate data
- Manage and support the GRCA's server, network and personal computer infrastructure for geographic information systems (GIS); flood forecasting and warning, including real-time data collection and dissemination of water quantity and quality monitoring station information; database and applications development; website hosting; electronic mail; internet access; personal computing applications; and administration systems, including finance and human resources
- Develop, and implement the GRCA's Geographic Information Systems (GIS) technology and spatial data infrastructure
- Acquire and/or develop business and scientific applications for use at the GRCA
- Operate on-line campsite reservation and day-use systems with computers in 10 Conservation Areas. Provide computers for use at outdoor education centres
- Develop and operate a wide area network connecting 14 sites and campus style wireless point-to-multipoint networks at Head Office and Conservation Areas
- Develop and operate an integrated Voice over IP Telephone network covering nine sites and 220 handsets
- Support and manage mobile phones, smart phones, and pagers

## **2. VEHICLE, EQUIPMENT – MOTOR POOL CHARGES**

Motor Pool charges are allocated to the individual sections based on usage of motor pool equipment. Effectively, motor pool charges are included with administrative costs or other operating expenses, as applicable, on Tables 1 to 10.

### ***Specific Activities:***

- Maintain a fleet of vehicles and equipment to support all GRCA programs.
- Purchases of new vehicles and/or equipment.
- Disposal of used equipment.
- Lease certain equipment.

# **SECTION B**

## **BASE PROGRAMS – CAPITAL**

## **SECTION B – CAPITAL BUDGET**

Capital Spending in 2017 includes spending in the following program areas:

- Water Resources Planning
- Flood Forecasting and Warning
- Water Control Structures
- Conservation Areas

Water Resources Planning expenditures will be for water quality monitoring equipment.

Flood forecasting and warning expenditures will be for software systems and gauge equipment.

Water Control Structures 2017 projects to be finalized with final budget.

Conservation Area capital spending includes expenditures as part of the regular maintenance program as well as spending on major repairs and new construction. In 2017, major capital projects within the Conservation Areas will include:

- Elora Gorge – major repairs to the Marsden Pavilion
- Rockwood – sanitary forcemain

Corporate Services capital spending represents the portion of overall Information Services and Motor Pool expenses that are funded by the Information Technology (IT) and Motor Pool (MP) reserve. See “Other Information” above for spending descriptions for IT and MP.

## SECTION B - Capital Budget

GRAND RIVER CONSERVATION AUTHORITY

### Budget 2017

	Water Resources Planning & Environment	FFW	Flood Control Expenses	Conservation Land Management (Sch 4)	Conservation Areas	Corporate Services	BUDGET 2015 TOTAL
<b>Expenses:</b>							
WQ Monitoring Equipment & Instruments	110,000						110,000
Flood Forecasting Warning Hardware and Gauges		190,000					190,000
Flood Control Structures-Major Maintenance			1,500,000				1,500,000
Conservation Areas Capital Projects					683,000		683,000
PSAB Project							-
Building Major Maintenance							-
Net IT/MP Capital Spending not allocated to Departments						180,400	180,400
<b>TOTAL EXPENSE</b>	<b>110,000</b>	<b>190,000</b>	<b>1,500,000</b>	<b>-</b>	<b>683,000</b>	<b>180,400</b>	<b>2,663,400</b>
<b>Funding</b>							
Municipal Special Levy							-
Prov & Federal Govt			700,000		83,000		783,000
Self Generated					600,000		600,000
Funding from Reserves	50,000					180,400	230,400
<b>TOTAL FUNDING</b>	<b>50,000</b>	<b>-</b>	<b>700,000</b>	<b>-</b>	<b>683,000</b>	<b>180,400</b>	<b>1,813,400</b>
<b>Net Funded by General CAPITAL Levy</b>	<b>60,000</b>	<b>190,000</b>	<b>800,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,050,000</b>

### BUDGET 2014 - CAPITAL

	Water Resources Planning & Environment	FFW	Flood Control Expenses	Conservation Land Management (Sch 4)	Conservation Areas	Corporate Services	BUDGET 2015 TOTAL
<b>Expenses:</b>							
WQ Monitoring Equipment & Instruments	110,000						110,000
Flood Forecasting Warning Hardware and Gauges		190,000					190,000
Flood Control Structures-Major Maintenance			1,500,000				1,500,000
Conservation Areas Capital Projects					683,000		683,000
Net IT/MP Capital Spending not allocated to Departments						189,000	189,000
<b>TOTAL EXPENSE</b>	<b>110,000</b>	<b>190,000</b>	<b>1,500,000</b>	<b>-</b>	<b>683,000</b>	<b>189,000</b>	<b>2,672,000</b>
<b>Funding</b>							
Prov & Federal Govt			700,000		83,000	40,000	823,000
Self Generated					600,000		600,000
Funding from Reserves	100,000					149,000	249,000
<b>TOTAL FUNDING</b>	<b>100,000</b>	<b>-</b>	<b>700,000</b>	<b>-</b>	<b>683,000</b>	<b>189,000</b>	<b>1,672,000</b>
<b>Net Funded by General CAPITAL Levy</b>	<b>10,000</b>	<b>190,000</b>	<b>800,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,000,000</b>

### ACTUAL 2015 - CAPITAL

	Water Resources Planning & Environment	FFW	Flood Control Expenses	Conservation Land Management (Sch 4)	Conservation Areas	Corporate Services	ACTUAL 2015 TOTAL
<b>Expenses:</b>							
WQ Monitoring Equipment & Instruments	39,787						39,787
Flood Forecasting Warning Hardware and Gauges		155,067					155,067
Flood Control Structures-Major Maintenance			1,186,517				1,186,517
Conservation Areas Capital Projects					781,413		781,413
PSAB Project							-
Building Major Maintenance							-
Funding to Reserves		30,000	210,000			68,892	308,892
Net IT/MP Capital Spending not allocated to Departments						(26,392)	(26,392)
<b>TOTAL EXPENSE</b>	<b>39,787</b>	<b>185,067</b>	<b>1,396,517</b>	<b>-</b>	<b>781,413</b>	<b>42,500</b>	<b>2,445,284</b>
<b>Funding</b>							
Municipal Special Levy			12,235				12,235
Prov & Federal Govt	6,544		509,709			42,500	558,753
Self Generated			75,598		781,413		857,011
Funding from Reserves							-
<b>TOTAL FUNDING</b>	<b>6,544</b>	<b>-</b>	<b>597,542</b>	<b>-</b>	<b>781,413</b>	<b>42,500</b>	<b>1,427,999</b>
<b>Net Funded by General CAPITAL Levy</b>	<b>33,243</b>	<b>185,067</b>	<b>798,975</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,017,285</b>



# **SECTION C**

## **SPECIAL PROJECTS**

## **SECTION C – SPECIAL PROJECTS**

This category of activity represents projects that the GRCA undertakes where special one time and/or multi-year funding is applicable. The duration of these projects is typically one year although in some instances projects may extend over a number years, such as Source Protection Planning. External funding is received to undertake these projects.

The main project in this category is the Source Protection Planning project which commenced in 2004 and implementation began in 2015. Work includes research and studies related to the development of a Drinking Water Source Protection Plan for each of the four watersheds in the Lake Erie Source Protection Region. All four Source Protection Plans are now approved. The Kettle Creek and Catfish Creek came into effect on January 1, 2015, and the plans for the Long Point Region and Grand River watersheds came into effect on July 1, 2016.

