



Board of Directors *Notice of Meeting*

April 20th - 10:00 a.m., Administrative Office

Tentative Agenda

1. Chair's Remarks
2. Declaration of Pecuniary Interests
3. Minutes
4. General Manager's Report
 - (i) GM Report
 - (ii) Ontario's Environmental Registry
5. Chair & Conservation Ontario Report
 - (i) Update from April 3, 2017 meeting
6. Business Arising
7. Conservation Area Reports
 - (i) Conservation Areas Update
 - (ii) Enviro-Friends of Coldstream
8. Water Resources Reports
 - (i) Current Watershed Conditions
 - (ii) 2016-17 WECI Projects
 - (iii) International Joint Commission's Public Meeting on Great Lakes Water Quality
 - (iv) Outlet Park Expansion
9. Biology Reports
 - (i) Healthy Watersheds
 - (ii) Summarized Municipal Drain Review activities
 - (iii) Water Quality and Biodiversity
 - (iv) O. Regulation 7171/06 permission for Drain Enclosures
10. Conservation Services Report
 - (i) Conservation Services Report
 - (ii) Larvicide Report
11. Planning Department Reports
 - (i) Regulations Summary Report
 - (ii) Monthly Planning Activity Summary Report
 - (iii) DART Activity Report
 - (iv) West Ipperwash Dynamic Beach Limit Assessment update
12. Finance Reports
 - (i) Revenue & Expenditure Report
 - (ii) Cheque Listings
 - (iii) 2017 General Levy update
 - (iv) Investment Statements
 - (v) 2015 and 2016 Directors' Expenses
 - (vi) Joint Health & Safety Committee Meeting minutes

13. Communications Reports
 - (i) Bus Tour
 - (ii) Conservation Education
14. In Camera
15. New Business
15. Adjournment

Please contact Marlene (call 519-245-3710, 1-866-505-3710 or e-mail mdorrestyn@scrca.on.ca) at the Administration Office by April 18th, if you are unable to attend.

- 8.(i) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 7, 2017 on the current watershed conditions and Great Lakes water levels.
- 8.(ii) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 6, 2017 on Water and Erosion Control Infrastructure Projects and approves the projects submitted for funding in 2017-2018 and further will assist staff in obtaining matching funds, where required, to support these projects upon confirmation of funding approval.
- 8.(iii) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 6, 2017 regarding the International Joint Commission's Public Meeting on Great Lakes Water Quality – March 22, 2017 in Sarnia.
- 8.(iv) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 6, 2017, regarding the Outlet Park and further approves that the Chair and General Manager are to sign an agreement with St. Clair Township which maintains ownership of the property, while the development of the parking area and dock and the operation and maintenance of the Outlet Park will become the responsibility of St. Clair Township.
- 9.(i) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 10, 2017 on the Healthy Watersheds Program in Lambton Shores.
- 9.(ii) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated March 3, 2017 summarizing Municipal Drain Review activities.
- 9.(iii) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 5, 2017 on Water Quality and monitoring aquatic bio-indicator species in the SCRCA, and acknowledges the value of continuing to support monitoring and reporting on the aquatic health of St. Clair Conservation watersheds.
9. (iv) Moved by: Seconded by:
That the Board of Directors acknowledges this report dated March 6, 2017, on the need for O. Regulation 171/06 written permission for drain enclosures and directs SCRCA staff to present a motion and policy to require O. Regulation 171/06 permission for Drain Enclosures.
- 10.(i) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 7, 2017 regarding Conservation Services projects and programs.

- 10.(ii) Moved by: Seconded by:
That the Board of Directors acknowledges the report dated April 7, 2017 on the application of Larvicide to catch basins in Lambton County for the control of West Nile Virus in 2016.
- 11.(i) Moved by: Seconded by:
That the Board of Directors acknowledges and concurs with the Regulations Summary Reports on "*Development, Interference with Wetlands & Alterations to Shorelines & Watercourses*" Regulations (Ontario Regulation 171/06), for February and March 2017.
- 11.(ii) Moved by: Seconded by:
That the Board of Directors acknowledges the St. Clair Region Conservation Authority's monthly Planning Activity Summary Reports for February and March 2017.
- 11.(iii) Moved by: Seconded by:
That the Board of Directors acknowledges the report, dated March 31, 2017 on Drainage Act and Conservation Authority Act Protocol (DART) Municipal drain activities for January, February and March 2017.
- 11.(iv) Moved by: Seconded by:
That the Board of Directors acknowledges the receipt of the West Ipperwash Dynamic Beach limit Assessment, update on study consultation and the Shoreline Management Plan and further approves the West Ipperwash Dynamic Beach limit Assessment next steps.
- 12.(i) Moved by: Seconded by:
That the Board of Directors acknowledges the revenue and expenditure report to March 31, 2017, as it relates to the budget.
- 12.(ii) Moved by: Seconded by:
That the Board of Directors approves the January, February and March 2017 disbursements as presented in the amount of \$864,784.05 and further that future detailed listing of disbursements will no longer be provided with the Board packages.
- 12.(iii) Moved by: Seconded by:
That the Board of Directors acknowledges the status report on the 2017 general levy receipts to date.
- 12.(iv) Moved by: Seconded by:
That the Board of Directors acknowledges the February and March 2017 Investment report.

- 12.(v) Moved by: _____ Seconded by: _____
That the Board of Directors acknowledges the Status Summary report, dated March 31, 2017 on directors' expenses from January 1 to December 31, 2015 and 2016.
- 12.(vi) Moved by: _____ Seconded by: _____
That the Board of Directors acknowledges the minutes of the Joint Health and Safety Committee meeting held November 30, 2017.
- 13.(i) Moved by: _____ Seconded by: _____
That the Board of Directors acknowledges the report dated March 24, 2017 on the proposed project tour scheduled for June 22, 2017.
- 13.(ii) Moved by: _____ Seconded by: _____
That the Board of Directors acknowledges the Conservation Education Report, dated April 7, 2017 including the winter programming, program development and expansion, Community Partnerships, and Special Events.
- 14.(i) Moved by: _____ Seconded by: _____
That the Board of Directors move in-camera at _____
to discuss property issues with all staff remaining.
- 14.(ii) Moved by: _____ Seconded by: _____
That the Board of Directors rise and report at _____.
16. Moved by: _____ Seconded by: _____
That the meeting be adjourned.

General Manager's Report 4.(i)

To: Board of Directors

Date: April 10, 2017

From: Brian McDougall, General Manager



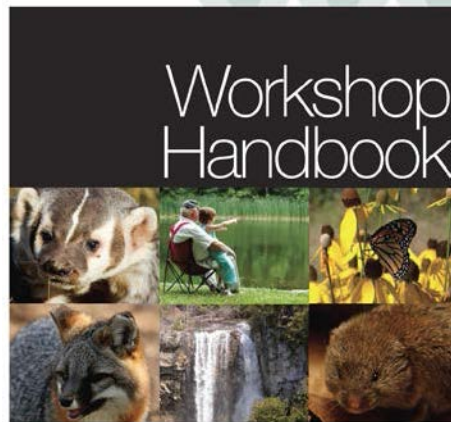
Annual General Meeting (AGM)

- ❖ At our AGM some comments several comments were provided that were spoken to at the event and have been acted upon since the meeting
- ❖ A concern was brought forward regarding the notification / advertisement of the Authority's AGM on the Authority's website
 - The Authority's website has for quite some time included a list of Board Meetings (including the AGM) which are and have always been open to the public
 - Provisions have been made to ensure that the website will include notice of the AGM as a special event in future years as well as under coming events on the Authority's main webpage
- ❖ A further concern was outlined regarding the membership of the Board of Directors being expanded to include representation from the Agriculture community
 - This concern was addressed several times during the review of the Conservation Authorities Act
 - The Act current outlines the makeup of the Board of Directors and we are fortunate to have a broad cross section of municipal appointments that include several with experience in agriculture
 - Through their appointments, our member municipalities may appoint members of council or community members to the Board of Directors and a change in legislation will be required alter the current Board member appointment method

Aichi Biodiversity Targets

- ❖ The Government of Canada has established a series of 20 targets to be achieved by 2020 to meet the objectives agreed to at the Convention on Biodiversity
- ❖ Target 11 commitment states:
 - "By 2020, at least 17 percent of terrestrial and in-land water and 10 percent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes"

- ❖ Environment and Climate Change Canada (ECCC) recognizes that Conservation Authorities own important and diverse land holdings which may be important to be included in the areas recognized in confirming targets exceeded for the Aichi targets
- ❖ ECCC hosted a workshop in Barrie on March 28th to review the evaluation process with Authority staff and confirm the information that may need to be compiled in order for Authority Conservation Areas to qualify
- ❖ A further workshop is to be scheduled to establish common terminology, assess time commitments and discuss potential funding



A workshop to discuss the potential contribution of lands and waters managed by the Ontario Conservation Authorities and partners to Canada's commitment to the Aichi Biodiversity Targets

Date: March 28, 2017
Venue: Holiday Inn Barrie Hotel and Conference Centre
20 Fairview Road, Barrie, ON

Under the auspices of the Canadian Wildlife Service – Environment and Climate Change Canada

Queen's Park Day

- ❖ Conservation Ontario hosted the second Annual Conservation Authorities Queen's Park Day on April 4th – Chair Arnold and I attended
- ❖ 13 Ministers, 24 MPPs attended as well as representatives from 28 Conservation Authorities, plus CO staff, Deputy Ministers, Assistant Deputy Ministers, Environmental Commissioner staff, Mining and Lands Commissioner staff and Ministers' staff - approximately 150 people in total
- ❖ Both MPP Monte McNaughton and MPP Bob Bailey took time away from a caucus meeting to share a few moments with us
- ❖ Minister of Natural Resources and Forestry Kathryn McGarry spoke at length about the importance of Conservation Authorities, the broad range of program they deliver that are tailored to their watersheds and the breadth of provincial programs that benefit from Authority activities
- ❖ She also indicated that the Conservation Authorities Act will be active on the governments agenda this "spring"



Staff Report

4. (ii)



To: Board of Directors
Date: April 10, 2017
From: Brian McDougall, General Manager
Subject: Environmental Registry

The Environmental Registry (“Registry”) is a website that provides public access to a database holding information about environmental proposals and decisions made by the Ontario government. Proposals vary from individual permit to take water applications, official plans, environmental compliance and licensing, legislation and regulations, etc.

The Registry is an important part of ensuring that the public can participate in decisions being made on environmental issues. The Environmental Registry is the only one of its kind in Canada and was created under Ontario's Environmental Bill of Rights, 1993 (EBR).

Through providing internet access to environmentally-relevant information, the Environmental Registry allows the Authority and the public to exercise its right to be given public notice of a range of government proposals and decisions related to environmental matters, and be able to provide comments on those issues.

The Environmental Commissioner of Ontario is responsible for monitoring that the government fulfills its obligations under the Environmental Bill of Rights, including the Registry. Additional information is available on the Environmental Commissioner's website (www.eco.on.ca).

Use of the Registry has grown over the past 3 year from 2368 posting in 2014, to 2897 in 2015 and 3704 in 2016. Over 1130 postings have been undertaken in 2017, appearing to show a continued trend.

The comment period for postings varies greatly. Some postings have comment period of less than 20 days and some as long as 120 days.

Conservation Ontario has been helpful in drawing together comments from all Authorities and providing one submission on our behalf on many issues. However, some issues that are of great importance or may have a regional or local focus require local comments. The Authority has contributed to many of Conservation Ontario's submissions and has also provided comments from the Authority directly – such as the Authority's comments regarding the Conservation Authorities Act review approved by the Authority Board in June of 2016.

Concern has been brought forward that a procedure for Board approval of comments should be established in order for any comments provided under the St. Clair Region Conservation Authority banner has Board support.

With a variety of issues, mostly around timing, slowing procedure development, we are working towards a draft procedure that ensure that the Board has the time to review proposed posting comments and to provide comments as well as confirming or denying support for proposed posting comments in a timely fashion. Requesting extensions for comment periods may assist with this process, however our bi-monthly meeting schedule hampers the opportunity for open discussion at a Board meeting.

It is hoped that through improved digital communication (e-mailed links to postings, attached draft comments and emailed responses of support) we may be able to obtain support for proposed comments in a timely fashion.

If this concept is found to be suitable by the Board, a written procedure will be provided at the next meeting for Board review.

**Conservation Ontario Council
Minutes from Meeting #1/17
Monday, April 3, 2017
Black Creek Pioneer Village**

Voting Delegates Present:

Dick Hibma (Grey Sauble), Chair

Brian Horner, Ausable Bayfield
Alan Revill, Cataraqui Region
Geoff Rae, Cataraqui Region
Kim Smale, Catfish Creek
Chris Darling, Central Lake Ontario
Don MacIver, Credit Valley
Deb Martin-Downs, Credit Valley
Tim Pidduck, Crowe Valley
Richard Wyma, Essex Region
Forrest Rowden, Ganaraska Region
Linda Laliberte, Ganaraska Region
Joe Farwell, Grand River
Sonya Skinner, Grey Sauble
Gerry Smallengange, Halton
Lisa Burnside, Hamilton
Peter Raymond, Kawartha Region
Mark Majchrowski, Kawartha Region
Elizabeth VanHooren, Kettle Creek
Geoffrey Dawe, Lake Simcoe Region
Mike Walters, Lake Simcoe Region
Tammy Cook, Lakehead Region
Noel Haydt, Long Point Region
Cliff Evanitski, Long Point Region
Linda McKinlay, Lower Thames
Don Pearson, Lower Thames
Eric Sanford, Lower Trent
Jim Campbell, Maitland Valley

Mark Burnham, Mississippi
John Karau, Mississippi
Sandy Annunziata, Niagara Peninsula
James Kaspersetz, Niagara Peninsula
Bruce Timms, Niagara Peninsula
Lin Gibson, Nickel (Conservation Sudbury)
Carl Jorgensen (Conservation Sudbury)
Brian Tayler (North-Bay Mattawa)
Gail Ardiel, Nottawasaga Valley
Sherry Senis, Otonabee
Dan Marinigh, Otonabee
Janice Maynard, Quinte
Terry Murphy, Quinte
Richard Pilon, Raisin Region
Roger Houde, Raisin Region
Lyle Pederson, Rideau Valley
Sommer Casgrain-Robertson, Rideau Valley
Luke Charbonneau, Saugeen
Rhonda Bateman, Sault Ste Marie
Doug Thompson, South Nation
Francois St. Amour, South Nation
Angela Coleman, South Nation
[REDACTED]
[REDACTED]
Brian Denney, Toronto and Region
Murray Blackie, Upper Thames River
Ian Wilcox, Upper Thames River

Members Absent:

Mattagami Region

Presenting Guests:

Sandra George, Environment and Climate Change Canada
Dawn Walsh, Ministry of Environment and Climate Change

Guests:

Jennifer Keyes, Ministry of Natural Resources and Forestry
Phil Beard, Maitland Valley
Duncan Abbott, Mississippi
Peter Graham, Niagara Peninsula
Chris Hibberd, Nottawasaga Valley

CO Staff:

Kim Gavine, General Manager
 Jessica Chan
 Jane Dunning
 Bonnie Fox
 Chitra Gowda
 Jane Lewington

Matthew Millar
 Nekeisha Mohammed
 Leslie Rich
 Jo-Anne Rzakki
 Rick Wilson

1. Welcome from the Chair

Chair Dick Hibma encouraged members to make introductions as follows:

Alan Revill (Cataraqui Region) Chair introduced Geoff Rae, General Manager.

Don Pearson (Lower Thames CA) introduced Chair Linda McKinlay.

Doug Thompson (South Nation) Past Chair introduced Chair Francois St. Amour and announced that Angela Coleman is now General Manager.

Peter Graham (Niagara Peninsula) Acting CAO introduced Chair Sandy Annunziata and Vice Chair James Kaspersetz.

Terry Murphy (Quinte) introduced chair Janice Maynard.

Peter Raymond (Kawartha) Vice Chair introduced Mark Majchrowski, General Manager.

Cliff Evantiski (Long Point) GM introduced Chair Noel Haydt.

Eric Sandford, Vice Chair Lower Trent Conservation was introduced.

Roger Houde (Raising Region) retiring GM introduced incoming GM Richard Pilon.

Phil Beard (Maitland) introduced Chair Jim Campbell.

Gerry Smallegange (Halton) Chair was introduced.

Roger Houde, Raisin Region was recognized for 30 years of service as he plans retirement in summer of 2017.

For those that were unable to attend the Conservation Ontario Orientation Webinar on March 24th, a recording will be posted on the Council Members page for your viewing.

The chair highlighted Queen's Park Day taking place April 3, 2017. As well, David Tyler (Archives of Ontario) has invited members to visit the Ontario150 exhibit following the Council meeting.

Chair Hibma outlined the function of the Consent Agenda and members were reminded that no discussion will take place on items in the Consent Agenda unless members identify ahead of time their desire to have an item pulled for discussion. This allows Council more time to discuss strategic items which they can actually have an effect upon.

2. Great Lakes Presentation

Bonnie Fox (CO)'s presentation is [attached](#) to the minutes of the meeting.

3. Adoption of the Agenda

#01/17 Moved by: Forrest Rowden

Seconded by: Doug Thompson

THAT the agenda be adopted as circulated.

CARRIED

4. Declaration of Conflict of Interest

There was none.

5. Approval of the Minutes of the Previous Meeting

#02/17 Moved by: Mark Burnham

Seconded by: Luke Charbonneau

THAT the minutes from the December 5, 2016 meeting be approved.

CARRIED

6. Business Arising from the Minutes

There was none.

7. Adoption of the 2016 Audited Financial Statements, Final Report to the Budget and Audit Committee & Appointment of Auditors for 2017.

Mark Burnham (Mississippi) Conservation Ontario Vice Chair and Treasurer highlighted the report.

#03/17 Moved by: Sandy Annunziata

Seconded by: Lin Gibson

THAT the Final Report to the Conservation Ontario Budget & Audit Committee be received;

THAT Conservation Ontario accept the Budget and Audit Committee's recommendation that the Financial Statements of Conservation Ontario for the year ended December 31, 2016 be approved;

AND THAT Conservation Ontario appoint BDO as its auditor for the 2017 audit.

CARRIED

8. Conservation Ontario's 2016 Annual Report & Presentation

Members were provided with copies of the Annual Report. Kim Gavine (CO) presentation is [attached](#) to the minutes of the meeting and the Annual Report can be found on the Conservation Ontario [website](#).

#04/17 Moved by: Sherry Senis Seconded by: Joe Farwell

THAT Conservation Ontario Council accept the 2016 Annual Report.

CARRIED

9. Council Voting Delegates & Alternates

Members made some amendments to the list and it is [attached](#) to the minutes of the meeting.

#05/17 Moved by: Mark Burnham Seconded by: Chris Darling

THAT the Voting Delegates and Alternates List be accepted as amended.

CARRIED

10. Election of Conservation Ontario Chair, 2 Vice Chairs and 3 Directors

The proceedings were handed over to Kim Gavine (CO). All the positions were declared vacant for 2017 and the election procedures were reviewed.

#06/17 Moved by: Forrest Rowden Seconded by: Tim Pidduck

THAT Rick Wilson and Jane Lewington be appointed as scrutineers in the event of a vote.

CARRIED

Kim Gavine called for nominations for the position of Chair of CO for 2017.

Forrest Rowden (Ganaraska) nominated Dick Hibma (Grey Sauble).

Kim Gavine called a second and third time for nominations and hearing none called for a motion to close the nominations.

#07/17 Moved by: Doug Thompson Seconded by: Geoff Dawe

THAT the nominations for Chair of Conservation Ontario for 2017 be closed.

CARRIED

[REDACTED]

Kim Gavine called for nominations for Vice Chairs (2) of Conservation Ontario for 2017.

Linda McKinley (Lower Thames) nominated Lin Gibson (Conservation Sudbury).

Kim Gavine called a second time for nominations.

Joe Farwell (Mississippi Valley) nominated Don MacIver (Credit Valley).

Lin Gibson (Conservation Sudbury) nominated Mark Burnham (Mississippi).

Kim Gavine called third time for nominations and hearing none called for a motion to close the nominations.

#08/17 Moved by: Forrest Rowden Seconded by: Chris Darling

THAT the nominations for Vice Chairs of Conservation Ontario for 2017 be closed.

CARRIED

Each of the nominees spoke to their nomination. Ballots were cast and counted.

[REDACTED]

Kim Gavine called for nominations for the Directors (staff positions) for 2017.

Joe Farwell (Grand River) nominated Cliff Evanitski (Long Point Region).

Kim Gavine called a second time for nominations.

Mark Burnham (Mississippi Valley) nominated Linda Laliberte (Ganaraska).

Kim Gavine called a third time for nominations and hearing none called for a motion to close the nominations.

#09/17 Moved by: Dick Hibma

Seconded by: Alan Revill

THAT the nominations for staff position Directors of Conservation Ontario for 2017 be closed.

CARRIED

[REDACTED]

Kim Gavine called for nominations for the third Director for 2017, noting that this could be a staff or voting representative.

Lyle Pederson (Rideau Valley) nominated Doug Thompson (South Nation).
Lin Gibson (Conservation Sudbury) nominated Mark Burnham (Mississippi).

Kim Gavine called a second and third time for nominations and hearing none called for a motion to close the nominations.

#10/17 Moved by: Luke Charbonneau Seconded by: Forrest Rowden

THAT the nominations for the Director of Conservation Ontario for 2017 be closed.

CARRIED

Ballots were cast and counted. [REDACTED]

#11/17 Moved by: Richard Wyma Seconded by: Sandy Annunziata

THAT the ballots be destroyed.

CARRIED

Dick Hibma resumed chair of the meeting and thanked members for their support.

11. [REDACTED] [See Committee Listing at end of Minutes](#)

As Linda Laliberte (Ganaraska) now sits on the Budget & Audit Committee as a director, a vacancy on the committee needed to be filled. Brian Horner (Ausable Bayfield) was nominated to fill that GM position on the Budget & Audit Committee.

#12/17 Moved by: Forrest Rowden Seconded by: Rhonda Bateman

THAT the Budget and Audit Standing Committee membership be ratified as amended.

THAT the Group Insurance and Benefits Committee membership be ratified.

CARRIED

12. Motion to move from Full Council to Committee of the Whole

#13/17 Moved by: Lin Gibson Seconded by: Tim Pidduck.

THAT the meeting now move from Full Council to Committee of the Whole.

CARRIED

13. Consent Agenda

C.W.#01/17 Moved by: Mark Burnham Seconded by: Lyle Pederson

THAT Council approve a consent agenda and endorse the recommendations accompanying Items 13a – 13o.

CARRIED

- a. Conservation Ontario’s Comments on “*Consultation on the role of Ontario Municipal Board in Ontario’s Land Use Planning System*” (EBR# 012-7196)**

THAT the comments on the “Consultation on the role of Ontario Municipal Board in Ontario’s Land Use Planning System” (EBR# 012-7196) submitted to the Ministry of Municipal Affairs and Housing on December 19, 2016 be endorsed.

- b. Conservation Ontario’s Comments on the “*Proposed Technical Guidance for Bottled Water Permit Renewals*” (EBR#012-9151) and “*Regulation Establishing a New Water Bottling Charge*” (EBR#012-9574)**

THAT Council endorse the letter, dated January 31, 2017 on the “Proposed Technical Guidance for Bottled Water Permit Renewals” (EBR#012-9151) submitted to the Ministry of the Environment and Climate Change.

AND THAT Council endorse the letter, dated March 20, 2017 on the “Regulation Establishing a New Water Bottling Charge” (EBR#012-9574) submitted to the Ministry of the Environment and Climate Change.

- c. Conservation Ontario’s Comments on the “*Ontario Cap and Trade Program: Offsets Credits Regulatory Proposal*” (EBR# 012-9078)**

THAT the comments on the “Ontario Cap and Trade Program: Offsets Credits Regulatory Proposal” (EBR# 012-9078) submitted to the Ministry of the Environment and Climate Change on December 22, 2016 be endorsed.

- d. Conservation Ontario’s Comments on “*Naturally Resilient: MNRF’s Natural Resource Climate Adaptation Strategy (2017-2021)*” (EBR# 012-9499)**

THAT the comments on “Naturally Resilient: MNRF’s Natural Resource Climate Adaptation Strategy (2017-2021)” submitted to the Ministry of Natural Resources and Forestry on March 13, 2017 be endorsed.

e. Conservation Ontario's Comments on the "Request for Bids for the Development of Draft Guidance for Watershed Planning"

THAT the letter sent to the Ministry of the Environment and Climate Change and the Ministry of Natural Resources and Forestry on March 20th, 2017 on the "Request for Bids for the Development of Draft Guidance for Watershed Planning" RFB No.: OSS_00500736 be endorsed.

f. Great Lakes Water Quality Agreement Executive Committee and Annex Sub-Committees Updates

THAT Conservation Ontario Council receives this report.

g. CO Case for Reinvestment in Ontario's Flood Management Programs, Services and Structures

THAT Conservation Ontario Council receives this report.

h. Ministry of Environment and Climate Change (MOECC) Low Impact Development Guidelines for Ontario

THAT Conservation Ontario Council endorse the Conservation Ontario letter submitted to MOECC on March 7, 2017 regarding the Low Impact Development Guidelines for Ontario.

i. CO Section 28 Regulations Committee Representative

THAT Tammy Cook (Lakehead Region) be endorsed as a member of the CO Section 28 Regulations Committee.

j. Carolinian Canada Coalition (CCC) Representation

THAT Conservation Ontario Council endorses Mari Veliz as Conservation Ontario representative on Carolinian Canada Coalition Board;

AND THAT Conservation Ontario thank Caroline Biribauer for her contribution to the CCC Board.

k. Conservation Ontario Training and Professional Development Strategy Advisory Committee Representatives

THAT A. Kett (Credit Valley Conservation (CVC)), D. Martin-Downs (CVC), D. Landry (Otonabee Region CA), B. Tayler (North Bay Mattawa CA), J. Lewington (CO), and B. Fox

(CO, Advisory Committee Chair) be endorsed as members of the Advisory Committee for a Conservation Ontario Training/Professional Development Strategy.

I. Board of Directors Meeting Minutes to be received: November 14, 2016 and December 5, 2016

THAT Conservation Ontario Council receives these minutes.

m. Program Updates

- i. Source Water Protection
THAT Conservation Ontario Council receive this report as information.
- ii. Marketing and Communications
THAT Conservation Ontario Council receives this report.
- iii. Business and Partnership Development
THAT Conservation Ontario Council receives this report.
- iv. Information Management (IM) Program Update
THAT Conservation Ontario Council receives this report.

n. Project Tracking

o. Correspondence

- Minister of Natural Resources and Forestry to CO re: Letter re CA Act Review
- Federal Minister of Finance to CO re: Pre-Budget Consultation

14. Presentations to Council

Jo-Anne Rzadki (CO) introduced Sandra George, Nutrient Program Coordinator (Environment and Climate Change Canada), whose presentation *Lake Erie Action Plan to Reduce Phosphorus Loads* to Lake Erie is [attached](#) to the minutes of the meeting.

Bonnie Fox introduced Dawn Walsh, COA/Great Lakes Project Manager (Ministry of Environment and Climate Change) whose presentation *Ontario's COA and Great Lakes Strategy Work Plan* is [attached](#) to the minutes of the meeting.

15. Discussion Items

a. 2017 Special Projects Budget

On Friday, March 31, CO signed the Drinking Water Source Protection Agreement with the MOECC. The final amount of the agreement was not known at the time the staff report was written, and the total amount of the 2017 Special Projects budget subsequently changed from \$1,477,831 to \$1,493,680.

C.W.#02/17 Moved by: Mark Burnham Seconded by: Lin Gibson

THAT the draft 2017 Special Projects Budget in the amount of \$1,493,680 be approved as presented and as recommended by the Budget and Audit Committee.

CARRIED

b. General Manager's Report

C.W.#03/17 Moved by: Forrest Rowden Seconded by: Gail Ardiel

THAT Conservation Ontario Council receives this report.

CARRIED

- c. i. Annual Report: April 2016-March 2017 Conservation Ontario (CO) Representatives and Conservation Authorities Program Discussion Group List;
ii. Initiation of the 2017 Committee Review

C.W.#04/17 Moved by: Mark Burnham Seconded by: Lin Gibson

THAT Conservation Ontario Council receives this report.

CARRIED

d. Update on the Excess Soil/Large-Scale Fill and Proposed Amendments to Bill 68

C.W.#05/17 Moved by: Mark Burnham Seconded by: Chris Darling

THAT Conservation Ontario staff pursue support for the draft "Conservation Ontario Proposed Amendment to Subsection 142(8) of the Municipal Act"

CARRIED

16. [REDACTED] See Presentation at end of Committee Tables

Richard Wyma's (Essex Region) presentation is [attached](#) to the minutes of the meeting.

Deb Martin Downs (CVC) will work with her neighboring CAs to present either on the Greater Golden Horseshoe or Greater Toronto Area CAs for the June meeting.

17. Motion to Move from Committee of the Whole to Full Council

#14/17 Moved by: Luke Charbonneau Seconded by: Brian Tayler

THAT the meeting now move from Full Council to Committee of the Whole.

CARRIED

18. Council Business

- Council Adoption of Recommendations

#13/17 Moved by: Lyle Pederson Seconded by: Mark Burnham

***THAT Conservation Ontario Council adopt Committee of the Whole (C.W.)
Recommendations: C.W. #01/17 to C.W. #05/17.***

CARRIED

19. New Business

Deb Martin-Downs (CVC) brought an update regarding Latornell 2017 encouraging members to consider people for the upcoming Leadership Awards nominations. As well, auction items are always needed for the annual auction that raises funds for the Grant Program. The 2017 theme is *Succession – The Nature of Change*.

The Biennial Tour is scheduled for October 1-3, 2017. Credit Valley Conservation and Conservation Halton will co-host the event *Growing Today – Protecting Tomorrow*.

Terry Murphy (Quinte) brought clarification to a recent event in the Quinte watershed where a boil water advisory had been put into effect after a partially submerged barge spilled fuel into the Picton Bay on March 24 while docked at Picton Terminals. Janice Maynard (Quinte Chair) spoke further to the situation highlighting that this is why the Source Protection Programs work: systems were monitored and an emergency plan was enacted thanks to Quinte Conservation and the Source Protection Plan.

20. Adjourn

#14/17 Moved by: Gail Ardeil

THAT the meeting be adjourned.

TABLE 1. Standing Interagency Committees/Councils/Boards (ongoing) & Representatives for Related Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
4R Nutrient Stewardship Advisory Committee (Ontario Ministry of Agriculture and Food)	A.Loeffler (GrandRCA)	June/15
Aggregate Resources Act Multi-Stakeholder Advisory Group (Ministry of Natural Resources and Forestry)	B.Veale (CH) Lead; and N.Davy (GrandRCA) actively participated although no CO representative	Sept/14
Biodiversity Council (Ministry of Natural Resources and Forestry)	K.Gavine (CO)	
Carolinian Canada Coalition, Board	C.Biribauer (ERCA);	
Certified Crop Advisory Association Board of Directors	M. Eastman (CVC)	Oct/12 Dec/15 update
Class Environmental Assessment Proponents Group (multi-stakeholder)	L.Rich (CO), J.Chan (CO)	
Committee of External Advisors for Algonquin Land Claim (ALC) (Ministry of Natural Resources and Forestry)	P.Lehman (MVC)	
[REDACTED]	[REDACTED]	[REDACTED]
Ecohealth Ontario (multi-stakeholder)	J.Lewington (CO), alternate J.Rzadki (CO), M.Puddister (CVC), D.Cheriton (TRCA), N.Gaetz (TRCA)	Mar/14
Forest Gene Conservation Association Board Representative	J.Enright (UTRCA)	
Forests Ontario	K.Gavine (CO)	Mar/14
Forests Ontario Technical Committee	R.Grillmayer (NVCA)	2006
Great Lakes Water Quality Agreement (GLWQA) Great Lakes Executive Committee (GLEC) (Env and Climate Change Canada co-chair)	B. Fox (CO)	April/ 13
GLWQA Annex 2 Lakewide Action Management Plans Sub-Committee (Env and Climate Change Canada co-chair)	B.Fox (CO)	Jun/13
[REDACTED]	LAKE SUPERIOR: R.Bateman (SSMRCA), T.Cooke (LRCA); [REDACTED] P. Beard, (MVCA), [REDACTED]; LAKE ERIE: I.Wilcox (UTRCA), R.Wyma (ERCA): LAKE ONTARIO: B.Denney, (TRCA), T.Murphy (QC). G.Wood (NVCA) is also a member of the Lake Huron Committee.	Apr/16 (new)
GLWQA Annex 2 Nearshore Framework Task Group (Env and Climate Change Canada co-chair)	B.Fox (CO) Subgroup Contributors (not CO endorsed) includes: K.Hayes (CVC), Gary Bowen (TRCA)	Mar/14
GLWQA Annex 2 Nearshore/ Baseline Assessment Advisory Panel (Env and Climate Change Canada co-chair)	K.Hayes(CVC)	Dec 16

TABLE 1. Standing Interagency Committees/Councils/Boards (ongoing) & Representatives for Related Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
GLWQA Annex 4 Nutrients Sub-Committee (Env and Climate Change Canada co-chair)	J.Rzadki (CO)	Jun/13
GLWQA Annex 4 Lake Erie Nutrients Working Group	J.Rzadki (CO)	Sept 16 (new)
GLWQA Annex 8 Groundwater Sub-Committee (Env and Climate Change Canada co-chair)	K.Anderson (TRCA) replaced Gayle SooChan (CVC) within 2016 year	Jun/13 Dec/16
GLWQA Annex 9 Climate Change Sub-committee (Env and Climate Change Canada co-chair)	S. Shifflett (GrandRCA)	Mar/14
GLWQA Annex 10 Science Sub-Committee (Env and Climate Change Canada co-chair)	C. Gowda (CO)	Sept/14
GLWQA Annex 10 Data Sharing and Management Task Team	G.Sousa (GrandRCA)	Sept 16 (new)
Great Lakes Blue Accounting Advisory Committee (Great Lakes Commission)	D.Hibma, Chair (CO)	Apr/16 (new)
Great Lakes Guardian Council (Ministry of Environment and Climate Change)	Dick Hibma, Chair (CO), B.Fox Alternate	Apr/16 (new)
Green Infrastructure Ontario Coalition (GIOC) Steering Committee (multi-stakeholder)	D. Martin-Downs (CVC)	Dec/15 (confirmed)
Latornell Conservation Symposium Steering Committee	J. Lewington (CO) 2017 Chair: S.Watt (CRCA) 2017 Past Chair: L.Turnbull (TRCA)	
Norfolk Alternative Land Use Services Public Advisory Committee (ALUS PAC)	C. Evanitski (LPRCA)	Mar/11
Oak Ridges Moraine Foundation Board Representative	R.Messervey 2016 (KC)	Apr 16
Ontario Climate Advisory Committee	D. Boyd (GrandRCA), R.Ness (TRCA)	Mar/07
Ontario Dam Owners' Advisory Committee (Ministry of Natural Resources and Forestry)	J.Farwell (GrandRCA), alternate D.Boyd (GrandRCA)	Mar/14
Ontario Hydrometric Program Coordinating Committee (Ministry of Natural Resources and Forestry)	A.Scott (ABCA), alternate D.Boyd (GrandRCA)	Sept/14
Ontario Invasive Plant Council Board (OIPC)	K.Towle (GanRCA)	
OIPC <i>Phragmites</i> Working Group (OPWG)	K.Monk (ABCA)	Dec/12
Ontario Land Trust Alliance (OLTA)	A.Van Niekerk (ABCA)	Dec/ 10
Ontario Society of Professional Engineers Land Drainage Committee	D. Heinbuck (ABCA)	Mar/06

TABLE 1. Standing Interagency Committees/Councils/Boards (ongoing) & Representatives for Related Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
Ontario Trails Coordinating Committee (Ministry of Tourism Culture and Sport)	R.Wyma (ERCA)	
Provincial Elevation Coordination and Consultation Committee (EC3) (Ministry of Natural Resources and Forestry lead)	I.Jeffrey (GanRCA)	Mar/15
Provincial Elevation Data Acquisition Specifications Sub-Committee (of EC3) (Ministry of Natural Resources and Forestry lead)	I.Jeffrey (GanRCA)	Mar/15
Provincial Environmental Assessment Committee (Ministry of Environment and Climate Change)	L.Rich (CO), J.Chan (CO)	Dec/09
Provincial Flood Forecasting and Warning Committee (PFFWC) (Ministry of Natural Resources and Forestry)	A.Scott (ABCA) D.Boyd (GrandRCA), R.Bateman (SSMRCA) G.Earle (Otonabee), T.Hogenbirk, (LSRCA)	
Source Water Protection Joint Advisory Committee (JAC) (Ministry of Environment and Climate Change)	C. Evanitski (LPRCA), S.Casgrain-Robertson (RVCA), M.Walters (LSRCA), R.Bateman (SSMCA), C.Gowda (CO), K. Gavine (CO), (MOECC)	Est. Jan/13. Endorsed December 11, 2016
Source Water Protection Project Managers Working Group (Ministry of Environment and Climate Change)	S.Shankie (LRCA), D.Vallier (MRCA), M.Venne (Conservation Sudbury), S.Miller (NBMCA), R.Bateman (SSMRCA), H.Evans (CRCA), R.McRae (CRCA), B.Stratton (RVCA), A.Dickens (QC), R.Pilon (SNC), C.Wilkinson (LTC), J.Stephens (CTC), D.Bloomfield (CH), J.Campbell (NPCA), B.Thompson (LSRCA), . C.Seider (GSCA), M.Keller(GrandRCA), J.Allain (UTRCA), G.Cade (ABMV), K.Stammler (ERCA), C.Gowda (CO), K.Bristow (CO), R.Wilson (CO), K.Gavine (CO), (MOECC).	Est. 2005
Source Water Protection North Regional Project Managers Working Group (Ministry of Environment and Climate Change)	S.Shankie (LRCA), D.Vallier, (MRCA), M.Venne (Conservation Sudbury), S.Miller (NBMCA), R.Bateman (SSMRCA), C.Gowda (CO), (MOECC)	Est. 2014
Source Water Protection East Regional Project Managers Working Group (Ministry of Environment and Climate Change)	H.Evans (CRCA), R.MacRae (CRCA), B Stratton (RVCA), A.Dickens (QC), R.Pilon (RRCA), C.Wilkinson (LTC), S.Casgrain-Robertson (RVCA), C.Gowda (CO), (MOECC)	Est. 2014
Source Water Protection South-Central Regional Project Managers Working Group (Ministry of Environment and Climate Change)	C.Wilkinson (LTC), J.Stephens (TRCA), D.Bloomfield (HH), J.Campbell (NPCA), B.Thompson (LSRCA), C.Seider (GSCA), M.Keller (GrandRCA), M.Walters (LSRCA), C.Gowda (CO), (MOECC)	Est. 2014
Source Water Protection West Regional Project Managers Working Group (Ministry of Environment and Climate Change)	C.Seider (GSCA), M.Keller (GrandRCA), J.Allain (UTRCA), G.Cade (ABMV), K.Stammler (ERCA), C.Evanitski (LPRCA), C.Gowda (CO), (MOECC)	Est. 2014