Other special projects in the area of watershed stewardship include the “Rural Water Quality Program” grants, Emerald Ash borer infestation management, floodplain mapping projects, Upper Blair subwatershed study, Apps’ Mill Nature Centre renovation, Dickson trail and boardwalk rehabilitation, waste water optimization project, the Mill Creek Ranger stream restoration project and numerous ecological restoration projects on both GRCA lands and private lands in the watershed.

## SECTION C - Special Projects Budget

GRAND RIVER CONSERVATION AUTHORITY  
Budget 2017

EXPENDITURES	ACTUAL 2015	BUDGET 2016	BUDGET 2017
Dundas Valley Groundwater Study	130	-	-
Grand River Management Plan	36,305	20,000	20,000
Subwatershed Plans - City of Kitchener	67,547	130,000	100,000
Waste Water Optimization Program	124,964	125,000	83,000
Drought Contingency Pilot Project	1,682	-	-
Floodplain Mapping	180,279	200,000	200,000
RWQP - Capital Grants	1,014,449	800,000	800,000
Brant/Brantford Children's Water Festival	31,934	26,000	26,000
Haldimand Children's Water Festival	14,332	15,000	20,000
Species at Risk	68,214	75,000	60,000
Trees for Mapleton	25,179	-	-
2015 Biennial Tour	35,245	-	-
Ecological Restoration	163,009	150,000	200,000
Large Cover Placement Program	41,729	15,000	-
Trees for Guelph	37,875	40,000	-
Great Lakes SHSM Event	-	50,000	-
Great Lakes Agricultural Stewardship Initiative	-	90,000	77,000
Trails Capital Maintenance	5,210	-	-
Emerald Ash Borer	357,179	400,000	400,000
Forest in the City	202,504	-	-
Lands Mgmt - Land Purchases/Land Sale Expenses	36,339	300,000	-
Lands Mgmt - Development Costs	-	50,000	50,000
Mill Creek Rangers	30,711	35,000	35,000
Parkhill Hydro Turbine Project	-	-	200,000
Apps' Mill Nature Centre Renovation	-	423,500	220,000
Dickson Trail and Boardwalk Rehabilitation	-	187,000	187,000
<b>Total SPECIAL Projects 'Other'</b>	<b>2,474,816</b>	<b>3,131,500</b>	<b>2,678,000</b>
<b>Source Protection Program</b>	<b>1,532,692</b>	<b>835,000</b>	<b>835,000</b>
<b>Total SPECIAL Projects Expenditures</b>	<b>4,007,508</b>	<b>3,966,500</b>	<b>3,513,000</b>
<b>SOURCES OF FUNDING</b>			
Provincial Grants for Source Protection Program	1,532,692	835,000	835,000
OTHER GOVT FUNDING	1,538,803	1,738,500	1,433,500
SELF-GENERATED	542,495	743,000	594,500
FUNDING FROM(TO) RESERVES	393,518	650,000	650,000
<b>Total SPECIAL Funding</b>	<b>4,007,508</b>	<b>3,966,500</b>	<b>3,513,000</b>



*The Corporation of*

**THE TOWNSHIP OF MELANCTHON**

157101 Hwy. 10, Melancthon, Ontario, L9V 2E6

**Denise B. Holmes, AMCT**  
**CAO/Clerk**

Telephone - (519) 925-5525

Fax No. - (519) 925-1110

Website: [www.melancthontownship.ca](http://www.melancthontownship.ca)

Email: [info@melancthontownship.ca](mailto:info@melancthontownship.ca)

## **REPORT TO COUNCIL**

**TO: MAYOR WHITE AND MEMBERS OF COUNCIL**

**FROM: DENISE B. HOLMES, AMCT, CAO/CLERK**

**DATE: JANUARY 24, 2017**

**SUBJECT: STRATEGIC PLAN - RECOMMENDATION FOR THE AWARD OF THE REQUEST FOR PROPOSAL**

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### **RECOMMENDATION**

That the Strategic Planning Sub-Committee recommends to Council that the RFP for the Strategic Plan be awarded to Planscape in the amount of \$26,668.00, includes HST. And that the Ad hoc Strategic Planning Sub-Committee continue to manage the project moving forward.

### **BACKGROUND AND DISCUSSION**

Throughout the course of 2016, the Committee of the Whole held several meetings to discuss the development of a Strategic Plan for the Township of Melancthon. A Strategic Planning Sub-Committee was formed, comprising of Mayor White, Deputy Mayor Elliott and Councillor Webster. The Sub-Committee held meetings and met with Gerry Horst, OMAFRA and Shirley Boxem from Headwaters Community in Action for advice and assistance on the outline of a Strategic Plan. They provided information on how to hire a consultant for a Strategic Plan, and examples of Request for Proposals from other municipalities. This information was then shared with the Committee of the Whole and it was decided, that in the best interests of the Township, that the services of a consultant be retained to develop the Township's Strategic Plan.

On November 15, 2016, Deputy Mayor Elliott, Councillor Webster and the CAO met and developed the Request for Proposal, which was subsequently approved by Council on November 17, 2016 for posting on the "bidding.com" website. The deadline for RFP's was set at 4:00 p.m. on January 11, 2017, so that they could be opened at the January 12, 2017 Council meeting.

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A total of 13 Request for Proposals were opened at the meeting:

CONSULTANT NAME	SUB-TOTAL	HST	TOTAL REP
YAKU Consulting Limited	\$ 10,720.00	\$ 1,393.60	\$ 12,113.60
The Talent Business Solutions	\$ 12,800.00	\$ 1,664.00	\$ 14,464.00
BDO	\$ 15,690.00	\$ 2,040.00	\$ 17,730.00
Lura Consulting	\$ 17,550.00	\$ 2,281.50	\$ 19,831.50
Shercon Associates Inc.	\$ 20,475.00	\$ 2,661.75	\$ 23,136.75
The Letter M	\$ 21,764.00	\$ 2,829.00	\$ 24,593.00
Planscape	\$ 23,600.00	\$ 3,068.00	\$ 26,668.00
Mellor Murray Consulting	\$ 24,900.00	\$ 3,237.00	\$ 28,137.00
AtFocus Inc.	\$ 24,900.00	\$ 3,237.00	\$ 28,137.00
Botting, Thompson and Associates	\$ 25,000.00	\$ 3,250.00	\$ 28,250.00
Leah M. Stephenson & Associates	\$ 28,400.00	\$ 3,692.00	\$ 32,092.00
Compass Point Consulting	\$ 30,500.00	\$ 3,965.00	\$ 34,465.00
Simpson McGrath and Associates	\$ 120,000.00	\$ 6,000.00	\$ 126,000.00

The above Request for Proposals were then referred to the Strategic Planning Sub-Committee for review and recommendation.

The Strategic Planning Sub-Committee and CAO met on January 17, 2017 to start the review of the proposals. Discussion ensued and each member gave his or her choices on their selection and advised of their reasons why they were chosen. The proposals were then narrowed down to three (in no particular order): 1. Shercon Associates Inc.; 2. The Letter M; 3. Planscape

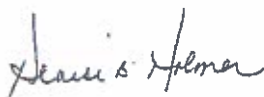
Each member and the CAO were asked to further review each proposal and evaluate them based on experience and qualifications, approach and budget.

On January 23, 2017, the Planning Sub-Committee held a further meeting to review the evaluations and the chosen consultant was Planscape. It was felt that an interview was not necessary, however, there would need to be an initial meeting once they were appointed by Council. The initial meeting will be to outline the Township's expectations moving forward on this project.

## FINANCIAL

The cost of the Strategic Plan to be prepared by Planscape is \$26,668.00 which includes the HST. Once the HST has been claimed, the net cost to the Township will be \$24,015.36.