TABLE 1. Standing Interagency Committees/Councils/Boards (ongoing) & Representatives for Related Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
	C.Gowda (CO), A.Clarke (CO), A. Amin (SSMRCA), A.Gyori (ERCA), B. Lee Boyd (SNC), B.Barkes (LTC), C. Hawson (KC), C.Jacques (LPRCA), D.Clarkson (MVCA), H.Kovacs (Conservation Sudbury), I.Feldmann (GrandRCA), M.Wilson (LSRCA), K.Ebel (UTRCA), M.McKinnon (SSMRCA), M.MacDonald (ABCA), J.Schnaithmann (UTRCA), P.Barnes (RRCA), R.Post (NVCA), S.Shankie (LRCA), T.Cox (ORCA), (MOECC), (Municipalities)	Est. 2013
Source Water Protection Corporations Working Group – MOECC, municipalities	C.Gowda (CO), B.Barkes (LTC), D.Scanlon (MOECC), H.Kovacs (Conservation Sudbury), K.Thompson (City of Barrie), K.Davis (Wellington County Municipalities), K.Mitchell (Town of Orillia), M.MacDonald (ABCA), P.Rider (City of Guelph), R.Post (NVCA), S.Drewette (City of Barrie), S.Pennington (Town of Minto)	Est. July 2015
Source Water Protection Communications Working Group (broad) (Ministry of Environment and Climate Change)	N.Mohammed (CO), C.Gowda (CO), J.Lewington (CO), A.Gibbons (MVRV), A.Griffiths (GanRCA), B.Carey (LTVCA), C.Seider (GSCA), C.Ropeter (SSMRCA), C.Harris (LTC), C.Spekking-Percival (MRCA), D.Stuebing (ERCA), D.Bloomfield (CH), D.Clarkson (MVCA), E.DeCloet (LTC), G.Geissberger (CLOCA), H.Kepran (NVCA), I.Feldmann (GrandRCA), J.Robertson (LPRCA), J.Thompson (MaitVC), J.Allain (UTRCA), J.Anderson (QC), J.Stephens (TRCA), J.Patch (LSRCA), J.Mesman (SNC), K.Gillan (GSCA), K.Reid (Otonabee), K.Furlanetto (CRCA), K.Geisler (QC), K.Fazackerley (CRCA), (Town of Midland), (Severn Sound Environmental Association), (MOECC)	Est. 2013
Source Water Protection Communications Working Group (small) - MOECC	C. Gowda (CO), N.Mohammed (CO), D.Bloomfield (CH), E.DeCloet (LTC), J. May-Anderson (QC), T.Cumming (ABCA)	Est. June 2016
Source Water Protection Data Sharing Working Group (Ministry of Environment and Climate Change)	R.Wilson (CO), C.Gowda (CO), A.Clarke (CO), A.Dickens (QC), C. Tasker (UTRCA), C.Wilkinson (LTC), E.Vandermeulen (GSCA), G.Sousa (GrandRCA), J.Holland (SNC), M.McKinnon (SSMRCA), R.Palmini (ERCA), S. Higgins (NBMCA), S. Kozmick (NBMCA),	Est. 2015
Source Water Protection Information Management Working Group (Ministry of Environment and Climate Change)	A.Clarke (CO), R.Wilson (CO), C.Gowda (CO), R.Carnegie (ABCA), T. York (CRCA), S. Abbas (CH), K.Stammler (ERCA), S.Sutherland (GrandRCA), K.Zhao (LSRCA), R.Augustyn (LRCA), J.Meyer (LTC), M.Pawson (MRCA), P.McKinnon (NPCA), M.Esfahaninejad (Conservation Sudbury), S.Kozmick (NBMCA), A.Dickens (QC), P.Ghiourelotis (RVCA), J.Campbell (NPCA), E.Vandermeulen (GSCA), M.McKinnon (SSMRCA), J.Edwards (SNC), K.McMillan (SNC), D.Macleod (TRCA), T. Chapman (UTRCA), J. Campbell (UTRCA)	Est. 2016
Stewardship Network of Ontario (multi-stakeholder)	J. Rzadki (CO)	

Table 1. Standing Interagency Committees/Councils/Boards (ongoing) & Representatives for Related Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
The Ontario Aggregate Resources Corporation (TORAC) Board (multi-stakeholder)	C.Darling (CLOCA)	Sept 16
Water and Erosion Control Infrastructure (WECI) Committee - (Ministry of Natural Resources and Forestry)	G.Rungis (GrandRCA, Chair), A.Amin (SSMRCA), S.Mancini (SNC), C.Mitchell (TRCA), C.Tasker (UTRCA), B.Fox (CO), 2016 only: J.Cottrill (GSCA), R.Goldt (UTRCA)	Sept/15 Sept/16

Table 2. Ad Hoc Interagency Committees (specific deliverables) 2016-17		
Committee Name	CO Rep/ Membership	Date Established or Endorsed
Drainage Act and Section 28 Regulations Team (DART) (OMAFRA/MNRF)	T.Byrne (ERCA), T.Davidson (RVCA) L.Rich (CO), D.Heinbuck (ABCA)	June/15
Drains Action Working Group (DAWG) Fisheries and Oceans Canada (DFO)	D.Heinbuck (ABCA), L.Rich (CO)	Dec/16
Excess Soil – Market Support Team (MOECC)	L.Rich (CO)	
Excess Soil Engagement Group (MOECC)	L.Rich (CO), F.Natolochny (GRCA), C.Jones (CLOCA), B.Veale (CH), R.Messervey 2016 (KRCA), D.Hatton (TRCA)	
Fisheries and Oceans Canada (DFO)-CO MOU Workplan Working Group	A.Boudreau Ivany (SNC), C.Jorgensen (Conservation Sudbury), D.Lewis (TRCA), K.Winfield (UTRCA), L.Hamilton (NPCA), B.Fox (CO) L.Rich (CO)	June /13; Dec/13; Mar/15
[REDACTED]	J.Rzadki (CO) also J. Henderson (ERCA); M.Peacock (GanRCA); S.Mancini (SNC); [REDACTED] K.Lynch (NBMCA) and I.Shah (UTRCA); C.Gowda (CO) and M.Millar (CO) were endorsed to provide input at key points during the Guidance Manual Development process through J.Rzadki (CO);	Dec/15
Ontario Height Modernization Working Group (Ministry of Natural Resources and Forestry lead)	I. Jeffrey (GanRCA)	Mar/15
Ontario Onsite Wastewater Association (OWA) Working Group (OWA)	J. Rzadki (CO), B.Taylor (NBMCA), T. Davidson (RVCA)	June/13
Provincial Soil Health Working Group (Ontario Ministry of Agriculture and Food)	T.Ryan (GrandRCA)	Sept/16
Source Water Protection Annual Reporting Working Group - MOECC	E.Vandermeulen (GSCA), M.Keller (GrandRCA), B.Thompson (LSCRA), J.Campbell (NPCA), D.Bloomfield (CH), C.Wilkinson (LTCA), M.Venne (Conservation Sudbury), C.Gowda (CO)	Est. July 2015
Source Water Protection Conference Steering Committee (Ministry of Environment and Climate Change)	J.Stephens (CTC), H.Evans (CRCA), C.Gowda (CO), (municipalities), (MOECC), (SPC members)	Est. Jan. 2017
Source Water Protection Overhead Working Group (MOECC)	R.Bateman (SSMRCA), G.Rodgers (LTC), R.Pilon (SNC), S.Miller (NBMCA), D.Bloomfield (CH), M.Keller (GrandRCA), and C.Gowda (CO)	Dec. 5, 2016
Source Water Protection Road Salt Working Group (Ontario Good Roads Association and CO co-chair)	B.Thompson (LSRCA), M.Keller (GrandRCA), J.Stephens (TRCA), A.Dickens (QC), C.Gowda (CO), (OGRA), (MOECC), (municipalities)	Endorsed June 26, 2016
Source Water Protection Threats Database Working Group	R.Wilson (CO), M.Thorpe (CVC), J.Dowdall (NBMCA), A.Dickens (QC), J.Meyer (LTRCA), A.Clarke (CO), M.McKinnon (SSMRCA), H.Amo (NVCA), D.MacLeod (TRCA), P.McKinnon (NPCA), J.Campbell (UTRCA)	Est. 2014/15?

Table 3. Conservation Ontario Internal Working Groups 2016-17		
Committee Name	CO Rep/ Membership	Date Endorsed or Established
CA Watershed Report Card (CAWRC) Working Group	C.Quinlan, Chair (UTRCA), J.Lewington (CO), I.Wilcox (UTRCA) WRC members from each CA	
CA Watershed Report Card Data Subcommittee	R.Wilson (CO), K.Reischke (CO) , T.York (CRCA), C.Vance (QC), M.McKinnon (SSMRCA), T.Chapman (UTRCA) , C.Brown (GanRCA)	
CA Watershed Report Card Groundwater Subcommittee	M.Millar (CO), D.Ford (TRCA), J.Campbell (NPCA), M. Wilson (LSRCA), F.Liu (CVC), R.Post (NVCA), S. Holysh (CAMC)	
CA Watershed Report Card Water Quality Subcommittee	M.Millar (CO), M.Veliz (ABCA), E.O'Connor (LSRCA), I. Ockenden (NVCA), J. Bittorf (GSCA), K.Maaskant (UTRCA), A.Wallace (TRCA), H.Evans (CRCA), J.Harrison (NBMCA)	
Conservation Authorities Act Review Working Group	B. Denney (TRCA), H. Bassit (CH), G. Wood (NVCA), C. Evanitski (LPRCA), M. Henttonen 2016 (LRCA), J. Farwell (GRCA), D.Pearson (LTRCA), B.Tayler(NBMCA), S. Casgrain-Robertson (RVCA), R. Messervey 2016(KC)	Apr/16
[REDACTED]	J.Clayton (CVC) Chair, A.Boudreau Ivany (SNC) Vice Chair, B.Morrison (GrandRCA) Secretary, L. Rich (CO), Members: A. Anderson (LTC), B.McNevin (QC), B.Tregunno (KC), C.Hamm (SVCA), C.Jorgensen (Conservation Sudbury), C.Ropeter (SSMRCA), D.Lawrie (TRCA), C.Lavender (Hamilton), S.Richardson (CVCA), C.Allan (GrandRCA), D.Vallier (MRCA), K.Jean (ABCA), D.Lewis (TRCA), [REDACTED] E.Gouthro (MVCA), E.McGauley (Otonabee) , F.Dobbs (NVCA), I.Kelsey (CLOCA), J.Dow (KKCA), J.Lamoureux (RVCA), V.Towsley (LTVCA), J.Bittorf (GSCA), K.Lynch (NBMCA), K.MacDonald (RRCA), L.Hamilton (NPCA), L.Deslandes (RRCA), M.Snowsell (UTRCA), M.Henttonen 2016/ T.Cook (LRCA), P.Gagnon (LPRCA), R.Wilson (LSRCA), S.Mason (CH), S.Matchett (CH), S.Richardson (CVCA), S.Fernandes (LSRCA), T.Byrne (ERCA), T,Beaubiah (CRCA), T.DiFazio (CCCA)	Updated Feb/14
Conservation Authorities Climate Change Working Group	J.Lewington (CO): J.Rzadki (CO) Rob McCrae (CRCA) C. Sharma (TRCA) R. Ness(TRCA) P.Lancaster(GanRCA) P.Beard (MVCA), M.Shifflett (UTRCA) T.Hollingsworth (UTRCA) R.Post (NVCA), Christine Tu (TRCA) R.Wyma, (ERCA)	Sept/13 and again in March 2017
Conservation Authorities University Committee	D.Martin-Downs (CVC), D.Landry (Otonabee), B.Tayler (NBMCA), A.Kett (CVC), D.Pearson (LTVCA)and B. Fox (CO)	Apr/16 Dec/16
Conservation Ontario Class Environmental Assessment Working Group	J.Chan, L.Rich (CO), T.Labuda (CH),M. Johnston (TRCA)	Date Est.: Aug/16
Esri Enterprise License Agreement (ELA) Working Group	R.Wilson (CO), B.McIntosh (GrandRCA), M.McKinnon (SSMRCA), T.Chapman (UTRCA), D.Campbell (LSRCA), E.Hardie (RVCA), T.Dufour (ERCA), J.Tam (TRCA), R.Augustyn (LRCA)	
Flood Management Business Case – Core Working Group	D. Martin Downs (CVC), C.Woodland, S. Dhalla (TRCA), J.Farwell (GrandRCA), A. Coleman (SNC), M.Peacock (GanRCA), M.Walters/Alternate (LSRCA), D.Vallier (MRCA), C.D'Angleo 2016 (NPCA) J.Rzadki, K.Gavine, B.Fox, R.Wilson (CO)	Sept/14

Staff Report

6. (i)



To: Board of Directors

Date: April 3, 2017

From: Marlene Dorrestyn

Subject: Business Arising from February 16, 2017 meeting

- under New Business: the Chair recognized Dave Ferguson, a Brooke-Alvinston resident who wished to address the meeting. Mr. Ferguson requested that the annual meeting be posted as a special event on the Authority website and that he wanted to see the membership of the Board of Directors include a representative of the agricultural sector. – see *GM's report*

Staff Report

7.(i)



To: Board of Directors
 Date: April 7, 2017
 From: Kevan Baker, Director of Lands
 Subject: Conservation Lands Report

Conservation Areas:

- the Conservation Authority owns 15 conservation areas and manages 17 properties for the Foundation
- of those 15 conservation areas, 6 are managed by the local municipality and 9 are operated by the Conservation Authority
- of these 9, 3 conservation areas are regional campgrounds which attract campers from primarily Southwestern Ontario
- our three regional campgrounds have over 500 campsites and 420 seasonal campers and are financial self sufficient
- profits obtained from our campgrounds are used to offset capital improvements
- the camping season in 2017 runs from Friday, April 28 to Thanksgiving Day

Warwick Conservation Area

- a 24 x 32 ft pole type storage shed to be constructed
- engineered wood chip playground protective surfacing to be installed at the main day use area play equipment
- roads to be upgraded with gravel
- pool washroom hydro panel to be upgraded
- 550 meters of new chip and dust trail to be developed around the perimeter of the 5-acre climate change tree growth plantation (Foundation).



L.C. Henderson Conservation Area

- campground pool to be renovated with 2 new ladders and entrance railing
- road to be upgraded with gravel
- 10 new picnic tables have been constructed
- shower area to be upgraded with new shower surround and ceramic tile on the floor and walls
- a new sidewalk to be installed in front of the shower areas
- two new hydro panels have been installed, one in the main washroom building and one in the campground area
- LED lighting to be installed on the main washroom building and on 2 utility poles



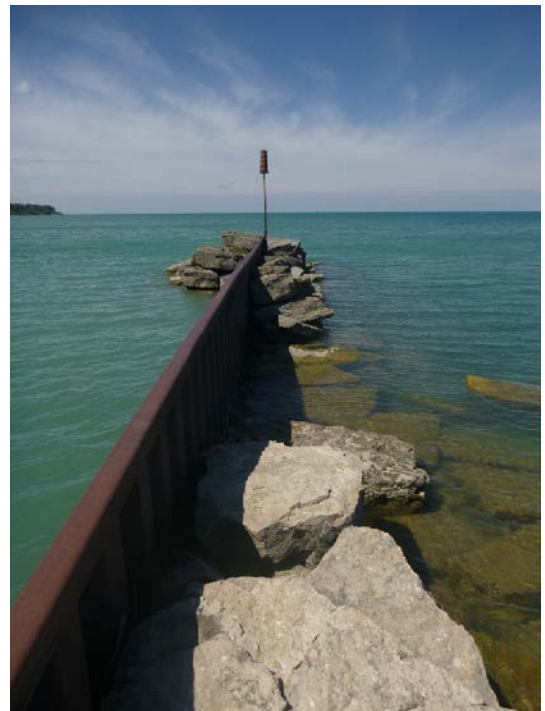
A.W. Campbell Conservation Area

- a new concrete side walk to be constructed at the pool washroom and visitor center
- permanent hydro (6 – 30 amp campsites) to be installed at the Campbell house group camp area
- water distribution pump house to be renovated with new internal and external siding and new internal plastic water lines
- roads to be upgraded with gravel
- 10 new picnic tables have been constructed
- a butterfly meadow has been seeded-in on the old train station site
- staff were busy preparing for the annual syrup festival; approximately 700 people attended the event this year which was held on March 18th & 19th .



Highland Glen Conservation Area:

- there are significant improvements planned for the conservation area this year, improvements focus mostly on the upgrade of the boat ramp walkways and sea walls, including:
 - install approximately 40 ft of new walkways along one side of the boat ramp, this will allow for more than one boat to dock at a time
 - repair existing seawall by excavation and installing new tie back supports
 - remove existing non-operational dock supports from within the harbor area
 - re-position armor stone to provide better protection for the steel seawall
 - there will be fees charged this year at the conservation area for use of the boat ramp and vehicle entry
 - cost to launch a boat is \$120.00 per season or \$10.00 per launch; vehicle fees are \$60.00 per season or \$5.00 per day. Purchase of a seasons pass will also allow entry into other St. Clair Conservation areas.
 - these fees will be collected through the MacKay Pay system, where payments are collected on line or by phone.
 - revenues collect will be used to offset future repair costs to the ramp and seawalls



- to date we have had 4 seasonal boat ramp passes and 2 vehicle seasonal pass purchased

Other Lands Activities:

- Keith McLean Conservation Lands - Matt Caron and Kelly Johnston (property overseers) resigned their positions effective February 28, 2017; this position has been filled by Scott O'Brien who has been on site since the end of March
- Keith McLean Conservation Lands- a new floor has been installed in the Kent Bridge Road pump house
- a new 5-year tower lease is being negotiated with Cogeco Connexion Inc. for the existing tower & building (Peers Wetland CA)
- existing tennis courts to be removed and new courts constructed at the Esli Dodge Conservation Area (project of Lambton Shores)
- staff have been maintaining many of our trails system this spring by removing fallen, dead or dangerous trees and installing or repairing boardwalks
- over the winter we have accepted campsite reservations (overnight camping only) at the administration office for our 3 regional campgrounds; as of March 31st over 750 reservations have been taken, collecting \$ 96,649.00; as compared to 678 reservations and \$ 87,000.00 collected in 2016 (HST adjusted)
- our financial goal in 2017 is to collect \$ 225,000 in overnight camping and \$800,000 in seasonal camping.

Enviro-Friends NEWS

Winter 2016-17

Coldstream Conservation Area

...a part of our community.

Surprise, Surprise, Surprise

This past year was a very unusual year for Enviro-Friends, as we learned the Provincial Government no longer provides funds for summer students. Next blow was the discovery that the Boardwalk had a hard winter and many areas of it needed replacement. We were forced to close the Boardwalk for the summer.

With all these challenges we assessed what we could adjust to ensure we were able to provide as many programs as possible. We shortened student hours and did not do any special jobs in the park.

GOOD NEWS!

Then a wonderful thing happened. At our annual Benefit Gala in April, through community and area donations, we were able to raise **\$13,000.00**. This was the most money we have ever raised. What an uplifting experience. At a time when we needed extra funds to go forward, the community came through.

We were able to operate with reduced student hours, and hold our Clean Up Day, day camp and Farmer's Market. We were able to save money to pay for the repair on the Boardwalk, which is very expensive. Then a second wonderful thing happened. St. Clair Region Conservation Authority came out in the Fall and repaired all areas of the Boardwalk at no charge to Enviro-Friends. A BIG thanks to St. Clair! Because of all these things we were able to put a large donation forward for the new memorial Bridge. This was not how we thought the year was going to go but were very thankful for all the support from the many groups.



2016-Benefit Gala-Wild West

A Hootin' and Hollerin' good time was had by all at the Benefit Gala. Our great food was provided by Iris & Pam Warzecka, and I can't think of a better way to end the evening than munching on Buns and Chilli at midnight. Our "Supporter of the Year" award went to Iris Warzecka who stepped forward to take on the huge job of the food for the Gala. Also thank you Iris, for your work with the day camp, Farmer's Market and Gala.

18th Annual

Benefit Gala

Coldstream Conservation Area

Saturday April 8, 2017

Coldstream Community Centre

7:30pm-1:00am

Tickets-\$15.00 single or \$30.00/couple

Entertainment-"South of 7"

Appetizer Buffet * Silent Auction* Dance
Theme- "Happy 150th Birthday CANADA"

Tickets available at the Marsh Store, March 1st

To donate, contact Janice Dolliver

519-666-0461 or by email at

coldstreamenvirofriends@gmail.com

Want to join Enviro-Friends of Coldstream?

Call Janice at 519-666-0461 or email us at

coldstreamenvirofriends@gmail.com

Like us on FACEBOOK

Summer Students and Day Camp

This year we hired two summer students who were right from Coldstream. Nicholas Wilson took on the dual lead of maintenance and the Day Camp and Erin Buwalda assisted him as Day Camp Assistant. Our free Environmental Day Camp ran from July to August, and 23 families with 44 children made use of the Day Camp. They ran a great environmental day camp program. Thank you both, for a great summer.

The 2016 Gala donations funded all of these activities and events:

- Hire two summer students
- Trailblazing for the new bridge
- Promotion for the Farmer's Market
- Repairs to the bathrooms again
- Painting of outhouses/signs, etc. in the park
- Large donation for the Al Bycraft Memorial Bridge
- Jr. Counsellor program
- Jr. Enviro-Friends-Photo Contest/Scavenger Hunt

Thank you to everyone who supported the Gala.