Respectfully submitted,



Denise B. Holmes, CAO/Clerk

**THE CORPORATION OF THE TOWNSHIP OF MELANCTHON**

**BY-LAW NO. -2017**

**A BY-LAW TO AUTHORIZE THE USE OF ALTERNATIVE VOTING METHODS  
(TELEPHONE AND INTERNET) FOR THE 2018 SCHOOL BOARD AND MUNICIPAL  
ELECTION**

**WHEREAS**, *the Municipal Elections Act*, 1996, S.O. 1996, c.32, s. 42 provides that a municipal council may pass by-laws authorizing the use of voting and vote counting equipment and electors to use an alternative voting method that does not require electors to attend at a voting place in order to vote; and

**AND WHEREAS**, the Township of Melancthon deems it appropriate to use telephone and internet voting to conduct the 2018 school board and municipal election; and

**NOW THEREFORE** the Council of the Corporation of the Township of Melancthon hereby enacts as follows:

1. That the use of electronic voting by telephone and internet as alternative voting methods is hereby authorized by Council to conduct the 2018 school board and municipal election.
2. That the counting of ballots by electronic methods, in keeping with the voting method, is hereby authorized.
3. In this by-law, words shall have the same meaning as defined or set out in *the Municipal Elections Act*, 1996, S.O 1996, c.32, as amended.
4. No proxy voting provisions are applicable at the municipal elections conducted in accordance with this by-law.
5. Any person, Corporation or trade union guilty of corrupt practice or contravention of the provisions of *the Municipal Elections Act*, 1996, S.O. 1996, c.32, as amended may be prosecuted pursuant to the provisions of the said Act.
6. Any other previous by-laws authorizing alternative voting methods or containing contrary provisions of this by-law are hereby repealed.
7. That this by-law shall come into force and effect on the date of final passing thereof.

By-Law read a first, second and a third time and finally passed this 2<sup>nd</sup> day of February, 2017.

.....  
MAYOR

.....  
CLERK

## **Electronic Voting (eVoting) - Solution Overview**

Intelivote Systems Inc. (ISI) a Canadian owned and operated company, is the recognized Canadian leader in the successful implementation of eVoting; electors casting their ballots using the Internet, wireless devices and mobile or land line telephones.

The Intelivote solution even provides a seamless integration of traditional in-person polling station voting with an electronic voting solution which includes telephone and Internet voting. ISI's leadership position comes as a result of our extensive experience in conducting municipal, union, association, and political leadership elections in a secure and auditable fashion ensuring voter anonymity and ballot privacy.

Intelivote has delivered more eVoting events in Canada than all our competitors combined and in addition to our Canadian elections and events, we have gained international experience and credibility in the successful implementation of both Internet and telephone based voting applications used to deliver elections in the United States and the United Kingdom.



Intelivote understands that, in addition to other event requirements, event officials' mandate includes containing event costs, managing administrative time/effort, and providing overall management for the voting event. These requirements are among the key objectives and benefits available through the implementation of eVoting options.

ISI's extensive subject matter expertise in Ontario Municipal Elections, in conjunction with the experience gained from conducting electronic elections, has resulted in a full suite of election system modules that address the needs of both the election officials and voters.

Intelivote does not sell its software; it is provided as a voting service. There is no additional software or hardware for clients to purchase to run a voting event using the Intelivote suite of modules. All the services are provided with our base service and all the modules are Internet enabled; secured by encryption, digital certificates and login IDs and passwords.



Voter anonymity, PIN security and event auditability are paramount in the design and delivery of the eVoting solutions ISI provides. In addition, the ability to import elector information from clients' eligible Elector Lists (MPAC), export updated elector information and perform demographic and statistical analysis on voting activity, further demonstrates the flexibility of our voting solution.

The ability for authorized event officials to review information on particular aspects of the eVoting event as it progresses (elector participation rates, etc.) provides increased visibility to those voting event metrics that can define a successful electronic voting event.

**Township of Melancthon**  
**2018 Municipal and School Board Elections - eVoting Options**

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ISI maintains a hosted data centre environment in Halifax through Bell Canada, which also hosts some of the most sensitive government and financial applications running in Atlantic Canada. The full range of services we deliver, including high-speed high-bandwidth data capability, and scaleable IVR (telephone) port availability, further demonstrates our commitment to our ensuring an event with maximum performance, communications path diversity, application redundancy and high survivability.



ISI's project management capability, coupled with our established processes and procedures is delivered by a team of information systems professionals and electronic voting experts, providing clients with the best in-class Internet and telephone voting solution.

As traditional election costs continue to climb and voter participation rates continue to drop, providing voters with choice in how they cast their ballot offers an opportunity to increase voter participation, while at the same time decreasing the requirements for the number of polling stations equipped to handle paper ballots. Simply put, the cumulative savings associated with decreasing the number of (or eliminating entirely) staffed polling stations, reduced paper requirements (ballots, elector lists) and building rental fees, often covers the cost of the eVoting solution. Reducing the number of polling stations and offering electronic voting means fewer voters opting to travel to those polling stations, if a client still wants to operate and staff them.



Our experience confirms that several other categories of electors; disabled electors, retirees, shift workers and electors travelling are positively impacted by offering electronic voting. It is clear that eVoting specifically and effectively addresses all their requirements while at the same time offering them a new degree of convenience and secrecy not offered in traditional balloting at a polling location.

Out of region voters, actively deployed military personnel, students away attending school, business travelers, and infirmed voters are all examples of voters who have made use of eVoting in other elections ISI has conducted and form an important portion of most constituencies.

The ability to cast your ballot using the telephone, in addition to the Internet, addresses another important social-economic issue often cited in Internet-only voting solutions. The fact that Internet enabled electors have a more ample opportunity to cast their ballot than those who do not have Internet service, has been defined as a form of "digital divide" between certain groups of voters.

This demographic of electors who for various reasons, either are not comfortable with the technology, or cannot afford the technology (PC) and/or Internet service, are addressed by Intelivote's solution with the use of our telephone enabled voting. Typically everyone has access to phone service and this presents an equal opportunity to all electors. As an example, in the 48 Ontario municipal elections conducted by Intelivote in 2014, on average, 25% of all electors casting their ballot electronically used a phone to cast their vote, clearly confirming the value of this option.



**Township of Melancthon**  
**2018 Municipal and School Board Elections - eVoting Options**

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Intelivote has been proactive in accommodating persons with disabilities facilitating their comfort and participation when using eVoting services. Intelivote's solution is compliant with the guidelines as listed by the W3C technologies website principles which include organization, functionality and readability of information provided, as well as alternative ways of representing information (audio).



As traditional election/event costs continue to climb and elector participation rates continue to drop, providing electors with choice in how they cast their ballot offers an opportunity to increase elector participation and selecting Intelivote as the service supplier has significant advantages over our competition.

As noted earlier we are the Canadian leader in delivering eVoting services. **We are the only eVoting service organization with Federal Government security clearance for all our personnel, and our operations location.** This is in support of our selection as the supplier to the Federal Government of Canada for all the eVoting performed by the Canadian Labour Relations Board, and the Public Service Labour Relations Board.

Intelivote has the most experience in Ontario municipal elections amongst all the suppliers of eVoting services. We have conducted over 140 municipal elections and by-elections in Canada and lead the industry in these types of event.

The requirement for a documented set of policies and procedures governing the eVoting process is also an included service provided by Intelivote, as well as all the staff and electoral official training and support prior to and during your election.