Our Community Partners

Middlesex Centre- continues to support us with ongoing maintenance and summer payroll. Special thanks to Scott Mairs and Tiffany Farrell and the maintenance staff. We look forward to a continuing partnership with Middlesex Centre.

St. Clair Region Conservation Authority-made some badly needed repairs to the Boardwalk.

Once again we need to thank "Team Blue Collar" for their assistance with special repairs, problem solving and event clean up.

Excercraft Ladies-used their expert sewing skills to help us with decorations for the Gala. Thank you ladies for your assistance again this year.

Community Clean Up Day

Saturday April 22nd, 2017

9:00-12:00 noon

Coldstream Conservation Area

Hot Dogs and Drinks to follow for volunteers.

Call Janice 519-666-0461 for info on jobs.

Families Welcome!

Special Projects

Al Bycraft Memorial Bridge

Plans continue to move forward but at a very slow pace. We have hopes we will be able to bring a plan to the Gala in April and then start the preparation for installation. St. Clair Region Conservation Authority has joined us as a partner and are matching our \$17,350 raised to date.

Boardwalk

As mentioned earlier the Boardwalk was in very poor shape after the Winter. It involved both top boards and the under carriage of the frame. We were forced to close the Boardwalk for the Summer as we did not have the money to repair it. We tried to save as much money as we could and planned on fixing it in stages. Then St. Clair Region Conservation Authority was able to do all repairs at no charge to Enviro-Friends.

Jr. Enviro-Friends Club

We had a lot of fun with this new program last year and hope to expand it even more this year. We will be doing the Photo Contest again in early Spring and the Scavenger Hunt over the summer; with more to come.

Park Fees-2017

Organized Group Camping-\$2.00/camper/night

Part of the Park-\$25.00

Pavilion- \$50.00

For rental information call John at 519-668-4180

Like us on FACEBOOK!

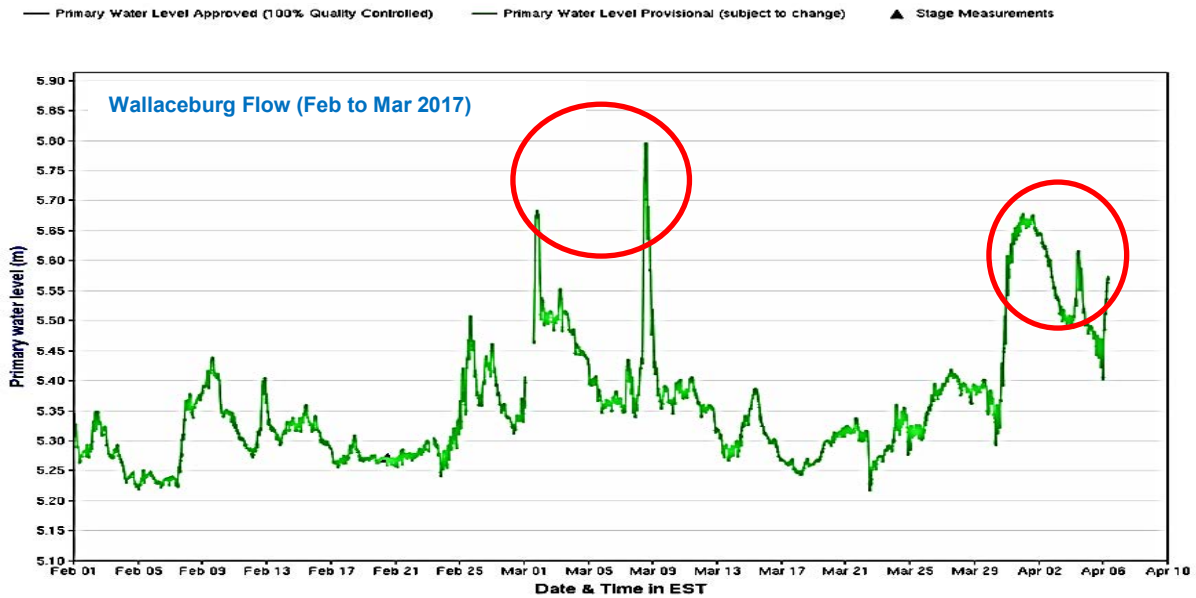
Staff Report

8.(i)

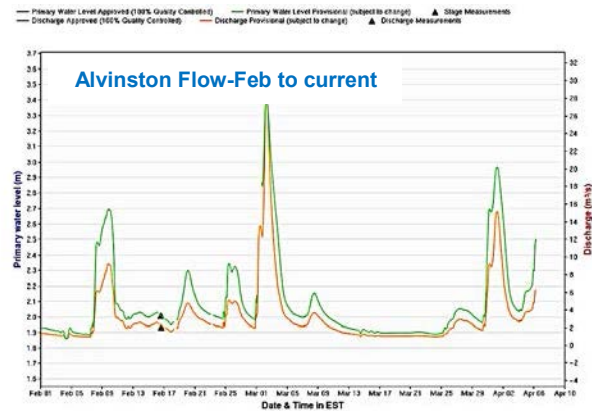
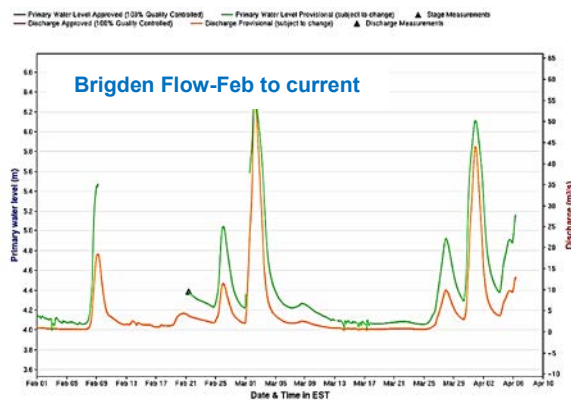


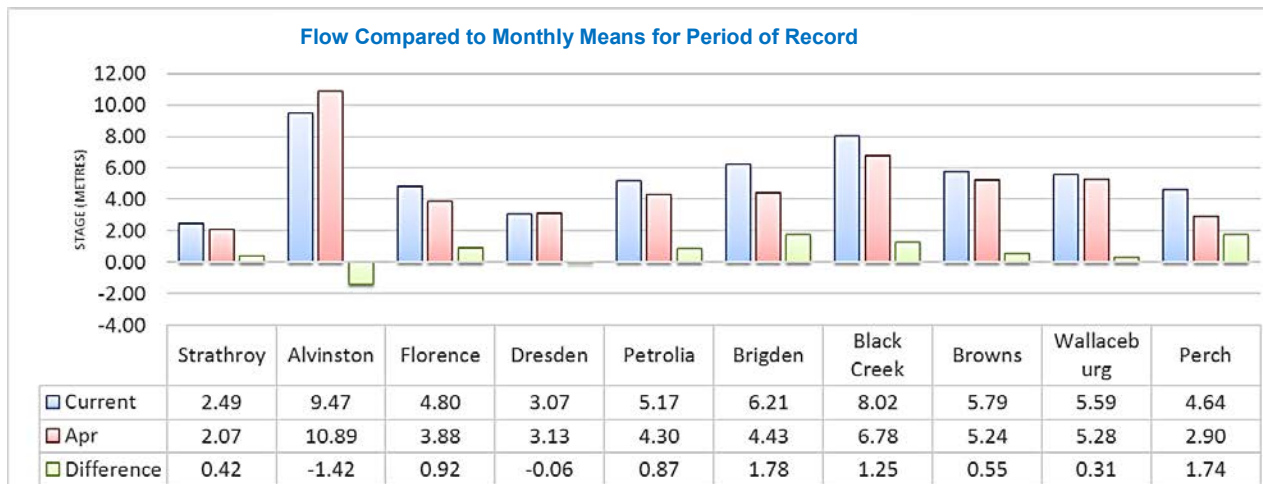
To: SCRCA Board of Directors
 Date: April 7, 2017
 From: Steve Clark, Water Resources Specialist
 Subject: Current Watershed and Lake Conditions

Watershed Stream Flow



- As has been the case in the past few years, there was no single major freshet event this spring. There were two high water events with **Water Safety Bulletins** issued at the beginning of March and again at the end of the month extending into the first week of April. While there were no significant complicating issues such as ice jamming, significant rainfall over short periods raised levels quickly maintaining higher flows throughout March and into April.



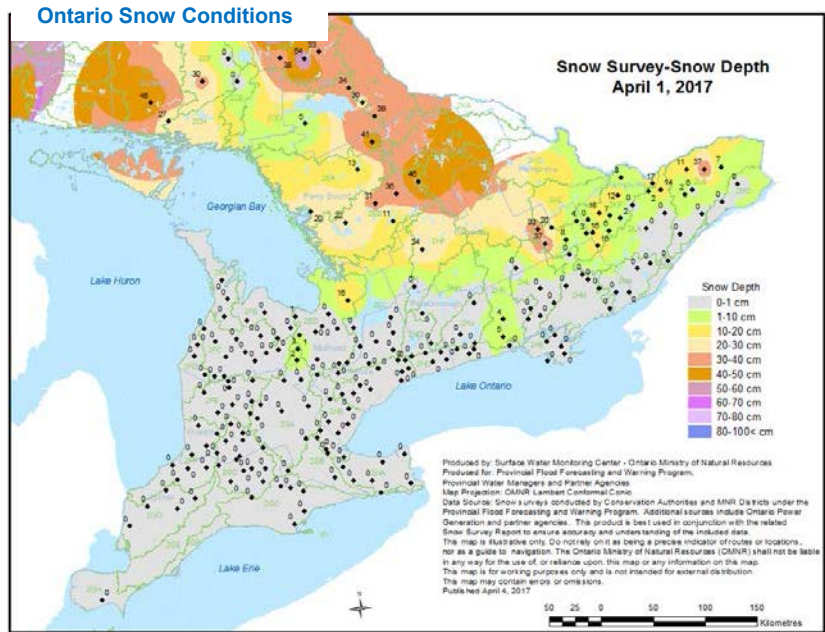


- Comparison of monthly average flows with total period on record for all hydrometric stations indicates, with the exception of Alvinston and Dresden that river flows are 10% to 20% higher than the expected average due to rain events in March.
- An additional contributing factor increasing levels as much as **20cm** were periods of high winds from the west restricting outflows at Wallaceburg prolonging the impact of earlier rain events
- Precipitation number reflect a similar trend across the region with three-month averages **21%** above normal. The six-month and twelve-month totals however remain **10%** lower following low water conditions that prevailed throughout 2016.

Regional Precipitation

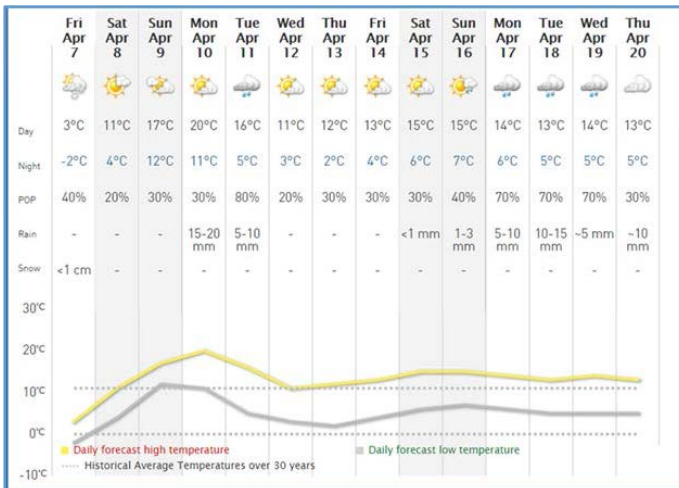
Precipitation (mm)	Sarnia		Strathroy		London		Windsor	
Last Quarter	Actual	Normal	Actual	Normal	Actual	Normal	Actual	Normal
March	66.7	62.6	69	74.9	77.9	78.4	104.6	75
February	40.6	47.7	98.6	61.1	97.2	60	57.4	57.3
January	80.2	50.1	76.4	75.3	95.4	74.2	74.1	57.6
Averages								
last 3 month totals	187.5	160.4	244	211.3	270.5	212.6	236.1	189.9
last 3 month % of normal	116.9%		115.5%		127.2%		124.3%	
regional average	121.0%							
last 6 month totals	338.2	370.8	380.9	469	425.6	469.9	413.8	405
last 6 month % of normal	91.2%		81.2%		90.6%		102.2%	
regional average	91.3%							
last 12 month totals	717.4	846.8	826.1	945.1	836.8	987	877	918.4
last 12 month % of normal	84.7%		87.4%		84.8%		95.5%	
regional average	88.1%							

- With the exception of a storm event bringing snow in early April, generally, snow remains only in central and northern areas of the province. With the lack of snowpack across the watershed and warmer temperatures there will be little impact from melting snow on water levels into the remainder of April



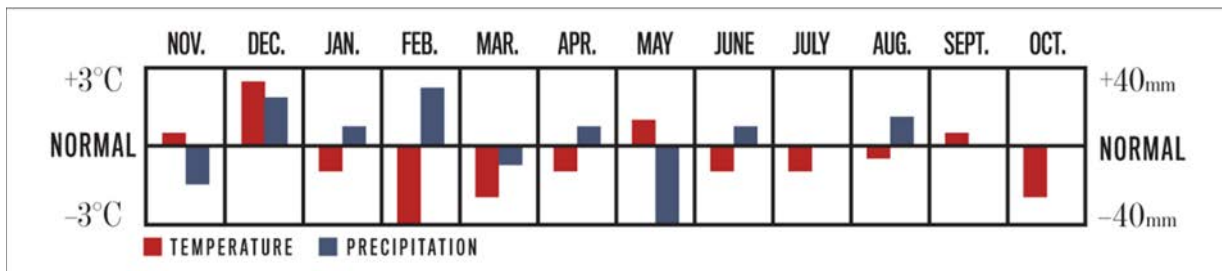
Flood Threat

Based on current conditions we continue to monitor any major rain events. Current high levels have reduced capacity of watercourses to absorb any additional significant rainfall. This condition is expected to prevail into April with seasonal flows remaining above the average range and any precipitation falling as rain may result in floodplain areas becoming flooded. As always, Advisories will be provided as conditions dictate.



Weather Forecast

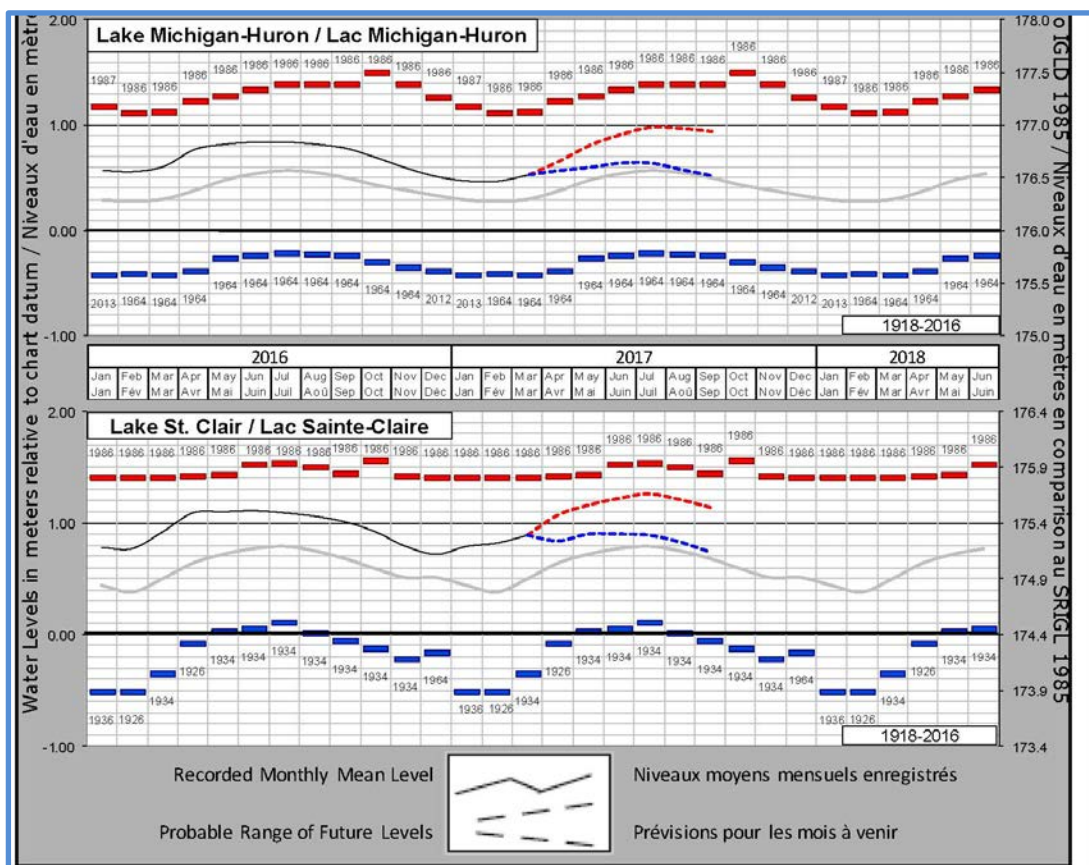
- Short term conditions indicate near normal temperatures into April with average precipitation for the month
- Longer term into May suggest average temperatures with below average precipitation and slightly below average temperature and precipitation into the summer (below)



Great Lakes Levels (Canadian Hydrometric, NOAA data – March 2017)

The monthly comparison for March 2017 (current available data) indicates that Lake Huron levels lower (8cm) than March 2016 suggesting a slight downward trend in lake levels possibly due to significant drought conditions in 2016. Numbers continue to remain above the 10 year average for Lake Huron by **49cm**. Lake St. Clair levels are very close to last year (3cm) and **39cm** above the 10 year average. Both Lake Huron and Lake St. Clair current values (March) continue to remain above the average for the entire period of record.

Units	Current Monthly Level	Monthly Level Last Year	Change 2015/2016	Current Month Avg for Last 10	Change Current compared to 10 year	Anticipated Next Month	Average for Month for Period of Record
Lake St. Clair							
Metric (m)	175.29	175.32	-0.03	174.90	0.39	175.39	174.90
Imperial (ft)	575.10	575.20	-0.10	573.82	1.28	575.42	573.82
Lake Huron							
Metric (m)	176.53	176.61	-0.08	176.04	0.49	176.61	176.30
Imperial (ft)	579.16	579.43	-0.26	577.56	1.61	579.43	578.41



Staff Report

8.(ii)



To: Board of Directors
 Date: April 6, 2017
 From: Girish Sankar, Director of Water Resources
 Subject: Water & Erosion Control Infrastructure (WECl) Projects

- 2017- 2018 Projects have been submitted on February 1, 2017
- all applications have been reviewed by a committee of provincial and conservation authority staff representatives in February
- follow up interviews to discuss details of the project was completed mid-February
- projects are ranked in comparison to all submitted projects from across the Province and the recommended list has been forwarded to the Minister for Approval
- list of approved projects is anticipated at any time

Structure	Project Name	Description of Work	Total Project Cost (\$)	Grant Requested (\$)
Courtright Park	Courtright Park Shoreline restoration	Shoreline work at Courtright Park along St. Clair River using armourstone and riprap.	\$600,000	\$300,000
Sarnia Shoreline Protection	Shoreline Repair (Helen and Kenwick Sts) Phase 1	Carry out construction of Phase 1 from the recommendation of engineering study.	\$600,000	\$300,000
Esli Dodge Dam	Esli Dodge Repair Project	Repair of Concrete cable/ retaining wall	\$20,000	\$10,000
L.C.Henderson Weir #1	L.C.H. Outfall Repair Project	Spillway Repair	\$30,000	\$15,000
W. Darcy McKeough Dam	Drop Structure Downstream Erosion Control	Install rip rap at outlet park	\$80,000	\$40,000
W. Darcy McKeough Dam	Vegetation Management Plan	Develop a vegetation management plan for vegetation control within the floodway channel	\$20,000	\$10,000
W. Darcy McKeough Dam	Watercourse Obstruction Removal	Vegetation and debris jam to be removed	\$16,000	\$8,000
W. Darcy McKeough Dam	McKeough Sill Repair	Crack repair to McKeough Dam sill	\$30,000	\$15,000
W. Darcy McKeough Dam	Wing wall repair	Repair cracks in the concrete Wing wall	\$30,000	\$15,000

Staff Report

8.(iii)



To: Board of Directors
Date: April 6, 2017
From: Girish Sankar, Director of Water Resources
Subject: Representation in a recent IJC event

- SCRCA staff participated in a recent meeting put together by International Joint Commission (IJC) in Sarnia.
- this was a Public Meeting to discuss the issues in Great Lakes Water Quality

Public Meeting on the Great Lakes Your Voice: Sarnia

Lochiel Kiwanis Community Centre
180 College Avenue North, Sarnia, ON



Afternoon Public Roundtable
1:30 – 4:30 p.m.

- the event was well represented by concerned citizens, members of the First Nation Community and Municipal, Provincial and Federal Government Staff.
- Donna Strang and Girish Sankar attended the meeting
- local experts on select topics shared their knowledge on Great Lakes water quality
- Donna made a presentation on the St. Clair Area of Concern and the Remedial Action Plan
- presentation was well received
- following the presentations, there was roundtable discussions on
 - Area of Concern
 - Nutrient Loading
 - Emerging contaminants
- during the meeting there were several discussions on the nutrient loading and the monitoring work of SCRCA was echoed numerous times.

Staff Report

8.(iv)



To: Board of Directors
 Date: April 6, 2017
 From: Girish Sankar, Director of Water Resources
 Subject: Outlet Park expansion

- St. Clair Township staff contacted SCRCA to consider the outlet park as a parking space for the residents of Fawn Island
- Outlet Park is home to approximately 50 trees
- a few trees were planted as memorial trees.
- a request to provide a concept of the parking lots and an idea of a location for boat dock at the outlet park was made during this meeting.
- SCRCA staff coordinated with Golder Associates to assist with providing a concept of parking lot.



- a preliminary layout of the parking lot is shown above, approximately 68 parking spots are possible
- the red highlights show the preferred location of the dock
 - (1) – North side of park
 - (2) – South side of Park
- the above concept is preliminary in nature and does not include any detailed engineering assessment.
- things to consider:
 - effects of Ice and Ice Jam along St. Clair River
 - wave action
 - high flows in St. Clair River
 - floodway operation and high flows

- correspondence is anticipated (and will be provided at the Board meeting) from St. Clair Township requesting the Authority's support for an agreement with the municipality to assume management and maintenance of the park as an open municipal park which will also function as the primary parking, launch and ferry dock for property owners on Fawn Island.
- such an agreement will require a tree saving plan, approval of any construction plans and construction and maintenance costs to be borne by the municipality.

Staff Report

9.(i)



To: Board of Directors
 Date: April 10, 2017
 From: Jessica Van Zwol, Healthy Watershed Specialist
 Subject: Healthy Watersheds Program Update

February 16 – SCRCA Annual General Meeting; Jessica Van Zwol presented *Phosphorus Reduction through Stewardship* to the Board of Directors, staff, and the general public.



March 9 – *David Brandt workshop* – Cover Crop Innovator from Ohio. Close to 65 people attended this presentation and the discussion following the talk was lively and had many farmers thinking. David did a great job captivating the audience with his experiences, knowledge, and his humour. Many attendees were interested in having more speakers in the area. OMAFRA- COA funding supported this event.



March 22 – *Soil Health Discussion Panel* – an afternoon with producers sharing their experiences with improving their soil health on their farms. Woody Van Arkel (from Dresden), Jim Patton, Andy Van Niekerk, and Mel Luymes presented. The QnA session was a great opportunity for the 60 farmers in attendance to seek out answers for their own farms. The workshop was held at the Brooke-Alvinston-Inwood Community Centre.



Staff Report

9.(ii)



To: Board of Directors
 Date: March 3, 2017
 From: Kelli Smith, Watershed Biologist
 Subject: Municipal Drain Review

Conservation Authorities (CAs) regulate activities that change, divert, or interfere in any way with the existing channel of a river, creek, stream or watercourse, or that interfere with wetlands. Municipal drains are generally watercourses as defined under the CA Act and are therefore regulated by CAs.

Staff help member municipalities meet regulatory requirements by issuing Standard Compliance Requirements (SCRs) as per the Drainage Act and Conservation Authorities Act (DART) Protocol and Letters of Review (LoR) for projects where DART does not apply (Drainage Act, S. 4: Petition Drains and S. 78: Improvements). Staff also meet with Drainage Superintendents on proposed projects and conduct site visits where necessary. If drain repair and maintenance activities are carried out (with or without permission) and result in impact on regulated areas with respect to the Conservation Authority's responsibilities under the Conservation Authorities Act, the Conservation Authority could be held liable for not under taking or enforcing its regulatory authority.

SCRs and LoRs outline project specific sediment and erosion control measures for all projects. Upstream and downstream flooding are considered where appropriate (e.g., culverts and enclosures) and advice is incorporated into review letters and SCRs. Interference with wetlands is discouraged by negotiating project specific mitigations. St. Clair Conservation staff work with municipalities to try to find solutions that meet the requirements of both the Drainage Act and the Conservation Authorities Act.

A year in review - 2016

2016 saw a total of 108 files submitted to SCRCA for review. 60 were reviewed under the DART protocol and received SCR permissions. 42 were reviewed by staff and received LoRs as the works were outside of those specified under the DART protocol.

Categories of Drain Review	January – April 2016	May-August 2016	September-December 2016	Totals
DART Protocol – SCR issued	19	28	13	108
Letter of Review Issued	17	9	16	
Other Types of Files (e.g., Environmental Assessment, sign-off, Assessment changes)	1	4	1	
Total Files	37	41	30	

Staff Report

9.(iii)



To: Board of Directors
Date: April 5, 2017
From: Brendan Martin, Biological Assistant
Subject: Water Quality and Benthic Monitoring – 2016

2016 Surface Water Monitoring Program – Background

The St. Clair Region Conservation Authority (SCRCA) collects monthly surface water samples throughout the SCRCA jurisdiction typically from April to November. These samples are shipped to appropriate organizations for water quality analysis where results are returned to the SCRCA. This data allows the SCRCA and other organizations to compare long-term results which helps to identify any changes in water quality. Water samples are collected through two monitoring programs:

1) Provincial Water Quality Monitoring Program

The Provincial Water Quality Monitoring Network (PWQMN) was implemented in 1964 by the Ministry of Environment (MOE) for the purpose of obtaining data on and determining surface water quality from watercourses throughout Ontario. While water quality samples are collected and analysed for several parameters, there are eight key parameters including suspended solids, chloride, total phosphorus, nitrate, copper, lead, zinc, and *E. coli* which are used as indicators. The Middlesex-London Health Unit tests water samples for *E. coli* while the other parameters are determined by the MOE. In 2016, eight sites were sampled monthly from April to November throughout the SCRCA jurisdiction.

2) Canada-Ontario Agreement (COA)

The purpose of the Canada-Ontario Agreement (COA) on Great Lakes Water Quality and Ecosystem Health is to address how federal and provincial governments can help to improve the Great Lakes basin ecosystem through partnership. Through this program, eight sites were sampled monthly from April to November 2016 in the SCRCA jurisdiction. Additionally, water samples were collected at two sites in the Lambton Shores area during these sampling events. Water samples are tested for similar water quality parameters as in the PWMQN sampling program.

Surface Water Monitoring Program – The Bigger Picture

Data collected by the SCRCA for the PWQMN and COA programs has been used in multiple provincial, national, and international programs. Such programs include SOLEC (State of the Lakes Ecosystem Conferences), which uses data collected from Lake Huron tributaries; SPARROW (Spatially Referenced Regressions on Watershed attributes), created by the USGS (United States Geologic Survey) as a modeling technique for relating water-quality measurements to attributes of the watersheds within the model; and the Integrated Climate Change Monitoring Program, a province wide sensitivity analysis created to identify sensitive watersheds. All of these programs have used data collected by the SCRCA from at least one watercourse within the watershed.

Total Phosphorus

Total Phosphorus (TP) is the amount of phosphorus from all sources and in all forms within the water column. Phosphorus easily binds to particles that can become suspended in the water through erosion and, as such, systems that run through soils that are more easily disturbed will naturally have a higher level of phosphorus. This also means that significant precipitation events or abnormally wet years can lead to large increases in total phosphorus concentrations. This is exemplified in Figure 1, which shows the average concentration of Total Phosphorus throughout the watershed (blue bars) in the North Sydenham (yellow line) and in the East Sydenham (grey line).

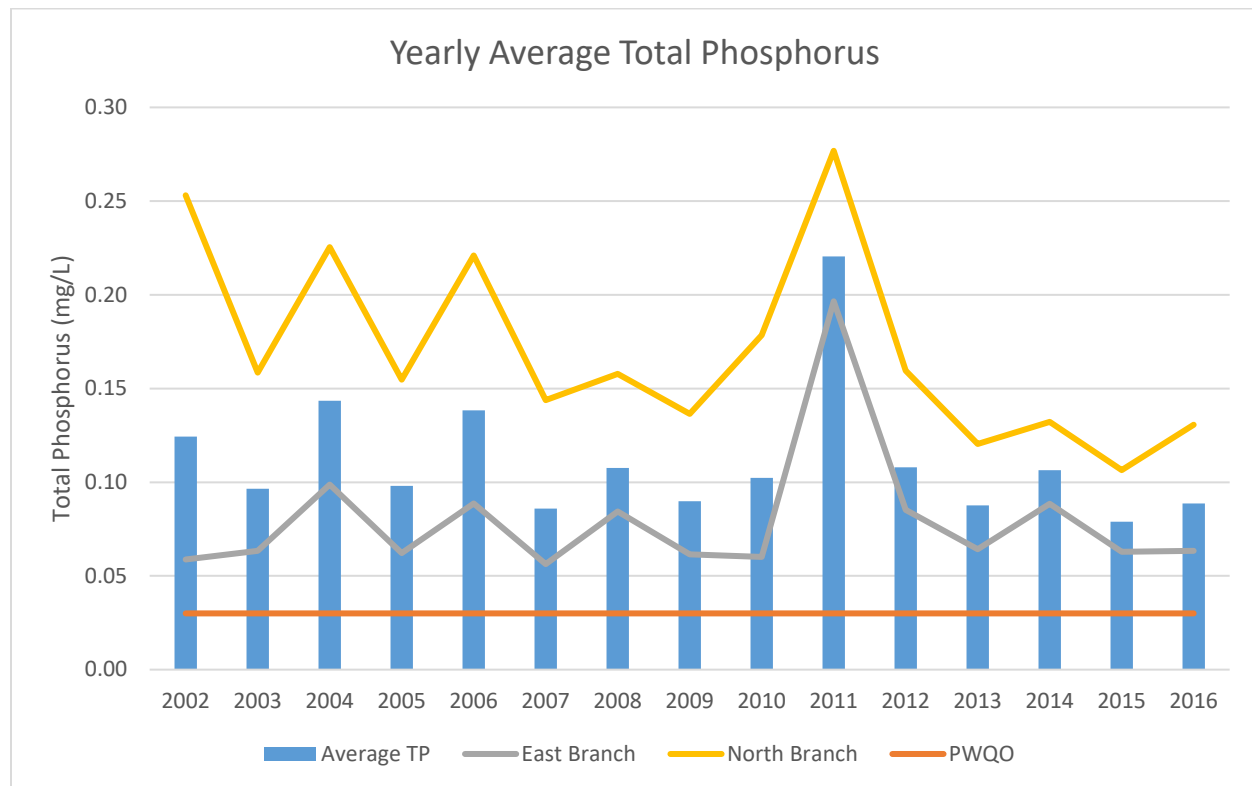


Figure 1: Yearly Average Total Phosphorus – Watershed, North, and East Sydenham

The extreme values seen in 2011 throughout the watershed are likely to have been caused by the above average amount of precipitation received that year. Between 2011 and 2016 most normal years receive about 770mm of precipitation throughout the year. 2011 had an average of 1100mm of precipitation throughout the watershed. We can most likely rule out any changes caused by smaller scale events such as spills as this large increase was seen throughout the watershed relatively evenly. This graph also shows the dramatic difference in TP concentration between the North and East branches of the Sydenham. The North Branch (Bear and Black Creeks) run through mainly clay and are almost exclusively bordered by agricultural land. The East Sydenham, on the other hand, starts in sand and loam and begins to transition into clay about $\frac{3}{4}$ of the way through its journey to Lake St. Clair. It should also be noted that the apparent decrease in TP in the North Branch between 2013 and 2016 should be taken with some skepticism as the MOE laboratory that process the water quality samples for

this region changed their analysis method which may have reduced the reported amount of phosphorus for some sites. The overall effects of this are being looked into.

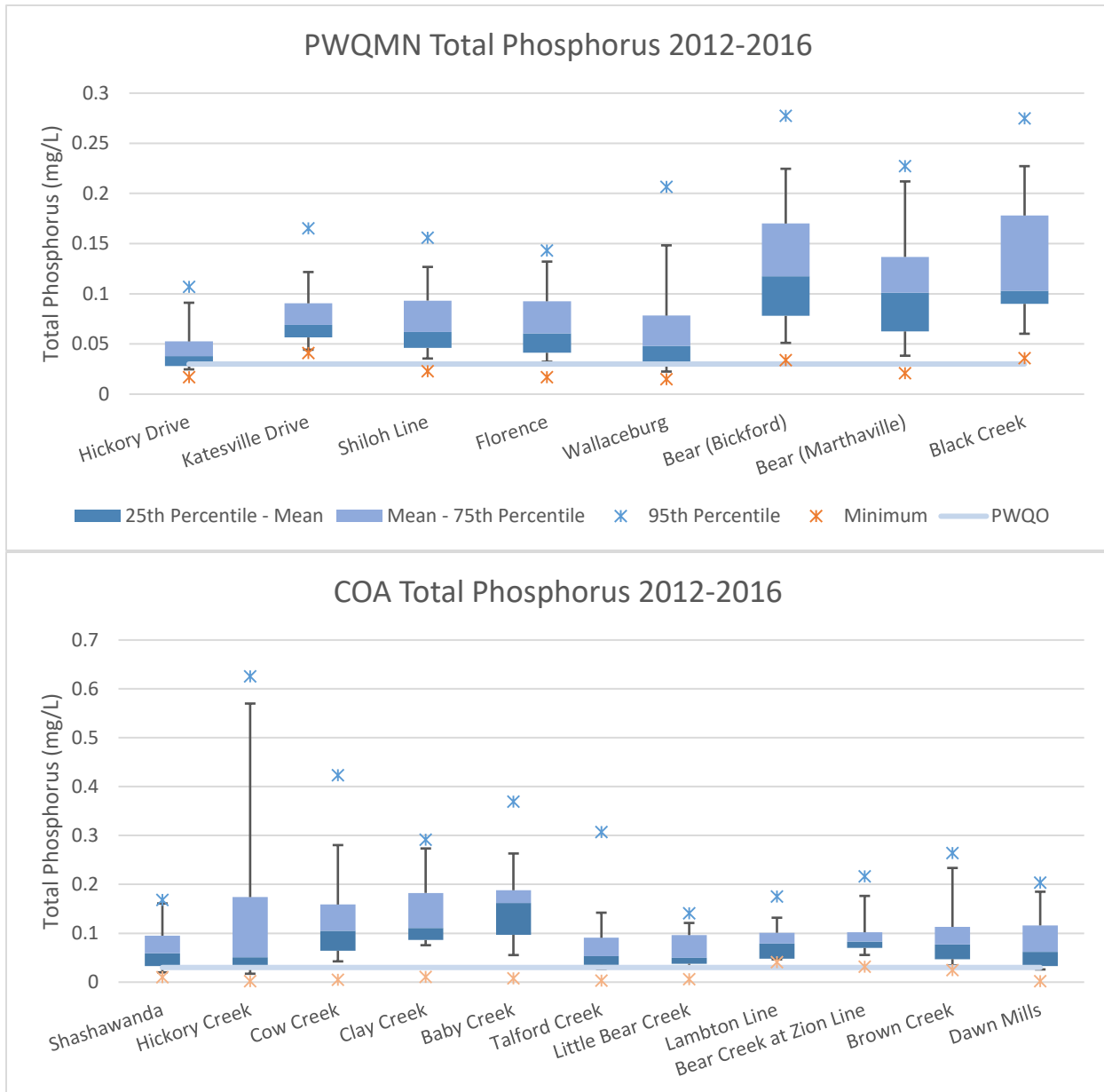


Figure 2: PWQMN and COA Total Phosphorus Boxplots – 2012-2016

Even more concerning are the concentrations of phosphorus seen in the St. Clair River Tributaries which have the most elevated range in the watershed. Even more critical than phosphorus concentrations (displayed above) is the total amount of phosphorus moved by each river in the SCRCA, also known as phosphorus loading. While the concentration of phosphorus in a watercourse can give us an idea of the state that watercourse is in it cannot alone tell us the amount of phosphorus that flows through it every year as that requires flow data. While the majority of our efforts should be focused

on reducing phosphorus loading we should also not forget the impact that watercourses with high phosphorus concentrations have on our Great Lakes, our rivers, and the flora and fauna that live within them.

Benthic Macroinvertebrate Sampling

Aquatic animals without a backbone that are visible to the naked eye and live on the bottom of a watercourse are also known as benthic macroinvertebrates. Mayflies (left), caddisflies (middle), crayfish, aquatic worms, and stoneflies (right) are all examples of benthic macroinvertebrates. These creatures are collected every spring in the SCRCA jurisdiction by Biology staff. Each species has a specific tolerance to environmental change or pollution and therefore can be used as an indicator species.



Figure 4. Mayfly, caddisfly, and stonefly larvae (respectively)

Organizations such as the SCRCA collect benthic macroinvertebrates for the purpose of assisting in determining watershed health. Through standardized grading systems this data can be compared over time to identify any changes in watershed conditions.

Specifically, the SCRCA and many other Conservation Authorities use the Family Biotic Index (FBI) to “score” a watershed. As displayed in Table 1, scores range from very poor to excellent with a lower FBI value indicating a higher water quality grade. FBI values calculated from sampling sites are averaged with other sites within the same subwatershed to arrive at an FBI average per sub-watershed.

Table 1. Family-level biotic index scoring chart

Family Biotic Index	Water Quality	Degree of Pollution
0.00 – 3.75	Excellent	Organic pollution unlikely
3.76 – 4.25	Very Good	Possible slight organic pollution
4.26 – 5.00	Good	Some organic pollution likely
5.01 – 5.75	Fair	Fairly substantial pollution likely
5.76 – 6.50	Fairly Poor	Substantial pollution likely
6.51 – 7.25	Poor	Very substantial pollution likely
7.26 – 10.00	Very Poor	Severe organic pollution likely

Benthic Macroinvertebrate Sampling – 2016 Results

Sub-Watershed	FBI Score	Water Quality
Middle East Sydenham	5.30	Fair
St. Clair River Tributaries	5.49	Fair
Sydenham Headwaters	5.49	Fair
Lower Bear Creek	5.50	Fair
Bear Creek Headwaters	5.52	Fair
Lower East Sydenham	5.67	Fair
Plympton Shores Tributaries	5.73	Fair
Brown Creek	5.74	Fair
Upper Sydenham River	5.78	Fairly Poor
Cow and Perch Creeks	5.84	Fairly Poor
Black Creek	5.86	Fairly Poor
Lambton Shores Tributaries	6.03	Fairly Poor
Lower North Sydenham	6.61	Poor
Lake St. Clair Tributaries	7.14	Poor
Watershed	5.84	Fairly Poor

Table 2. Benthic Macroinvertebrate Results 2016

The majority of sites sampled this year remained relatively consistent with their scores in previous years. Overall the Middle East Sydenham has the lowest FBI score of 5.30 closely followed by the St. Clair River Tributaries and the Sydenham Headwaters each with a score of 5.49. The Lake St. Clair Tributaries in Dover Township continue to have the highest, and therefore least favorable, score among our sub-watersheds. In terms of water quality grades eight sub-watersheds hold a “Fair” rating, four hold a “Fairly Poor” rating, and two hold a “Poor” rating. If treated as one site the score given to the entire watershed is a 5.84 or a “Fairly Poor” rating.