The opportunity to provide your electors with the option of electronic voting is an important step in the evolution of democracy and will give electors the convenience of "Choice" in the method of casting their ballot in your eVoting event. Intelivote Systems has the experience and has laid the groundwork to ensure that when this step is taken it will be placed on a firm foundation.

### **Intelivote Modules**

A series of modules are included in the Intelivote system that ensure all the key stakeholders in the eVoting process are provided with the information they require to perform their tasks in support of the event. These include:

- **Auditor Module** – provides support for an independent third party to formally audit the voting and availability of the system during the eVoting period.
- **Ballot Review module** – provides the opportunity for event officials to review the spelling and audio quality of information appearing on the eVoting ballots prior to the voting event starting.
- **Chief Electoral Officer (CEO) module** – provides an interactive monitoring and reporting capability to review the activity of the electors as the eVoting progresses.
- **Voter Help module** – provides assistance to electors who contact the HelpLine by allowing agents to review and query the status of a member's activity. It is important to note that the agent can never see how an elector has cast their ballot.
- **Voter Help Supervisor module** – provides supervisory administration and management of the Voter HelpLine agents and their activities.
- **Enumerator module** – provides the event officials the opportunity to add eligible electors to the Electors List during a defined enumeration period.
- **Deputy Returning Office (DRO) module** – provides the DRO the capability to manage the electors appearing at a manual polling location by providing a capability to lookup electors, review their status within the eVoting system and strike them off the official list when a paper ballot is issued.
- **Candidate module** – offers candidates the opportunity to review and track elector "attendance" whether they are using electronic voting or manual voting and assists them in "getting the vote out".
- **Voter module** – facilitates electors casting their ballots using either a phone or an Internet enabled device.

**BY-LAW NO. \_\_\_\_ - 2017**

**TOWNSHIP OF MELANCTHON**

**PETERVALE FARMS DRAINAGE WORKS**

A By-law to provide for a drainage works in the Township of Melancthon in the County of Dufferin.

Whereas the requisite number of owners have petitioned the Council of the Township of Melancthon in the County of Dufferin in accordance with the provisions of the **Drainage Act**, R.S.O. 1990, requesting that the following lands be drained by a Drainage Works:

Pt. Lots 266, 267 & 268, Concession 2 S.W.

And whereas the Council of the Township of Melancthon in the County of Dufferin has procured a report made by R. J. Burnside & Associates Limited. The report is attached hereto and forms part of this by-law.

And whereas the estimated total cost of constructing the drainage works is \$120,000.00.

And whereas the Council of the Township of Melancthon pursuant to the Drainage Act, R.S.O. 1990, enact as follows:

1. The report dated December 21, 2016 and attached hereto as Schedule A is hereby adopted and the drainage works as therein indicated and set forth is hereby authorized and shall be completed in accordance therewith.
2. The Corporation of the Township of Melancthon may borrow on the credit of the Corporation the amount of \$120,000.00 being the amount necessary for construction of the drainage works.
3. A special rate shall be levied upon the lands as set forth in the assessment schedule included in Schedule A to the by-law to be collected in the same manner as other taxes are collected.
4. All assessments are payable in the same year as the assessment is imposed.
5. This by-law comes into force on the passing thereof and may be cited as the "Petrovale Farms Drainage Works By-law".

First Reading \_\_\_\_\_

Second Reading \_\_\_\_\_

Provisionally adopted this \_\_\_\_\_ day of \_\_\_\_\_, 2017

Mayor: \_\_\_\_\_

CAO/Clerk: \_\_\_\_\_

Third Reading \_\_\_\_\_

Enacted this \_\_\_\_\_ day of \_\_\_\_\_, 2017

Mayor: \_\_\_\_\_

CAO/Clerk: \_\_\_\_\_

**CORPORATION OF THE TOWNSHIP OF MELANCTHON**

**BY-LAW NO. -2017**

Being a By-law to amend By-law No. 61-2014 passed in open Council on December 18, 2014.

**WHEREAS** the Council of the Corporation of the Township of Melancthon deems it expedient to amend By-law No. 61-2014, a By-law to appoint a Board of Management for the Horning's Mills Park for the term of Council, ending on November 30, 2018.

**NOW THEREFORE** the Council of the Corporation of the Township of Melancthon enacts as follows:

That Jason Reiner and Corry Boyd be appointed to the Board of Management in the place of Rita and Christophe Kirch who resigned from the Board in 2016.

This By-law shall take effect and come into force on the passing thereof.

By-law read a first and second time this 2<sup>nd</sup> day of February, 2017.

By-law read a third time and passed this 2<sup>nd</sup> day of February, 2017.

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MAYOR

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CLERK

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To The corporation of the town of Melancthon

My name is Jason Reiner and I am writing the letter on behalf of my partner Corry Boyd and myself.

We are residents of Hornings Mills and wish to become part of its park board. We moved to Hornings Mills 4 years ago to the old Payne farm on the south side of Mill lane. Along with our son Patrick we have become involved in many events in the community since moving to Melancthon.

We have participated in preparing food for both of the park fundraisers that happened in 2015 and 2016. We are also involved with the fundraising dinners that have been held at the community center over the past two years. In view of members leaving the board it was brought to our attention that new members were needed.

We would like to submit this as our application to the park board. We are both employed locally. Corry is a freelance equestrian trainer in the area with her own business and I am the Chef of the Rosemont General Store. We have a lot of connections to the area and know a lot of individuals in the community that we would be able to draw on for support in future events. Any questions or references can be provided upon request.

Thank you.

Jason Reiner

Melancthon On

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**CORPORATION OF THE TOWNSHIP OF MELANCTHON**

**BY-LAW NO. -2017**

Being a By-law to amend By-law No. 60-2014 passed in open Council on December 18, 2014.

**WHEREAS** the Council of the Corporation of the Township of Melancthon deems it expedient to amend By-law No. 60-2014, a By-law to appoint a Board of Management for the Horning's Mills Cemetery for the term of Council, ending on November 30, 2018.

**NOW THEREFORE** the Council of the Corporation of the Township of Melancthon enacts as follows:

That Sarah Harrison be appointed to the Board in the place of Nancy Malek who resigned from the Board in 2016.

This By-law shall take effect and come into force on the passing thereof.

By-law read a first and second time this 2<sup>nd</sup> day of February, 2017.

By-law read a third time and passed this 2<sup>nd</sup> day of February, 2017.

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MAYOR

---

CLERK

**CORPORATION OF THE TOWNSHIP OF MELANCTHON**

**BY-LAW NO.     -2017**

Being a By-law to amend By-law No. 53-2016 passed in open Council on December 1, 2016.

**WHEREAS** the Council of the Corporation of the Township of Melancthon deems it expedient to amend By-law No. 53-2016, a By-law to appoint a Board of Management for the Horning's Mills Community Hall from December 1, 2016 to November 30, 2017.

**NOW THEREFORE** the Council of the Corporation of the Township of Melancthon enacts as follows:

That Jocelyn Burke and Tom Thayer be appointed to the Board of Management.

This By-law shall take effect and come into force on the passing thereof.

By-law read a first and second time this 2<sup>nd</sup> day of February, 2017.

By-law read a third time and passed this 2<sup>nd</sup> day of February, 2017.

\_\_\_\_\_  
MAYOR

\_\_\_\_\_  
CLERK

# • Municipal Planning Services Ltd. •

## MEMORANDUM

**To:** Mayor White and Members of Council  
**Copy:** Ms. Denise Holmes, CAO  
**From:** Chris D. Jones MCIP, RPP  
**Date:** December 8, 2016  
**Re:** Draft OPA to Implement Source Protection Plans

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## BACKGROUND

The South Georgian Bay Lake Simcoe Source Protection Plan was approved by the Ministry on January 26, 2015 and became effective on ~~January~~ <sup>July</sup> 1, 2015.