OBBN Data Use

Over the past year benthic data collected by the SCRCA has been used in at least one research paper determining the suitability of order level taxonomic identification versus the accuracy of family level taxonomic identification. This study used data from a variety of conservation authorities that use benthics as an indicator of aquatic health to determine that only identifying insects down to the order level was not suitable for accurately determining the health of any aquatic ecosystem. SCRCA benthic data will also be used in the near future to help assess the province wide health of streams and rivers as part of the Ontario Benthos Biomonitoring Network. Analysis methods and protocols are now being completed that will allow for multi-metric analysis to be completed accurately and easily in each watershed across the province. The hope of this is to thoroughly assess the health of benthic communities across Ontario in an attempt to better understand the current state of benthic wellbeing.

Staff Report

9.(iv)

To: Board of Directors
Date: March 6, 2017
From: Kelli Smith, Watershed Biologist
Greg Wilcox Watershed Technician
Erin Carroll, Manager of Biology
Subject: Proposed Policy to require SCRCA permission for Drain Enclosures (Flooding and Erosion Policy under O.R. 171/06 “Development, Interference with Wetlands & Alteration to Shorelines & Watercourses”)

Background:

SCRCA follows the CO/OMAFRA approved DART protocol for the maintenance of municipal drains. A protocol does not currently exist for new drains under section 4 or improvements to drains under section 78 of the *Drainage Act*.

Over the years, the number of proposed and actual enclosures of open drains and watercourses has increased in Southwestern Ontario. The SCRCA has seen 11 projects proposed or completed in the last five years on municipal drains, amounting to approximately 4kms of open watercourse converted into subsurface drainage. Approximately 2 kilometres of enclosure have been proposed or implemented in the last two years.

The majority of these enclosures of Municipal drains occur in the upper portions or the headwaters. These headwater systems have important ecosystem functions including: hydrologic, habitat/food web and physical/chemical. Intermittent headwaters may also provide unique habitat exploited by some aquatic organisms.

Enclosures can have negative and cumulative impacts, including:

- increased floodplains
- downstream/upstream flooding
- overland erosion
- increased sediment loads
- degraded stream health (i.e. water quality/aquatic species)

SCRCA’s current process is not to require written permission under O.R. 171/06 for enclosures taking place under the *Drainage Act*. The SCRCA provides comments and advice, based on our mandate, to the *Drainage Act* process for new engineer’s reports created under section 4 and/or 78 of the *Drainage Act*. Under the *Drainage Act*, the Authority is limited in the reports or studies that it can request in support of the proposed enclosure.

For those enclosures of natural watercourses or private drainage systems when not occurring under the *Drainage Act*, the proposals require written permission under Regulation 171/06.

If municipal drain enclosures are carried out (with or without a CA Act S.28 permit) and impact regulated areas with respect to the CA's regulatory responsibilities under the CA Act the CA could be held liable for not undertaking or enforcing its regulatory responsibilities (flooding and erosion impacts).

Ontario Regulation 171/06 gives SCRCA the right to require written permission for enclosures of open municipal drains since it involves alterations to a watercourse. Drains are defined as watercourses under the Act. Requiring written permission for all drain enclosures would enable the SCRCA to seek information, as deemed appropriate, to reduce the impacts of flooding and erosion. The Authority would be seeking such information as part of an application under O.R. 171/06 and not as part of the *Drainage Act* drain review process.

Administration of service:

- Similar to the DART protocol review process approved by the Board April 18, 2014, Biology Section staff complete the drain enclosure review and reporting with ratification by Planning and Regulations Section/ Regulations Officer. (This administrative process was a natural transition as a result of the former Department of Fisheries and Oceans agreements). As with the DART protocol, SCRCA Ontario Regulation 171/06 "Development, Interference with Wetlands & Alterations to Shorelines & Watercourses" applies to municipal drain enclosures and a proposed Drain Enclosure Policy and guideline would be followed for streamlining purposes. The impacts to flooding and erosion studies, if required, would require review by the SCRCA Engineer. Appropriate peer review fees would apply in these cases. We would expect only a couple of reports per year.

Other Conservation Authorities:

- Currently the ABCA, LTVCA, ERCA, UTRCA, require written permission (or permits) for drain enclosures.

Recommendation:

That the Board of Directors acknowledges this report on the need for O. Regulation 171/06 written permission for drain enclosures and directs SCRCA staff to present a motion and policy to require O. Regulation 171/06 permission for Drain Enclosures.

**This Board report has been prepared by Biology Section staff with input from Regulations staff with regard to O. Regulation 171/06 (PH/DC legal aspects) and the Director of Water Resources (GS Engineer, P. Eng) with regard to flooding and erosion impacts consideration.

Staff Report

10. (i)



To: Board of Directors
 Date: April 7th, 2017
 From: Steve Shaw, Manager of Conservation Services
 Subject: Conservation services spring projects

Stewardship Projects

- approximately \$167,000 in grants will go towards funding riparian buffers, stream bank stabilization, wetland creation, upland habitat improvements, agricultural windbreaks and afforestation projects
- estimated project value with landowner in-kind, land retirement value and financial contribution is more than \$1,200,000
- construction for some projects began in March with most expected to begin in the last week of April and be completed by the first week of June



Tree Planting Program

- seedling tree shipping from supplying tree nurseries is operating approximately one week or so ahead of normal spring schedules this year.
- tree nurseries started lifting seedlings the week of April 3rd this year due to minimal snow.
- trees are expected to arrive sometime around the April 20th of April.
- SCRCA crews will be planting more than 72,000 trees on 29 properties this spring.
- another 4000 trees will be distributed to an additional 38 landowners for planting.
- Two, tractor mounted machine tree planting crews and one small hand planting crew is planned for operations to take place starting the first week of May.
- approximately 225,000 trees require spray maintenance this spring (under the 3 year vegetation control program) plus another 76,000 trees scheduled for planting this year. Two machine sprayers will start herbicide applications mid to late April depending on site conditions.
- the 3 year tending work is paid in advance and carried forward each year to cover the cost of the labour and material.

Large Stock Trees

- there are more than 800 large stock trees on order this spring
- the Municipality of Brooke-Alvinston is purchasing approximately half of the order once again this year. Brooke-Alvinston is providing a financial incentive to its municipal property owners who purchase and plant trees on their property. Conservation Services staff will be planting approximately 100 trees this spring.
- trees range in size from 1 metre for evergreen trees and approximately 1.75 metres tall for the hardwood trees. Most of the trees come either potted, ball & burlap or bare root.
- all trees are expected to be available for landowners the week of April 17th to 21st

Staff Report

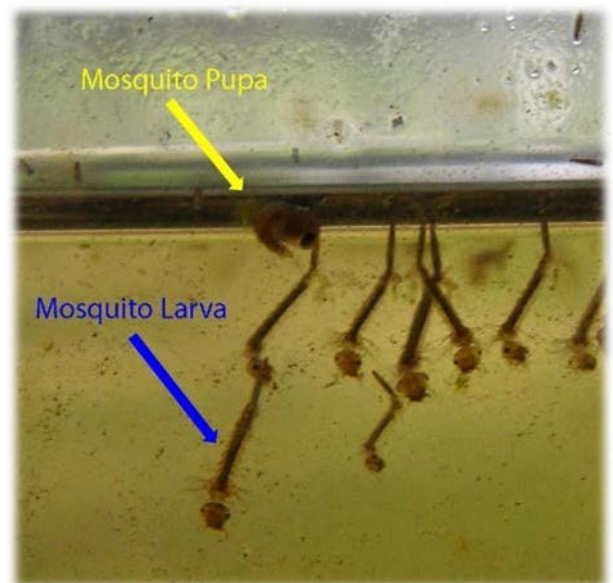
10. (ii)



To: Board of Directors
 Date: April 7, 2017
 From: Steve Shaw, Manager of Conservation Services
 Subject: Lambton County Larvicide Program

West Nile Virus Program

- the County of Lambton operates a West Nile virus (WNV) program including a larvicide application program to control mosquito populations in catch basins. The Conservation Authority has been treating catch basins in all rural and urban area in Lambton since 2006 under direction from Lambton Public Health. SCRCA obtains permits each year from the Ministry of the Environment and trains, certifies and registers summer staff as pesticide applicator technicians
- the contract for larvicide application between SCRCA and the County of Lambton has been extended one more year. 2017 will be the final year without extension under the existing contract.
- a high percentage of WNV carrying mosquitos are found in the species *Culex pipiens* (the common house mosquito). The house mosquito breeds mostly in stagnant water and prefers water heavy in organic content. Therefore, catch basins in urban areas are the most common breeding grounds for WNV carrying mosquitoes.
- approximately 16,000 catch basins are treated in towns and rural communities with 3 separate applications of methoprene (a mosquito larvicide) between July 1st and August 30th. **Methoprene is a growth regulator that prevents the pupa from emerging as a biting adult mosquito.** Approximately 65% of the catch basins treated are within the City of Sarnia.
- SCRCA staff conduct efficacy tests by collecting mosquito pupa samples throughout the summer. Pupa are monitored by Lambton Public Health. Past efficacy tests show 80% effectiveness at controlling mosquito populations.
- SCRCA will continue to offer the treatment program for Aamjiwnaang First Nation in Sarnia and Kettle & Stony Point First Nation in Lambton Shores.
- the larvicide treatment program is completely paid for by the County of Lambton for all municipal owned lands. Health Canada pays for treatments on First Nation lands.



March 31, 2017

TO: SCRCA Chair and Board of Directors

SUBJECT: Administration – Section 28 Status Report – Development, Interference of Wetlands and Alteration to Shorelines Watercourses Regulation

FROM: Dallas Cundick, Environmental Planner / Regulations Officer
Melissa Deisley, Regulations Officer

A summary of staff activity related to the Conservation Authority's *Development, Interference of Wetlands and Alterations to Shorelines and Watercourses Regulation* (Ontario Regulation 171/06 under Ontario Regulation 97/04) is presented below. This report covers the period from February 1, 2017 to March 31, 2017.

February 1, 2017 to February 28, 2017

Application No.	Subject Property	Proposed Works <i>Permissions may be granted where in the opinion of the CA, the control of Flooding, Erosion, Dynamic Beach, Pollution, or the Conservation of Land will not be affected by the development.</i>	Submission Complete:
			Permit Issued:
11228I	Eberts Line – Substation Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	10/02/2017
			23/02/2017
11228J	Oldfield Line – Turbine 43 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	14/02/2017
			23/02/2017
11228K	Oldfield Line – Turbine 34 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	14/02/2017
			23/02/2017
11228L	Claymore Line – Turbine 38 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	14/02/2017
			23/02/2017
11228M	Oldfield Line – Turbine 43a	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert 	14/02/2017

	Mun. Chatham-Kent	<ul style="list-style-type: none"> • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	23/02/2017
11228N	Prince Albert Rd – Turbine 3 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	08/02/2017
			23/02/2017
11228O	Prince Albert Rd – Turbine 4 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	08/02/2017
			23/02/2017
11228P	Countryview Line Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	08/02/2017
			23/02/2017
11228Q	Cedar Hedge Line-Turbine 23 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	09/02/2017
			23/02/2017
11228R	Caledonia Road – Turbine 12 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	10/02/2017
			24/02/2017
11228S	Claymore Line – Turbine 6 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	31/01/2017
			24/02/2017
11228T	Prince Albert Road Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	31/01/2017
			24/02/2017
11228U	Union Line – Turbine 27 Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Road Entrance Access Culvert • Part of North Kent Wind Energy Project • Plans prepared by AECOM 	31/01/2017
			24/02/2017
11229	515 Davies Street Mun. Chatham-Kent	<ul style="list-style-type: none"> • Construction of Garage Addition • Works will be wet passive floodproofed to Regulatory Flood Standard 	02/02/2017
			10/02/2017
11230	4602 Old River Road Geo. Twp. Sombra	<ul style="list-style-type: none"> • Construction of a Detached Garage • Works will be wet passive floodproofed to 177.3m GSC 	08/02/2017
			09/02/2017
11232	1457 London Road City of Sarnia	<ul style="list-style-type: none"> • Construction of a new storm outfall and open cut crossing • Engineered Drawings completed by TW Gray & Associates 	20/01/2017
			17/02/2017
11233	4079 Courtright Line	<ul style="list-style-type: none"> • Construction of a Pole Barn/Drive shed 	07/02/2017

	Geo. Twp. Enniskillen	<ul style="list-style-type: none"> Works will be greater than 15m from TOB and outside SCRCA Erosion Hazard Limit 	22/02/2017
11234	Black Creek Geo. Twp. Sombra	<ul style="list-style-type: none"> Integrity Dig Appropriate setback from watercourse and appropriate sediment and erosion control set up 	30/01/2017
			28/02/2017
11235	Plumb Creek Geo. Twp. Moore	<ul style="list-style-type: none"> Integrity Dig Appropriate setback from watercourse & appropriate sediment and erosion control set up 	30/01/2017
			28/02/2017

March 1, 2017 to March 31, 2017

Application No.	Subject Property	Proposed Works <i>Permissions may be granted where in the opinion of the CA, the control of Flooding, Erosion, Dynamic Beach, Pollution, or the Conservation of Land will not be affected by the development.</i>	Submission Complete:
			Permit Issued:
11228V	Bush Line – Turbine 5 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	28/02/2017
			20/03/2017
11228W	Bush Line – Turbine 52 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	28/02/2017
			20/03/2017
11228X	Union Line – Turbine 44 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	28/02/2017
			20/03/2017
11228Y	Oldfield Line–Turbine 20 & 21 Mun. Chatham-Kent	<ul style="list-style-type: none"> Construction of Road Entrance Access Culvert Part of North Kent Wind Energy Project Plans prepared by AECOM 	01/03/2017
			20/03/2017
11231	4604 Old River Road Geo. Twp. Sombra	<ul style="list-style-type: none"> Construction of Addition & Garage Addition Detailed Drawings completed by Lambton Design Consultants Works to be flush with existing elevations, no alterations to minimum lowest openings 	30/01/2017
			07/03/2017
11237	St Clair Parkway Geo. Twp. Moore	<ul style="list-style-type: none"> Navigational Aide Replacement Detailed Engineered Drawings completed by BM Ross Engineering 	02/02/2017
			06/03/2017

		<ul style="list-style-type: none"> Works will be completed from barge with appropriate sediment & erosion controls 	
11238	1220 Fort Street City of Sarnia	<ul style="list-style-type: none"> Sarnia Yacht Club Hydraulic Dredge Routine Maintenance hydraulic dredging – 30m x 213m x 3m deep 	08/02/2017
			07/03/2017
11239	Courtright Line Geo. Twp. Moore	<ul style="list-style-type: none"> Rehabilitation of Bear Creek Bridge on Courtright Line Detailed Engineered Drawings completed by BM Ross Engineering No in-water works, appropriate sediment & erosion controls 	01/02/2017
			16/03/2017
11240	Hickory Creek Line Twp of Warwick	<ul style="list-style-type: none"> Replacement of Existing Bridge/Culvert Detailed Engineered Drawings completed by Spriet & Associates Appropriate sediment and erosion control measures will be installed 	22/02/2017
			29/03/2017
11241	4075 Oil Springs Line Twp. Of Enniskillen	<ul style="list-style-type: none"> Helical Pier Foundation Repair Detailed Engineered Drawings completed by Robert E. Dale Consulting Engineers Works will be furthest from TOB, all within existing foundation, no other grading or excavation changes 	15/03/2017
			24/03/2017
11244	Old River Road Geo. Twp. Sombra	<ul style="list-style-type: none"> Construction of a Single Family Dwelling Engineered Floodproofing completed by Thames Valley Engineering Inc. Lowest opening (min. foundation opening) to be above 177.3m GSC 	30/03/2017
			31/03/2017

Total No. of Application = 30

Average No. of Days for SCRCA to Issue Permit = 15 Days

Permit Review Timelines are outlined in the document “*Policies and Procedures for Conservation Authority Plan Review and Permitting Activities*” Final Version May 2010, completed by the Conservation Authority Liaison Committee (CALC). In this document it states;

- CAs are to make a decision (i.e. recommendation to approve or referred to a Hearing) with respect to a permission (permit) application and pursuant to the CA Act within 30 days for a minor application and 90 days for a major application.

Recommended and Approved by:

Dallas Cundick, Environmental Planner/Regulations Officer

Melissa Deisley, Regulations Officer

Patty Hayman, Director of Planning

SCRCA Planning Activity Summary for the month of February 2017

File Ref.	Municipality	Geographic Twp	Lot	Concession	Street
SUB 39T-AM1301	ADELAIDE-METCALFE	ADELAIDE	LOT 26	CON 2 SER	SECOND STREET
LL 2017	ADELAIDE-METCALFE	ADELAIDE	LOT 6	CON 4 SER	NAPPERTON DRIVE
SEV B01/2017	BROOKE-ALVINSTON	BROOKE	LOT 18	CON 9	NAUVOO ROAD
FI 2017	DAWN-EUPHEMIA	EUPHEMIA	LOT 18	CON 2	FANSHER ROAD
LL 2017	LAMBTON SHORES	BOSANQUET	LOT 39	SOUTHERN	TONWSEND LINE
GI 20117	MIDDLESEX CENTRE	LONDON	LOT 25	CON 14	
FI 2017	PETROLIA	ENNISKILLEN	LOT 14	CON 11	DISCOVERY LINE
FI 2017	PLYMPTON-WYOMING	PLYMPTON	LOT 29	CON 4	LONDON LINE
SEV B01/2017	PLYMPTON-WYOMING	PLYMPTON	LOT 2	CON FRONT	PHEASANT LANE
FI 2017	PLYMPTON-WYOMING	PLYMPTON	LOT 40	CON FRONT	BLUEPOINT DRIVE
VAR A02/2017	PLYMPTON-WYOMING	PLYMPTON	LOT 23	CON FRONT	FERNE AVE
VAR A01/2017	PLYMPTON-WYOMING	PLYMPTON	LOT 23	CON FRONT	FERNE AVENUE
FI 2017	POINT EDWARD	SARNIA	LOT 69	0	VENETIAN BLVD
VAR A01/2017	SARNIA	SARNIA	LOT 66	CON 9	DEVONSHIRE ROAD
VAR A02/2017	SARNIA	SARNIA	LOT 68	CON 9	ANDOVER LANE
FI 2017	SARNIA	SARNIA	LOT 15	CON 8	MICHIGAN LINE
SEV B1/2017	SARNIA	SARNIA	LOT 56	CON 9	BRUCE STREET
FI 2017	SARNIA	SARNIA	LOT 41	CON 9	LAKESHORE ROAD
FI 2017	SARNIA	SARNIA	LOT 61	CON 9	TURDOR CLOSE WEST
VAR A4/17	ST. CLAIR	SOMBRA	LOT B	CON 13	ST. CLAIR PARKWAY
SUB 38T-16002	ST. CLAIR	MOORE	LOT 27	CON 1	
VAR A 10 /2017	STRATHROY-CARADOC	ADELAIDE	LOT 21	CON 4 SER	DEWAN STREET
FI 2017	STRATHROY-CARADOC	CARADOC	LOT 15	CON 2	GLENDON DRIVE
SEV B06/2017	STRATHROY-CARADOC	CARADOC	LOT 10	CON 10	SCOT STREET WEST
ZBA 2017	STRATHROY-CARADOC	CARADOC	LOT 11	CON 10	ELLOR STREET
SUB 39T-SC0501	STRATHROY-CARADOC	ADELAIDE	LOT 23	CON 3 SER	
LL 2017	STRATHROY-CARADOC	ADELAIDE	LOT 21	CON 5 SER	VICTORIA STREET
FI 2017	WARWICK	WARWICK	LOT 21	CON 3 SER	ZION LINE

SCRCA Planning Activity Summary for the month of March 2017

File Ref.	Municipality	Geographic Twp	Lot	Concession	Street
SEV B02/2017	ADELAIDE-METCALFE	METCALFE	LOT 3	CON 5	MELWOOD DRIVE
FI 2017	ADELAIDE-METCALFE	ADELAIDE	LOT 26	CON 3 SER	SECOND STREET
SEV B03/2017	BROOKE-ALVINSTON	BROOKE	LOT 13	CON 4	COURTRIGHT
SEV 02/2017	BROOKE-ALVINSTON	BROOKE	LOT 8	CON 13	LASALLE LINE
LL 2017	CHATHAM-KENT	CAMDEN	LOT 3	CON 1	
LL 2017	CHATHAM-KENT	DOVER	LOT 10	CON 12	LAKE STREET
VAR A01/2017	DAWN-EUPHEMIA	DAWN	LOT 31	CON 7	EDYS MILLS LINE
FI 2017	DAWN-EUPHEMIA	DAWN	LOT 22	CON 1	DAWN VALLEY ROAD
SEV B03/2017	DAWN-EUPHEMIA	EUPHEMIA	LOT 16	CON 9	JOHNSTON ROAD
SEV B02/2017	DAWN-EUPHEMIA	DAWN	LOT 21	CON 1	DAWN VALLEY ROAD
FI 2017	ENNISKILLEN	ENNISKILLEN	LOT 30	CON 13	LA SALLE LINE
ZBA 2017	ENNISKILLEN	ENNISKILLEN	LOT 10	CON 10	OOZLOFFSKY STREET
FI 2017	ENNISKILLEN	ENNISKILLEN	LOT 19	CON 12	LA SALLE LINE

LL 2017	59	MIDDLESEX CENTRE	LOBO	LOT 1	CON 8	
FI 2017		MIDDLESEX CENTRE	LOBO	LOT 7	CON 8	ILDERTON ROAD
SUB 38T89010		PETROLIA	ENNISKILLEN	LOT 13	CON 9	
SEV B02/2017		PETROLIA	ENNISKILLEN	LOT 15	CON 11	NORTH STREET
VAR A03/2017		PLYMPTON-WYOMING	PLYMPTON	LOT 4	CON FRONT	DOUGLAS STREET
FI 2017		PLYMPTON-WYOMING	PLYMPTON	LOT 40	CON FRONT	BLUEPOINT DRIVE
VAR A04/2017		PLYMPTON-WYOMING	PLYMPTON	LOT 35	CON FRONT	LAKESHORE ROAD
SUB 2015		PLYMPTON-WYOMING	PLYMPTON	LOT 20	CON FRONT	
LL 2017		SARNIA	SARNIA	ST CLAIR FRONT		DEVINE STREET
ZBA 2017		SARNIA	SARNIA	LOT 16	CON 8	MICHIGAN LINE
SEV B02/2017		SARNIA	SARNIA	LOT 16	CON 1	KIMBALL ROAD
SEV B03/2017		SARNIA	SARNIA	LOT 10	CON A OR GORE	TELFER ROAD
VAR A06/2017		SARNIA	SARNIA	LOT 9	CON 7	LONDON LINE
SPA 2016		SARNIA	SARNIA	LOT 16	CON 8	MODELAND ROAD
GI 2017		SARNIA	SARNIA	LOT 52	CON 9	
FI 2017		ST. CLAIR	MOORE	LOT 45	CON FRONT	ST CLAIR PARKWAY
VAR A05/2017		ST. CLAIR	MOORE	LOT 46	CON FRONT	ST. CLAIR PARKWAY
VAR A06/2017		ST. CLAIR	MOORE	LOT 50	CON FRONT	ST. CLAIR PARKWAY
GI 2017		ST. CLAIR	MOORE	LOT 60	CON FRONT	HILL STREET
FI 2017		ST. CLAIR	MOORE	LOT 21	CON 12	LADYSMITH ROAD
VAR A12/2017		STRATHROY-CARADOC	CARADOC	LOT 16	CON 6	OLDE DRIVE
FI 2017		STRATHROY-CARADOC	ADELAIDE	LOT 21	CON 4 SER	DEWAN STREET
OPA ZBA		STRATHROY-CARADOC	CARADOC	LOT 15	CON 10	METCALFE STREET
LL 2017		STRATHROY-CARADOC	CARADOC	LOT 12	CON 6	INADALE DRIVE

File Reference Codes:

CZ - Comprehensive Zoning	SEV - Severances	GI - General Inquiry	FI - Regulations Inquiry
ZBA - Minor Zoning Bylaws and Amendments	VAR - Variances	LL - Legal Inquiries/Letters	NM - Nutrient Management
OP (A)-Official Plan (Amendments)	EA/PLEA-Environmental Assessments	SP-Site Plan	PTTW- Permit to Take Water
TC-Tree Cutting	SUB-Subdivision	DAR-Development Assessment Review	SPA-Site Plan Approval

Meetings

February

- Feb 8 – Durco sub St. Clair Twp– P. Hayman, G. Sankar
- Feb 9 – Healthy Lake Huron GIS Meeting @ ABCA – C.Durand
- Feb 14 – 3424 Egremont Drive Discussion with Plympton-Wyoming Staff – P. Hayman, E. Ogden
- Feb 16 - Environics pop (planning) growth 2016 census webinar – E. Ogden, P. Hayman
- Feb 21 – 3118 Douglas Street Discussion with Plympton-Wyoming Staff – M. Deisley, E. Ogden

March

- Mar 2 – SWP Web/GIS Meeting – C.Durand
- Mar 2 – Bluewater Development Meeting with Plympton-Wyoming Staff and Developer – S. Hodgkiss, E. Ogden
- Mar 13 – B. Zantingh OPA 32 Plympton Wyoming – P. Hayman, B. McDougall, G. Sankar
- Mar 14 – Plympton-Wyoming Committee of Adjustment Meeting – E. Ogden
- Mar 22 – Errol Drain Site Visit – M.Deisley, K. Smith, G. Wilcox
- Mar 24 – Source Protection meeting @ SCRC – P. Hayman
- Mar 28 – Conference Call with Plympton-Wyoming Staff regarding Bluewater Development – S. Hodgkiss, E. Ogden
- Mar 29 – conference call with Baird – P. Hayman
- Mar 31 – 4058 Oil Springs Line Meeting with Landowners – D. Cundick, E. Ogden

Drainage Act and Conservation Authorities Act Protocol (DART)
(A protocol for municipalities and CAs in drain maintenance and repair)
Completed Files

Municipal drain January – March 2017 activity report associated with the provincially approved guidance “*Drainage Act and Conservation Authorities Act Protocol (DART)*” approved by the Board April 18, 2013.*

SCRCA DART FILES**2017 JANUARY**

FHR #	Municipality	Geographic Township	Drain Name	Project Description	SCRs Issued
2731	Plympton-Wyoming	Plympton	Hicks Drain	Bottom cleanout, brushing bank slope	2
2732	Plympton-Wyoming	Plympton	McGrail Drain	Bottom cleanout, brushing bank slope	2
2733	Plympton-Wyoming	Plympton	James Wilkinson/Kernohan O'Donnell Drain	Bottom cleanout, brushing bank slope	2

SCRCA DART FILES**2017 FEBRUARY**

FHR #	Municipality	Geographic Township	Drain name	Project Description	SCRs Issued
2743	Brooke-Alvinston	Brooke	McLachlan Drain	Bottom cleanout, brushing bank slope, brushing top of bank	3
2739	Chatham-Kent	Camden	Snider-Cooper-Ellis Drain	Bottom cleanout, brushing bank slope	2
2737	Chatham-Kent	Chatham	9 th Concession Drain	Culvert Replacement	1
2749	Chatham-Kent	Chatham	Rice Drain	Bottom cleanout, brushing bank slope, culvert replacement	3

2738	Enniskillen	Enniskillen	12 th Concession Drain	Bottom cleanout, brushing bank slope, brushing top of bank	3
2744	Enniskillen	Enniskillen	8 th Concession Drain	Culvert Replacements	1

SCRCA DART FILES**2017 MARCH**

FHR #	Municipality	Geographic Township	Drain name	Project Description	SCRs Issued
2755	Chatham- Kent	Chatham	McKiever Drain	Bottom only cleanout	1

***Note**

The SCRs and the above report are prepared by Biology Section staff with ratification by Planning and Regulations Section/ Regulations Officer. Ontario Regulation 171/06 "Development, Interference with Wetlands & Alterations to Shorelines & Watercourses" applies, however the DART protocol is followed for streamlining purposes. SCR's – standard compliance requirements

Staff Report

11. (iv)



To: Board of Directors
 Date: April 11, 2017
 From: Patty Hayman, Director of Planning
 Subject: West Ipperwash Dynamic Beach Limit Assessment and Lake Huron Shoreline Management update

West Ipperwash Dynamic Beach Limit Assessment Update

- Deliverables have been received by Baird and Associates Coastal Engineers and reviewed by staff. The study recommended a reduction in the dynamic hazard limit and ways to improve the beach.
- The deliverables included: i) technical study ii) hazard map iii) Best Management Practices brochure iv) consultation comments section and v) input to Development guidelines. The report will be included in the board package for shoreline members. If you wish to receive a printed report please request a copy from Marlene Dorrestyn, Administrative Assistant.
- the study involved consultation with West Ipperwash beach property owners and Kettle Stony Point First Nation (KSPFN), the latter which has “beach rights of use” as determined by the Supreme Court of Canada. As provided previously (Sept 2016), KSPFN has a consultation protocol. Key points are provided at the end of this memo. SCRCA inquired into obtaining KSPFN consultation funds and KSPFN must apply for the funds. SCRCA staff are going to continue to consult with KSPFN based on existing dollars to the best of our ability considering CA financial resources. Shoreline Management Plan funds will contribute to this end.
- In addition to a KSPFN band council meeting in August 2016 to introduce the study, SCRCA staff attended the April 1 Joint KSPFN and Lambton Shores Open House to discuss the results of the study. The Open House was well attended.



Next steps: Post and circulate study for comments. Consult and document. Bring comments back to the Board for approval. Finalize and incorporate into Shoreline Management Plan.



April 1 Open House

Lake Huron Shoreline Management Update

- As noted above, SCRCA continues to consult on the beaches site specific area studies and incorporate into the 2011 Shoreline Management Plan.
- The regular SMP funding will fund the consultations required this year.

Considerations to Shore Protection Structures

- In November 2016, due to high lake levels, SCRCA staff recommended the 2017 budget include funds to hire a coastal consultant to carry out an update to SCRCA's landowner resource document "Considerations to Shore Protection Structures". The Board of Directors approved the project in principle subject to funding based on utilizing 50% grants/reserves.
- Unfortunately, a review of available 2017 grants and reserves to offset municipal special levy contributions indicate insufficient funds to cover the administration and consulting costs. Therefore, it is recommended this project be deferred and potentially be revisited for the following years budget consideration.
- Without grants and reserves, the costs per shoreline municipality increases +/- 70%.
- The ABCA is proceeding with a similar type project for their lakeshore residents in 2017. Baird and Associates has been retained to carry out the project for ABCA.

KSPFN consultation protocol- Key points relative to above discussion extracted from (the protocol should be read in its entirety). Highlight added by CA staff.

5.10 A process of consultation and accommodation must be designed and implemented with flexibility in order to take into account the importance of CKSPFN's Aboriginal and Treaty Rights, Aboriginal Title, health and environmental considerations that could be affected by the Activity, and the seriousness of the possible Impact. It will be incumbent on CKSPFN to decide how much flexibility a certain process requires, this can include whether or not CKSPFN deems consultation in respect of an activity necessary or not or the level of consideration and accommodation necessary. It will not be the responsibility of the Industrial Proponent or Crown to decide how much or little consultation or

5.11 It is recognized that CKSPFN may take time to make decisions based on the required amount of consultation and accommodation required for a specific activity, and Industrial Proponents must consider all relevant matters and obtain approval from Chief and Council for certain matters or from elders of the community. However, a timely response to Notices is expected as part of the mutual relationship with the Crown and Industrial Proponents.

5.12 CKSPN realizes that the Crown may delegate procedural aspects of their duty to consult and accommodate to the Industrial Proponent. However, CKSPFN requires the Crown to remain in an oversight role throughout the entire process unless CKSPFN requests otherwise.

5.13 In terms of funding, the Crown are responsible to fund or ensure funding is provided by any relevant Industrial Proponent for all the reasonable costs of CKSPN to enable them to participate in a meaningful and informed way in any consultation and accommodation process.

Capacity funding may include, but is not limited to:

- **Meeting expenses**
- **Travel expenses, accommodation, and other honoraria**
- **Hiring outside experts or staff to provide critical analysis**
- **Completion of third-party reviews of Environmental assessment documents or legal agreements**
- **Administrative disbursements**
- **Other costs.**

Costs may also increase / decrease depending on the size, scope, and community involvement necessary to hold adequate and good faith consultations. These costs will be estimated in a work plan and a budget will be provided by CKSPFN to the proponent throughout the process.

Baird

oceans
engineering
lakes
design
rivers
science
watersheds
construction

DRAFT

West Ipperwash Dynamic Beach Assessment

**April 7, 2017
12574.101**



West Ipperwash Dynamic Beach Assessment

Prepared for



St. Clair Region Conservation Authority

Prepared by

Baird

W.F. Baird & Associates Coastal Engineers Ltd.

*For further information please contact
Fiona Duckett at (905) 845-5385*

Project Number: 12574.101

Revision	Date	Status	Comments	Reviewed by	Approved by
0	23 Feb 2017	Draft	Client review	HJM	FJLD
1	29 Mar 2017	Draft	Client review	HJM	FJLD
2	07Apr2017	Draft	Client review	HJM	FJLD

This report was prepared by W.F. Baird & Associates Coastal Engineers Ltd. St. for Clair Region Conservation Authority. The material in it reflects the judgment of Baird & Associates in light of the information available to them at the time of preparation. Any use which a Third Party makes of this report, or any reliance on decisions to be made based on it, are the responsibility of such Third Parties. Baird & Associates accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.

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1.0 INTRODUCTION

This report provides an assessment of the dynamic beach hazard limit for West Ipperwash Beach, between Centre Sideroad and West Ipperwash Road in Lambton Shores, Lambton County. The site is located on the east shore of Lake Huron as shown in Figure 1.1.

1.1 Background

In 1996 the St. Clair Region Conservation Authority (SCRCA) developed the *Lake Huron Shoreline Management Plan (SMP)* for Point Edward, Sarnia and Plympton-Wyoming. The SMP was updated in 2011 (Baird, 2011) to the current technical standards identified in the *MNR Technical Guide for the Great Lakes – St. Lawrence River System and Large Inland Lakes* (MNR, 2001), and to include Lambton Shores.

The Shoreline Management Plan Update - 2011 (Baird, 2011) identifies the West Ipperwash Beach study area, Centre Side Road to West Ipperwash Road as a dynamic beach. The *Provincial Policy Statement (PPS)* (Ministry of Municipal Affairs and Housing, 2014) states that development shall be directed away from natural hazards where there is unacceptable risk to public health, safety or property damage, and not create new or aggravate existing hazards. It further directs that development and site alteration shall not be permitted within the dynamic beach hazard. In accordance with the *Technical Guide* (MNR, 2001) published in support of the *PPS*, the dynamic beach hazard limit was mapped at the standard 30 m from the flood hazard, extending to the landward side of the first main foredune. An adjustment of the beach profile to compensate for an extended period of low water levels was included. The shoreline does not appear to be recessional and no erosion allowance was therefore applied.

The Natural Hazards Training Manual (MNR, 1997) states that mechanisms should be incorporated into the planning process to provide the flexibility to undertake a study using accepted scientific and engineering principles, to determine the landward limit of the dynamic beach hazard. The SCRCA retained Baird & Associates to further evaluate the dynamic beach hazard for West Ipperwash Beach. This report presents the methodologies used and results of the study, along with recommendations for the dynamic beach hazard limit.

1.2 Study Scope

The scope of work included the following key tasks:

- Site reconnaissance including use of an Unoccupied Aerial Vehicle (UAV) to collect imagery of the shoreline, establish control points, beach profile surveys, assess shore protection, and sediment sampling;

- Data review including the 1:2000 topographic mapping, Canadian Hydrographic Services Field Sheet (offshore bottom elevations), historical water levels and MNR wave climate database, as well as previous reports;
- Numerical modelling of the beach profile response to extreme wave and water level events for delineation of the dynamic beach hazard limit;
- Assessment of wave uprush for delineation of the dynamic beach hazard limit;
- Assessment of shore protection in the study area, in relation to the dynamic beach hazard limit.
- Recommendations for dynamic beach hazard delineation;
- Public consultation process and meeting with Kettle and Stony Point First Nation;
- Input to Development Guidelines through discussion with SCRCA (provided under separate cover); and
- Preparation of a Best Management Practices fact sheet (brochure) addressing good beach management, to inform and assist property owners (provided under separate cover).



Figure 1.1 Site Location

2.0 DYNAMIC BEACH HAZARD

As outlined in the *Provincial Policy Statement* (Ministry of Municipal Affairs and Housing, 2014),

“Hazardous lands adjacent to the shorelines of the Great Lakes - St. Lawrence River System are those lands, which are impacted by flooding, erosion, and/or dynamic beach hazards.”

The dynamic beach hazard limit is defined in Figure 2.1 based on MNR (2001). The “Flood Level” and the “Flooding Allowance” represent the flooding hazard. The flood level is the sum of the mean lake level and storm surge with a combined probability of a 100-year return period (i.e., on average, has a one percent probability of occurring in any given year). For the study area, the MNR 100-year flood level is 177.9 m (IGLD 1985). Further discussion on water levels is provided in Section 3.5.

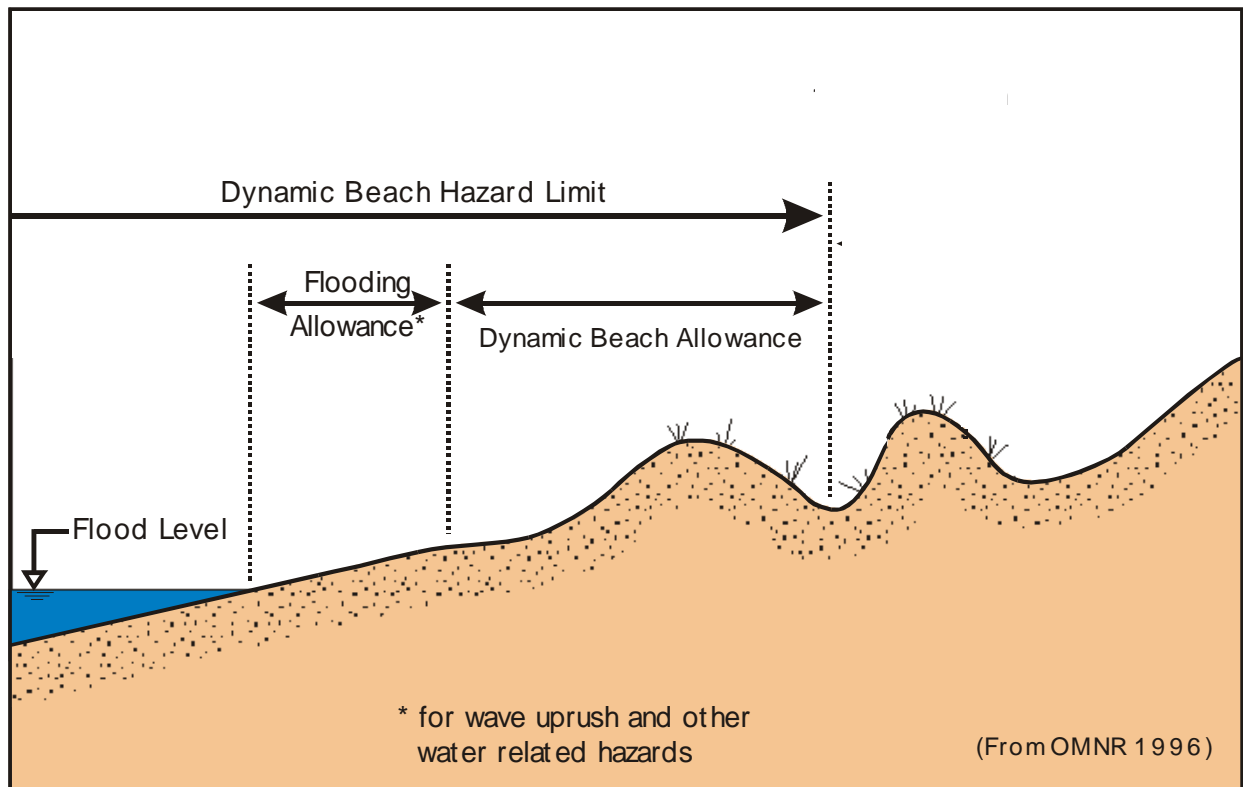


Figure 2.1 Dynamic Beach Hazard Limit

The flooding allowance accommodates wave uprush on the shoreline beyond the water level. The Technical Guide (MNR, 2001) requires a flooding allowance of 15 m, measured horizontally from the location of the flood level, if a study using accepted engineering and scientific principles is not undertaken.