The Grand River Source Protection Plan (Lake Erie Source Protection Region) was approved by the Ministry on November 26, 2015 and also became effective on January 1, 2015.

Source Protection Plans are authorized by the *Clean Water Act*, and their purpose is to protect existing and future drinking water sources and to eliminate threats to drinking water.

## PURPOSE OF THIS REPORT and DRAFT OPA

The purpose of this report is to advise Council that a draft official plan amendment has been prepared to implement planning and land use related aspects of the Source Protection Plans, which is a requirement of the Province of Ontario through the *Clean Water Act*.

The draft OPA is attached to this report, however a summary of the OPA is provided below:

- There are four "vulnerable areas" in the Township. These are wellhead protection areas, three of which are municipal wellheads and protection areas that belong to the Town of Shelburne and the other is a portion of a wellhead protection sub-area for a municipal well located in Dundalk;
- A description of the wellhead sub-areas (travel time areas) has been provided in the OPA;
- Prohibitions on land use such as waste disposal sites and fertilizer storage have been included in the draft OPA;

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• Municipal Planning Services Ltd. •

Chris D. Jones BES, MCIP, RPP  
51 Churchill Drive, Unit 1  
Barrie, Ontario  
(705) 725-8133

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~~PL 3~~ DEC 15 2016



- Development policies for sewage systems and facilities as well as stormwater management have been included in the draft OPA;
- Policies requiring proponents to assess potential impacts within vulnerable areas have been added as a pre-consultation requirement; and,
- Policies dealing with transport pathways have been included in the OPA.

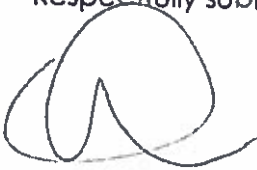
The draft OPA is subject to an approval process set out in Section 17 of the Planning Act. As such, the Township is required to pre-consult with the County of Dufferin and other applicable agencies and schedule a public meeting to allow members of the public to comment on the draft amendment.

### **RECOMMENDATIONS**

If Council concurs with this report and finds the draft OPA to be acceptable, the following recommendations are provided for consideration:

1. That this report be received;
2. That the Township initiate pre-consultation discussions with the County of Dufferin and the Risk Management Official (RMO) for the Township of Melancthon; and,
3. That the Clerk schedule a public meeting on the draft OPA in accordance with the requirements of the Planning Act.

Respectfully submitted,



Chris Jones MCIP, RPP

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• Municipal Planning Services Ltd. •

Chris D. Jones BES, MCIP, RPP  
51 Churchill Drive, Unit 1  
Barrie, Ontario  
(705) 725-8133

2005 JUN 10 10:00 AM  
Municipal Planning Services Ltd.

**AMENDMENT NO. 1  
TO THE TOWNSHIP OF MELANCTHON  
OFFICIAL PLAN**

**This Amendment applies to:**

**Lands located in the Township of Melancthon and identified as a vulnerable area by the  
South Georgian Bay Lake Simcoe and Grand River Source Protection Plans**

**(First Draft - December 9, 2016)**

## **CONSTITUTIONAL STATEMENT**

The following Amendment to the Official Plan of the Township of Melancthon consists of three parts.

**Part A** - The Preamble, consisting of the purpose, location and basis of the Amendment, does not constitute part of this Amendment.

**Part B** - The Amendment consisting of the noted text and mapping constitutes Amendment No. 1 to the Official Plan for the Township of Melancthon.

**Part C** - The Appendices.

Draft

## **PART A - THE PREAMBLE**

### **PURPOSE**

The purpose of this Amendment is to implement recommendations of the South Georgian Bay Lake Simcoe and Grand River Source Protection Plans as required by the *Clean Water Act*.

### **LOCATION**

The Amendment affects the following specific areas in the Township of Melancthon:

1. Lands located adjacent to the settlement of Dundalk in the Township of Southgate; and,
2. Lands located adjacent to the Town of Shelburne;

### **BASIS**

The basis and authority for the amendment is fundamentally derived from the following sources:

1. Section 3 of The *Planning Act*, which authorizes the Minister to issue policy statements;
2. Section 2.2 of the Provincial Policy Statement (2014), specifically Section 2.2.1 (e) which requires municipalities to protect municipal drinking water supplies and designated vulnerable areas;
3. Section 40 of The *Clean Water Act* which requires Official Plans to conform with local Source Protection Plans;
4. The South Georgian Bay Lake Simcoe Source Protection Plan prepared for the Nottawasaga Valley Source Protection Area, which identified three vulnerable areas in the Township of Melancthon and was approved on January 26, 2015;
5. The Grand River Source Protection Plan (Lake Erie Protection Region) prepared for the Grand River Source Protection Area, which identified one vulnerable area in the Township of Melancthon and was approved on November 26, 2015.

## PART B – THE AMENDMENT

Section 4.4.2, Wellhead Protection Areas is hereby deleted and replaced with the following new text in the Township of Melancthon Official Plan.

### 4.4.2 SOURCE WATER PROTECTION

#### 4.4.2.1 Purpose

The purpose of this section of the Official Plan is to establish policies designed to protect sources of drinking water as required by The *Clean Water Act*, The Provincial Policy Statement as well as the South Georgian Bay Lake Simcoe and Grand River Source Protection Plans, which have collectively identified two Wellhead Protection Areas in the Township and two Wellhead Protection Sub-Areas.

#### 4.4.2.2 Definitions

The following definitions are provided for terminology found referred to in this Section of the Plan:

- a) **Activity** refers to a land use activity.
- b) **Agricultural Source Material** means materials that may be sources of nutrients or pathogens such as:
  - i. Manure produced by farm animals, including bedding materials;
  - ii. Runoff from farm-animal yards and manure storages;
  - iii. Wash water that has not been mixed with human body waste;
  - iv. Organic materials produced by intermediate operations that process the above materials;
  - v. Anaerobic digestion output that does not include sewage biosolids or human body waste;
  - vi. Materials produced by aquaculture; and,
  - vii. Regulated compost that is derived from compost containing dead farm animals.
- c) **Municipal Drinking Water System** has the same meaning as in the *Safe Drinking Water Act, 2002*
- d) **Non-Agricultural Source Material**: includes a variety of materials that may be sources of nutrients or pathogens and are intended to be applied to land as nutrients, but are not necessarily produced on a farm. Such materials may include pulp and paper biosolids; sewage biosolids; anaerobic digestion output; and, materials from dairy product or animal food manufacturing.
- e) **Risk Management Official** means the risk management official appointed under Part IV of the *Clean Water Act 2006*.
- f) **Risk Management Plan** means a plan for reducing a risk prepared in accordance with the regulations prescribed under the *Clean Water Act 2006*.
- g) **Sensitive** means in regard to surface water features and ground water features, means areas that are particularly susceptible to impacts from activities or events including, but not limited to, water withdrawals, and

additions of pollutants.

**h) Significant Drinking Water Threat** means an activity that poses or has the potential to pose a significant risk to a drinking water system.

**i) Significant drinking water threat, Existing, means:**

- i) An activity that has been engaged in prior to January 1, 2015;
- ii) An agricultural activity (as defined by the TSPP) that has been engaged in at some time since January 1, 2005;
- iii) An activity that is related to a development proposal where an application was made under the Planning Act, Condominium Act, or Building Code Act prior to January 1, 2015; or
- iv) An activity that is related to an application made for the issuance or amendment of a prescribed instrument prior to January 1, 2015.

**j) Significant drinking water threat, Expansion** means an increase in the scale of an activity already taking place on a property. The increase in scale may include, but is not limited to:

- i) Increasing the area of land where an activity is taking place;
- ii) Increasing the amount of effluent or discharge from an activity;
- iii) Increasing the quantity of chemical or pathogen containing material handled or stored; or
- iv) Increasing the quantity of chemical or pathogen containing material applied.

**k) Significant drinking water threat, Future** means an activity that is to commence after January 1, 2015.

**l) Transport pathway** means a condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system contained in the South Georgian Bay Lake Simcoe Source Protection Plan. Transport pathways may include, but are not limited to, the following:

For groundwater systems:

- Wells or boreholes;
- Unused or abandoned wells;
- Pits and quarries;
- Mines;
- Construction activities involving deep excavations (such as building foundations, basements, parking garages);
- Underground storm sewer, sanitary sewer & water distribution system infrastructure.

For surface water systems:

- Storm drainage infrastructure (e.g. storm sewer lines, culverts, ditches); and
- Tile drains.

**m) Vulnerable Area** means areas around municipal drinking water sources where activities may be a significant drinking water threat now or in the future. These areas are shown on the applicable Official Plan Schedules.



- n) **Wellhead Protection Area** means the vulnerable area delineated around groundwater wells that supply municipal drinking water systems and is comprised of subareas. The WHPA-A (subarea) is the area that is closest to the municipal wellhead and is considered the most vulnerable area due to its proximity to the municipal wellheads.

#### **4.4.2.3**

#### **Wellhead Protection Areas**

A Wellhead Protection Area (WHPA) is a vulnerable area delineated around groundwater wells that supply municipal drinking water systems which could be impacted by migrating contaminants. In the Township of Melancthon, there are four WHPAs, which are identified on Schedule G to this Official Plan and are intended to function as an overlay to the primary land use designations identified on Schedule A to this Official Plan. The permitted uses and policies applicable to the primary land use designations shall generally prevail except where such policies are in conflict with this section in which case the policies of this section shall prevail.

The WHPAs identified on Schedule G has been spatially illustrated as sub-areas, referred to as A, B, C or D. The purpose these sub-areas is described below:

- a) WHPA-A identifies a 100 metre radius from the wellhead;
- b) WHPA-B identifies a 2-year travel time for a contaminant to reach a municipal wellhead if released into the environment;
- c) WHPA-C identifies a 10-year travel time for a contaminant to reach the municipal wellhead if released into the environment; and,
- d) WHPA-D identifies a 25-year travel time for a contaminant to reach the municipal wellhead if released into the environment.

#### **4.4.2.4**

#### **Development Policies**

Where development and/or site alteration within vulnerable areas identified on Schedule G requires a municipal approval related to the construction, demolition or change of use of a building or structure or an application for planning approval, the Risk Management Official will, prior to the granting of the municipal approval, determine if the proposed activity constitutes a significant drinking water threat. In making this determination, the Risk Management Official may, prior to the issuance of a Notice, require additional information which shall be the responsibility of the proponent.

Furthermore, in order to minimize threats to these vulnerable areas, the following land use activities shall not be permitted on lands which are located within areas identified on Schedule G as a Wellhead Protection Area if such uses are a future significant drinking water threat:

- a) new waste disposal sites and facilities within the meaning of Part V of the Environmental Protection Act, excluding storage of wastes described in

clauses (p), (r), (s), (t) or (u) of the definition of hazardous waste (O.Reg 347);

- b) facilities designed to store or handle or manage or stockpile agricultural source material, non-agricultural source material, commercial fertilizer, pesticides, road salt, snow, dense non-aqueous phase liquid, liquid fuels and organic solvents; and,
- c) facilities and yards designed to confine or pasture livestock and that will generate agricultural source material.

For the purpose of this policy, no land use activities that are an existing significant drinking water threat are prohibited within the areas identified on Schedule G however such land use activities may be subject to a Risk Management Plan, if the Risk Management Official deems the land use to be an activity that warrants the preparation of a Risk Management Plan.

During pre-consultation and development application review the County Planning Department, Risk Management Official and Local Municipal Staff will provide information related to source water protection to the proponent, to indicate whether the proposed application is within a vulnerable area and that the South Georgian Bay Lake Simcoe Source Protection Plan policies may apply.

As part of a complete application, development applications within identified vulnerable areas shall be accompanied by a Notice under Section 59(2) of the Clean Water Act, 2006, as amended.

New land uses, including the creation of lots, and new or expanding land use activities, shall not be permitted within vulnerable areas unless it can be demonstrated that they do not pose a significant drinking water threat.

#### **4.4.2.5 Division of Land**

Where a consent application proposes the division of land within a vulnerable area, the application shall be accompanied by a Notice issued under Section 59 of the Clean Water Act, 2006.

#### **4.4.2.6 Sewage Systems and Facilities**

The Source Protection Plan requires new development to be serviced by a municipal sewage collection system, where connection is feasible given financial and technical constraints. However, given that the Township does not possess a municipal sewage collection system, all sewage servicing will be accommodated by on-site sewage systems.

New sewage systems defined in Section 1 of O. Reg. 350/06 (Building Code) shall not be located within a vulnerable area identified on Schedule G unless such system complies with requirements established by the approval authority for such system, which may require a mandatory maintenance inspection once every five years by the approval authority that has jurisdiction in the vulnerable area.



Wastewater collection facilities that collect or transit sewage containing human waste that would be a future significant drinking water threat and require the approval of the MOECC are not permitted unless the facility complies with construction standards that will ensure the activity is not a significant drinking water threat.

Planning approvals shall not be given to proposed land uses dependent upon systems that collect, store, transmit, treat or dispose of sewage that would require an approval by the MOECC and would be a future significant drinking water threat. Exceptions to this policy may be made where only in cases where the MOECC has determined that all of the following conditions are met:

- a) The proposed system is intended to replace an existing activity or activities;
- b) The proposed system would be more protective of drinking water; and
- c) The instrument for the proposed activity contains conditions that ensure that it does not become a significant drinking water threat.

#### **4.4.2.7 Pre-consultation and Planning Act Approvals**

The policies of this section shall be read in conjunction with all other development policies in this Plan. Proponents that require municipal approval related to the construction, demolition, change of use, or an application under the Planning Act within the vulnerable areas identified on Schedule G are required to pre-consult with the Township, County and the Risk Management Official to ensure the proponent is aware of submission requirements, which will include a Notice issued by the Risk Management Official under Section 59(2) of the Clean Water Act and may also require the proponent to enter into a Risk Management Plan with the Risk Management Official.

#### **4.4.2.8 Transport Pathways**

A transport pathway is a condition of land resulting from human activity that increases the vulnerability of a raw water supply of a drinking water system. In the case of groundwater systems, transport pathways may include, but are not limited to:

- a) Wells or boreholes;
- b) Unused or abandoned wells;
- c) Pits and quarries;
- d) Mines;
- e) Construction activities involving deep excavations, such as a building foundation; and,
- f) Underground storm sewer, sanitary sewer and water distribution system infrastructure.

In the case of surface water systems, examples of transport pathways include storm drainage infrastructure and tile drains.

The Township shall establish a by-law prohibiting the approval of a proposal to engage in an activity that will result in the creation of a new transport pathway

If the Township becomes aware of a new transport pathway or modification of an existing transport pathway through a development application or any other application that relates to the Vulnerable Area for the municipal drinking water source, the Township shall give the Source Protection Authority and the Source Water Protection Committee notice of the proposal.

When informing the Source Protection Authority and the Source Water Protection Committee about a new or modified transport pathway, notice must include:

- a) A description of the proposal;
- b) The contact information of the proponent responsible for the proposal; and,
- c) A description of the approvals the proponent requires to engage in the proposed activity.

#### **4.4.2.9 Stormwater Management Facilities**

Stormwater management facilities are prohibited within wellhead protection areas identified on Schedule G.

## **PART C - THE APPENDICES**

There are no appendices at this time.

Draft

**THE CORPORATION OF THE TOWNSHIP OF MELANCTHON**  
**BY-LAW NO. \_\_\_\_\_**

Being a By-law to amend By-law No. 12-79, as amended, the Zoning By-law for the Township of Melancthon for lands legally described as Part 1 Plan 7R-6444, located in the North-East Half of Lot 16, Concession 7 S.W.T.S.R in the Township of Melancthon, County of Dufferin.

WHEREAS the Council of the Corporation of the Township of Melancthon is empowered to pass By-laws to regulate the use of land pursuant to Section 34 of the Planning Act, 1990;

AND WHEREAS the owner of the subject lands has requested a zoning by-law amendment to fulfill a condition of provisional consent;

AND WHEREAS the Council of the Corporation of the Township of Melancthon deems it advisable to amend By-Law 12-79, as amended;

NOW THEREFORE the Council of the Corporation of the Township of Melancthon enacts as follows:

1. Schedule 'A' to Zoning By-law No. 12-79 as amended, is further amended by zoning lands legally described as Part 1, Plan 7R-6444, located in the North-East Half of Lot 16, Concession 7, S.W.T.S.R from the General Agricultural (A1) Zone to the Rural Residential Exception (RR-163) Zone, as shown on Schedule A-1 attached hereto, which forms part of this By-law.

2. And Furthermore, Section 8.5 to Zoning By-law 12-79 as amended, is further amended by adding the following new sub-section after sub-section 8.5 ffffff):

gggggg) On lands legally described as Part 1, Plan 7R-6444, located in the North-East Half of Lot 16, Concession 7, S.W.T.S.R and zoned Rural Residential Exception (RR-163), the keeping of livestock and/or farm animals shall not be permitted and the barn that existed on the day this By-law was passed shall only be used for storage purposes accessory to a rural residential use.

3. In all other respects, the provisions of By-law 12-79, as amended shall apply.

This By-law shall come into effect upon the date of passage hereof, subject to the provisions of Section 34 (30) and (31) of the Planning Act (Ontario).

READ A FIRST AND SECOND TIME on the 12th day of January, 2017.

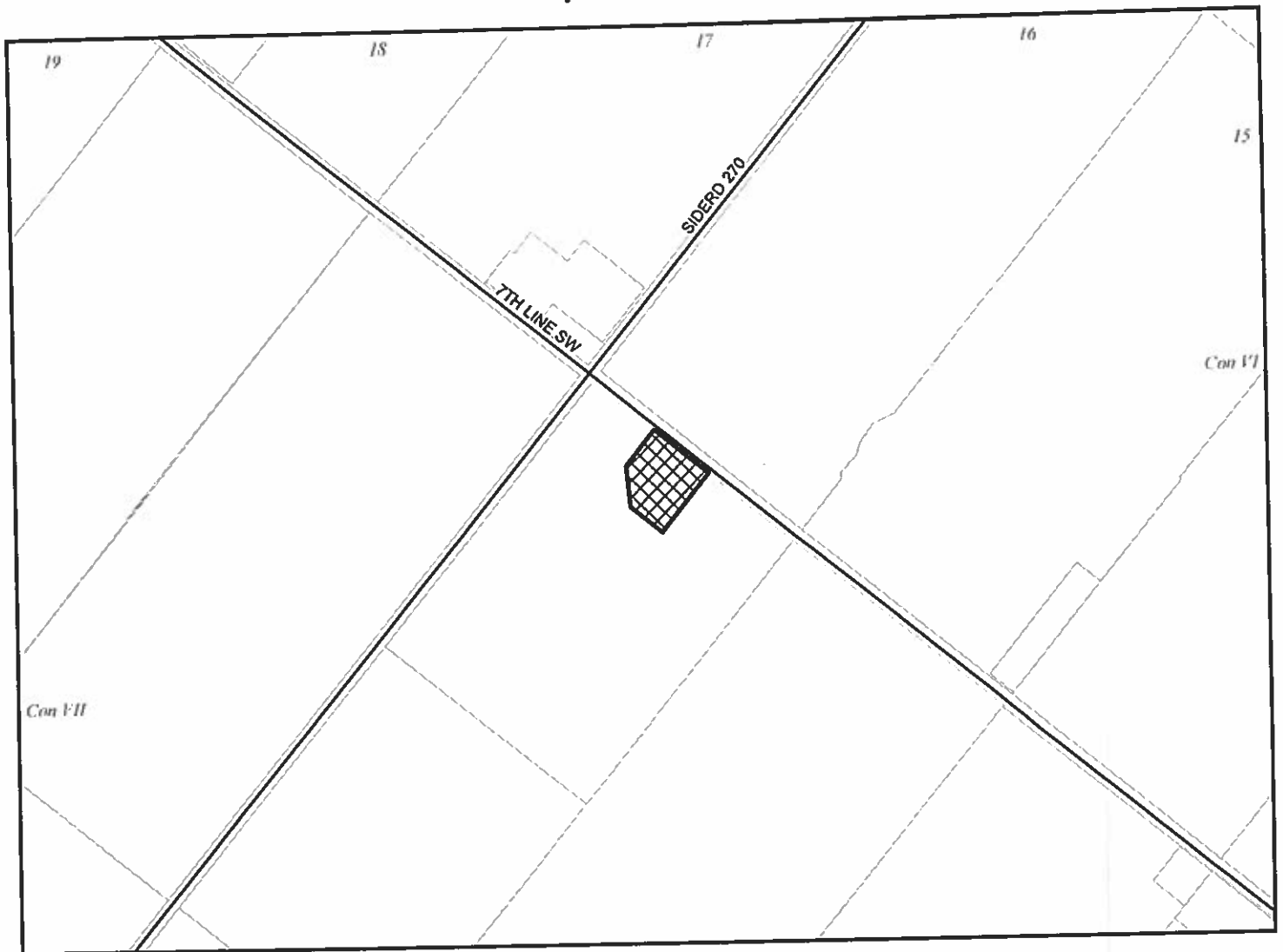
READ A THIRD TIME and finally passed this 12th day of January, 2017.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

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**Schedule 'A-1'**  
**By-law 2017-\_\_\_\_\_**  
**Part of Lot 16, Concession 7 South West of**  
**Toronto and Sydenham Road**  
**Township of Melancthon**



Lands to be rezoned from the General Agriculture (A1) Zone  
to the Rural Residential Exception (RR-163) Zone

This is Schedule 'A-1' to By-law \_\_\_\_\_

Passed this \_\_\_\_\_ day of \_\_\_\_\_, 2017.

\_\_\_\_\_  
Mayor

\_\_\_\_\_  
Clerk

THIS CONSENT AGREEMENT made this                    day of                    , 2017

B E T W E E N:

THE CORPORATION OF THE TOWNSHIP OF MELANCTHON

(hereinafter referred to as the "Township")

OF THE FIRST PART,  
- and -

2312439 Ontario Inc.

(hereinafter referred to as the "Owner")

OF THE SECOND PART.

WHEREAS 231439 Ontario Inc. is the registered Owner of the lands affected hereby;

AND WHEREAS the Owner, through Consent Application B2/16, obtained Provisional Consent to sever a lot;

AND WHEREAS the Township is authorized to establish agreements under Section 53 (12) of the Planning Act, RSO (1990);

AND WHEREAS Condition 8 to Provisional Consent B2/16 requires the Owner to enter into an agreement with the Township with respect to future development and maintenance of the lands subject to the planning approval;

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of mutual benefits, the Parties hereto agrees as follows:

**SECTION I - LANDS TO BE BOUND**

- 1) The lands to be bound by the terms and conditions of this Agreement (sometimes referred to as "the subject lands"), are located in the Township of Melancthon and are more particularly described in Schedule "A" hereto.

**SECTION II - COMPONENTS OF THE AGREEMENT**

- 1) The text, consisting of Sections I through VII, and the following Schedules, which are attached hereto, constitute the components of this Agreement.

Schedule "A" - Legal Description of the Lands Subject to Agreement

Schedule "B" - Reference Plan of Lands Subject to Agreement

**SECTION III - REGISTRATION OF AGREEMENT**

- 1) This Agreement shall be registered on title to the Subject Lands at the expense of the OWNER;
- 2) The OWNER agrees that all documents required herein shall be submitted in a form suitable to the TOWNSHIP and suitable for registration, as required;
- 3) The OWNER agrees to have the TOWNSHIP register this Agreement at the expense of the OWNER.

**SECTION IV - BUILDING PERMITS**

- 1) The OWNER agrees to not request the Chief Building Official to issue a building permit to carry out any construction until this Agreement has been registered on title to the lands described in Schedule "A" attached hereto.
- 2) On any application for a Building Permit and prior to the issuance thereof, the OWNER shall submit such plans, specifications and approvals with respect to the project as are required to the TOWNSHIP for the approval of the Chief Building Official.

**SECTION V - PROVISIONS**

- 1) The OWNER understands and agrees that this Agreement is intended to bind the OWNER with respect to

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4.2.1                    FEB 02 2017

provisions related to aspects related to site alteration, development and maintenance of the Subject Lands.

- 2) The OWNER hereby covenants and agrees that no portion of the land subject to this Agreement or buildings situated on land subject to this Agreement shall be utilized for the keeping of livestock or farm animals on a permanent or temporary basis.
- 3) The OWNER hereby covenants and agrees that on the day of execution of this agreement, there was no domestic livestock or farm animals present on the land subject to this Agreement.
- 4) The OWNER acknowledges and agrees that the zoning regulations established by By-law -2017 do not permit the keeping of livestock or farm animals on the lands subject to this Agreement.
- 5) The OWNER covenants and agrees to legally merge and register in title all of Lot 15, Concession 7 S.W.T.S.R with the retained land resulting from Consent B2/16 located in the North-East Part of Lot 16, Concession 7 S.W.T.S.R. in such a manner that said lands form one conveyable lot.
- 6) The OWNER agrees to provide the Clerk of the TOWNSHIP with confirmation of the legal merger required by Item 5 no later than 60 days from the date the certificate is issued under Section 53 (42) of the Planning Act.
- 7) The OWNER agrees to permit inspection of the subject lands by any Municipal Official or its authorized agent.
- 8) The OWNER agrees to reimburse the TOWNSHIP for all costs associated with the preparation, administration, registration and processing of this Agreement.

#### **SECTION VI - BINDING PARTIES, ALTERATION, AMENDMENT, EFFECT, NOTICE, PENALTY**

- 1) This Agreement may only be amended or varied by a written document of equal formality herewith duly executed by the parties hereto and registered against the title to the subject lands.
- 2) This Agreement shall enure to the benefit of and be binding upon the respective successors and assigns of each of the PARTIES hereto.
- 3) This Agreement shall come into effect on the date of execution by the TOWNSHIP.
- 4) The TOWNSHIP shall not release any security held in accordance with Agreement in whole or in part until the TOWNSHIP is satisfied that the OWNER has fulfilled all obligations specified under this Agreement.
- 5) Prior to initiating any site work or alteration the OWNER agrees to obtain any permit required under the Fisheries Act, Endangered Species Act, Conservation Authorities Act or any other applicable Provincial or Federal legislation or regulation. Nothing in this Agreement shall relieve the OWNER from complying with all other applicable by-laws, laws or regulations of the TOWNSHIP or any other laws, regulations or policies established by any other level of government. Nothing in this Agreement shall prohibit the TOWNSHIP from instituting or pursuing prosecutions in respect of any violations of the said by-laws, laws or regulations.
- 6) The OWNER covenants and agrees to release and forever discharge the TOWNSHIP from and against all claims, demands, causes of actions, of every nature and type whatsoever that may arise either as a result of the failure of the TOWNSHIP to carry out any of its obligations under this Agreement, or, as a result of the TOWNSHIP performing any municipal work on adjacent properties which may damage or interfere with the works of the OWNER, provided that such default, failure or neglect was not caused intentionally or through negligence on the part of the TOWNSHIP, its servants or agents.
- 7) The OWNER covenants and agrees to release and forever discharge the TOWNSHIP from and against all claims, demands, causes of actions, of every nature and type whatsoever that may arise as a result of the OWNER undertaking site alteration, constructing and maintaining the physical works specified in this Agreement.
- 8) Any notice required to be given pursuant to the terms hereto shall be in writing and mailed or delivered to the other at the following address:

OWNER NAME AND ADDRESS:

2312439 Ontario Inc.  
8309 Wellington Road 7  
Moorefield, Ontario  
N0G 2K0

TOWNSHIP:

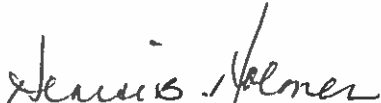
Clerk  
Township of Melancthon  
157101 Highway 10  
Melancthon, Ontario  
L9V 2E6

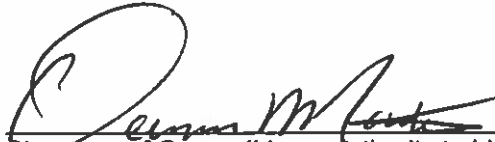
**THIS AGREEMENT** shall enure to the benefit of and be binding upon each of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

**IN WITNESS WHEREOF** the OWNER and the TOWNSHIP have caused their corporate seals to be affixed over the signatures of their respective signing officers.

**THIS AGREEMENT** was executed by the duly authorized signing officers of each party and sealed this day of \_\_\_\_\_, 2017.

**SIGNED, SEALED AND DELIVERED**  
in the presence of:

  
\_\_\_\_\_  
Witness

  
\_\_\_\_\_  
Signature of Owner (I have authority to bind the Corporation)

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Signature of Owner

**THE CORPORATION OF THE TOWNSHIP OF MELANCTHON**

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Mayor, Darren White

\_\_\_\_\_  
Witness

\_\_\_\_\_  
Clerk, Denise Holmes



**SCHEDULE "A"**

**Legal Description**

**Part of the North-East Half of Lot 16, Concession 7, South-West of the Toronto and Sydenham Sideroad, Geographic Township of Melancthon, Township of Melancthon, County of Dufferin, designated as Part 1, Plan 7R-6444.**

**SCHEDULE "B"**

**Plan 7R-6444, prepared and certified by Wayne D. Turpel, O.L.S of Van Harten Surveying  
Inc, dated November 4, 2016**