The dynamic beach allowance is intended to permit the natural erosion and accretion of the beach/dune system in response to variable lake levels and storm events. The Technical Guide requires a dynamic beach allowance of 30 m if no study using accepted engineering and scientific principles is undertaken. The sum of the combined flooding and dynamic beach hazard allowances is 45 m measured horizontally from the position of the 100-year flood level. In addition to the flooding and dynamic beach hazard allowances, an erosion allowance must also be considered where appropriate. The erosion allowance is intended to accommodate long-term recession of the shoreline.

This approach was used to delineate the dynamic beach hazard at West Ipperwash for the Shoreline Management Plan Update (Baird, 2011). The shoreline does not appear to be recessional and no erosion allowance was therefore applied. An adjustment of the beach profile to compensate for an extended period of low water levels was included.

Where it is determined that a scientific study using accepted engineering principles would be a more appropriate method for determining the landward limit of the dynamic beach hazard, the Technical Guide allows for this. The following sections outline the approach used in the study to delineate the dynamic beach at West Ipperwash.

3.0 DATA

This section provides a description of data used in the study including: topography, bathymetry, sediment, wave and water level data. Field work undertaken for this study included a UAV survey and sediment sampling on July 28, 2016.

3.1 UAV

To support the mapping of the dynamic beach hazard limit, Baird deployed a UAV to collect low altitude, high resolution digital oblique aerial photography of the study shoreline. The aerial photography was geo-referenced to provide up-to-date images of the site conditions and beach features, including current waterline, structures, vegetation, shore protection and locations of buildings. A registered OLS (Ontario Land Surveyor) conducted a survey of reference precision targets using the Can-Net GPS Virtual Reference Station Network to provide accurate geo-referencing. Property based aerial oblique photos from the UAV are provided in Appendix A.

3.2 Beach Profiles and Bathymetry

Beach profile data at representative locations were extracted from the 2010 Digital Elevation Model (DEM) provided by SCRCA. The DEM has a 0.5-metre resolution. The profile locations are shown in Figure 3.1. Bathymetry data from Canadian Hydrographic Services Field Sheet 8088 surveyed in 1981 with a 1:50,000 scale were used to extend the profiles offshore. Continuous beach profiles extending from the dune to approximately 3.5 km offshore were extracted from the compiled bathymetry and beach profile data.

3.3 Sediment

Sediment samples were collected on July 28, 2016 at 6 locations along the beach. The sample locations are shown in Figure 3.2. Sample IP-S4 was not sent for analysis as it contained a large quantity of organic material. A particle size distribution (PSD) analysis was completed and the results including D_{10} , D_{50} , and D_{90} are summarized in Table 3.1. The beach material is classified as fine sand with D_{50} in the range of 0.14 to 0.20 mm. Complete results of the PSD analysis are provided in Appendix B.

Table 3.1 D_{10} , D_{50} , D_{90} for Sediment Samples

Sample	D_{10} (mm)	D_{50} (mm)	D_{90} (mm)
IP-S1	0.11	0.16	0.20
IP-S2	0.10	0.14	0.20
IP-S3	0.13	0.20	0.20
IP-S5	0.13	0.18	0.18
IP-S6	0.12	0.18	0.18

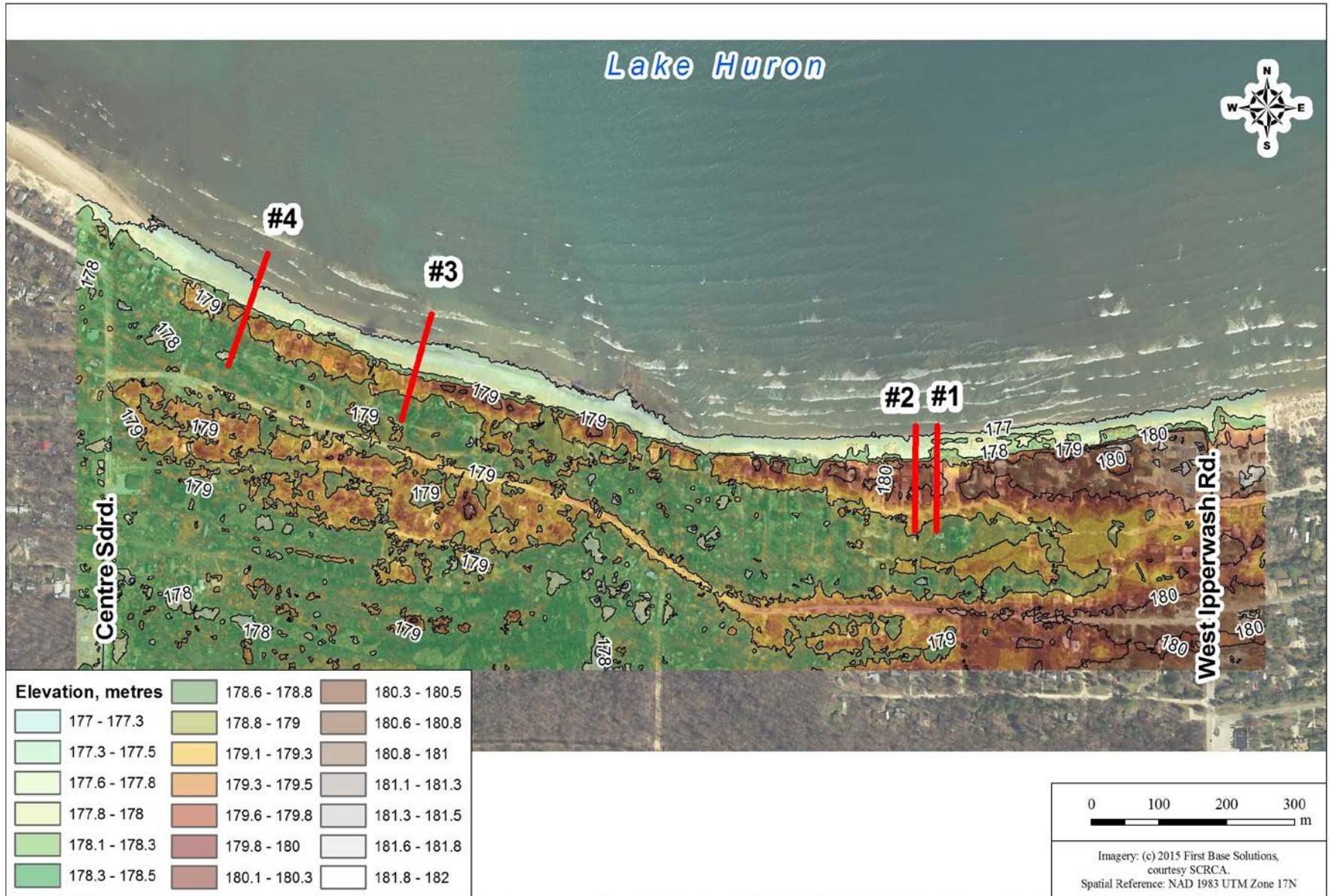


Figure 3.1 Profiles Locations for COSMOS Beach Profile Modeling



Figure 3.2 Locations of Beach Sediment Samples Collected July 28, 2016

3.4 Waves

Deep water waves from the MNR wave hindcast database (Philpott, 1988) for the period 1953 to 1987 were used to define the wave climate and extreme events. Data were extracted for the hindcast location nearest to the project site; Station H02 - Kettle Point. The deep water waves were transformed to a nearshore depth of 15 m considering the effects of wave refraction and shoaling. A peak over threshold (POT) extreme value analysis (EVA) was performed on the transformed waves to establish extreme events. Table 3.2 lists significant wave heights and corresponding return periods for the transformed nearshore waves.

Table 3.2 Significant Wave Heights with Return Period for Nearshore Waves (15 m depth)

Return Period (Years)	Significant Wave Height (m)
1	3.9
2	4.0
5	4.4
10	4.6
20	4.8
50	5.1
100	5.3

The largest nearshore wave event (15 m depth), had a significant wave height (H_s) of 4.9 m with peak wave period (T_p) of 9.9 s from 17 degrees (NNE); this has a return period between 20 and 50 years. The storm event was scaled to a 20 year event as shown in Figure 3.3, for input to the COSMOS model (discussed in Section 4).

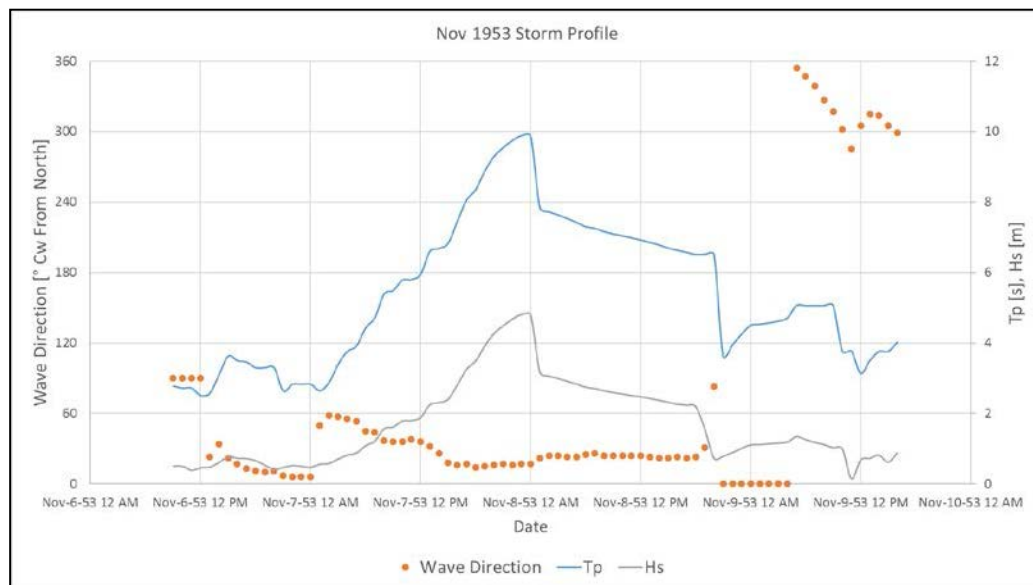


Figure 3.3 Wave Height, Period and Direction Nov 1953 Storm (Philpott, 1988)

3.5 Water Levels

Unless otherwise noted, all elevations in this report are referenced to International Great Lakes Datum (IGLD 1985). Lake Huron Chart Datum is 176.0 m IGLD 1985.

Water levels on Lake Huron vary in the long-term and seasonally in response to climatic conditions, and in the short term due to the passage of individual storm events. Figure 3.4 shows the long term variations in water level on Lake Huron.

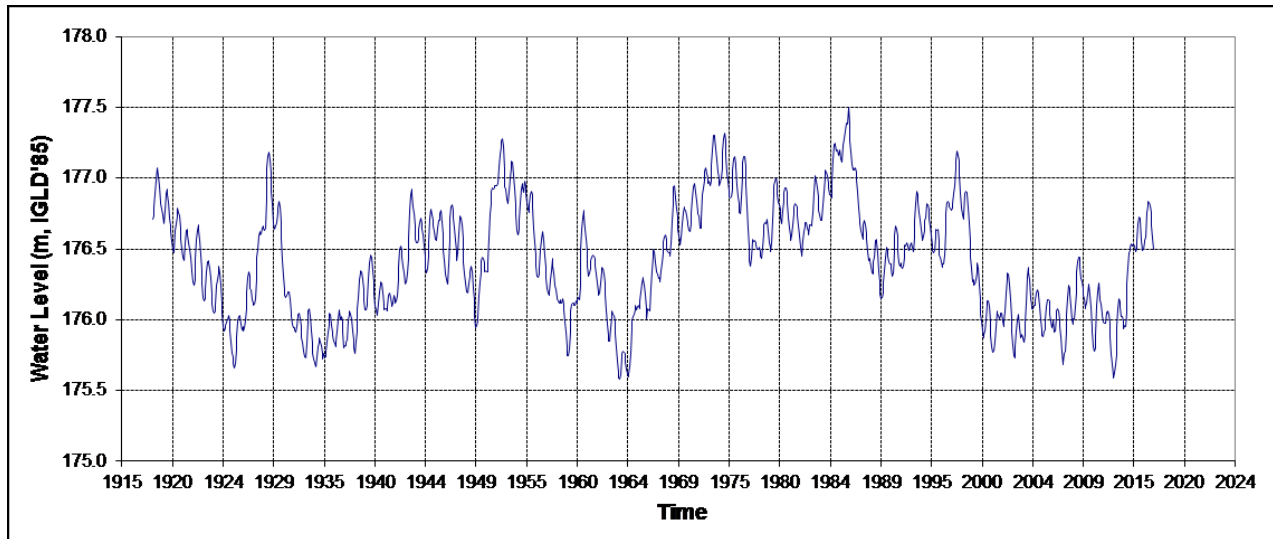


Figure 3.4 Lake Huron Monthly Mean Water Levels (1917 to 2016)

The typical seasonal variation on Lake Huron is approximately 0.3 m, with the average low monthly mean (176.3 m IGLD 1985) occurring in February and the average high monthly mean (176.6 m IGLD 1985) occurring in July. The highest recorded monthly mean water level was 177.5 m in October 1986 (see Figure 3.5), and the lowest recorded monthly mean water level was 175.6 m in January 2013, a difference of almost 2 m. The fluctuation over any given year will vary due to longer-term variations in precipitation, evaporation, runoff, inflow from Lake Superior and outlet at the St. Clair River.

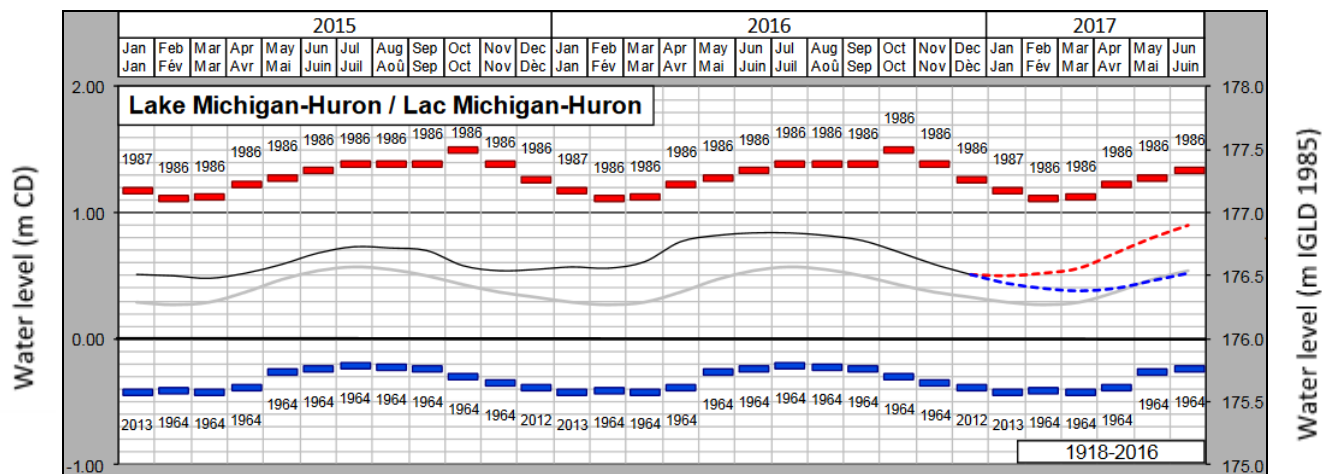


Figure 3.5 Monthly Mean Water Levels on Lake Huron (from Canadian Hydrographic Service)

Short term changes occur in response to storm events (over a period of hours). When winds continue to blow over the lake surface in one direction for several hours, an increase in the water level against the downwind shoreline is produced, this is referred to as “wind setup” or “storm surge”.

The peak instantaneous water level is the sum of the mean lake level and storm surge. The flood level used to define the flood hazard and the dynamic beach hazard (as discussed in Section 2), is the peak instantaneous water level with a combined probability of a 100-year return period (i.e., on average, has a one percent probability of occurring in any given year). The flood level and peak instantaneous water levels for varying return period are defined in the *Great Lakes System Flood Levels and Water Related Hazards* report (MNR, 1989). Table 3.3 lists peak instantaneous water levels at Kettle Point, which is the closest station to the project site.

Table 3.3 Kettle Point Peak Instantaneous Water Levels for Varying Return Periods (MNR,1989)

Return Period (Years)	Water Level (m IGLD'85)
2	177.1
5	177.4
10	177.6
25	177.7
50	177.8
100	177.9
200	178.0

For the purposes of this study, it was assumed that the statistical evaluation of historic water level records provides a suitable basis for establishing the dynamic beach limit in accordance with the *Provincial Policy Statement*. However, it should be noted that other factors such as tectonic uplift, climate change, and erosion of the St. Clair river bed may influence future water levels.

3.6 Shoreline Recession

No evidence of significant shoreline recession was identified from available studies including the shoreline comparison undertaken by SCRCA for the *Lake Huron Shoreline Management Plan Update – 2011*. As there is no distinct top of bluff, and the beach is a dynamic feature, it is difficult to assess shoreline erosion from historical air photo comparison. However, long term accretional ridges are visible in the air photos, indicating the beach is an accretional feature.

4.0 BEACH PROFILE MODELING

4.1 COSMOS Model

The COSMOS model was used to estimate the beach profile response to storm conditions and the wave uprush elevation on the profile. COSMOS is a two-dimensional (2D) profile model that consists of several predictive modules that evaluate the following processes across a shore-perpendicular profile:

- Random wave transformation (including refraction, bottom friction, shoaling, breaking, wave decay, run-up, and overwash);
- Steady currents (including undertow, and wave and tide-induced cross-shore and longshore currents);
- Orbital velocities (linear and non-linear);
- Suspended sediment distribution through the vertical;
- Bed and suspended load sediment transport in cross-shore and longshore directions; and
- 2D profile response due to gradients in cross-shore sand transport.

The model has been applied in over 100 engineering projects throughout the world. For a detailed description of the model, refer to Nairn and Southgate (1993) and Southgate and Nairn (1993). The COSMOS model is based on accepted scientific and engineering principles.

4.2 Model Input

The COSMOS model requires four key inputs: beach profile, waves, water levels and sediment grain size. Beach profiles were developed from the bathymetry and topographic data as described in Section 3.2. The profiles extend from the dune, offshore to a depth of 15 m.

The model was run for selected extreme water levels as defined in Table 3.3. Hourly waves from the deepwater hindcast transformed to the nearshore were used to define the wave conditions at the offshore limit of the profile as described in Section 3.4. The November 1953 storm profile was used as the base storm profile. This event had a significant wave height (H_s) of 4.9 m with peak wave period (T_p) of 9.9 s from 17 degrees (NNE (Figure 3.3)). The peak wave height was scaled to match the 20-year return period wave height for the base case scenario. This same process was used to develop the wave input file for other return periods.

Sediment Grain size was defined based on the samples discussed in Section 3.3. A D_{50} of 0.18 mm was used as the base case, this was the median D_{50} from samples. Sensitivity testing was also

completed, using different grain sizes, both larger (0.5 mm) and smaller (0.09 mm) than 0.18 mm to assess the effect of grain size on beach profile response.

4.3 Model Runs

The COSMOS model was used to evaluate the beach profile response at each of the profile locations shown in Figure 3.1. A sensitivity analysis was completed to assess the effects of varying water level, wave height and sediment grain size.

4.3.1 Base Case

The COSMOS model was run for the four representative profile locations shown in Figure 3.1. The model was run at the 100-year peak instantaneous water level; 177.9 m with the 20 year return period wave event. This is consistent with the return periods recommended in the Technical Guide, for assessing the dynamic beach hazard. A representative D_{50} of 0.18 mm was used. The results of the model runs showing the initial profile and the profile after the storm are provided in Appendix C.

For the base case, the COSMOS model predicted the limit of wave uprush resulting in a beach profile response, in the range of elevation 178.9 m (Profile 1) to 179.5 m (Profile 2). The notable difference between these two profiles, which are in close proximity, is the presence of the foredune at Profile 1. Although the foredune at Profile 1 was eroded when exposed to the storm event, it provided a level of natural protection, as demonstrated by the lower uprush elevation.

At Profiles 3 and 4, the nearshore depths are shallower due to the shale outcrop. Wave energy is reduced, resulting in lower wave uprush elevations, in the range of 178.5 m. The corresponding profile adjustment is also reduced when compared with Profiles 1 and 2, as shown in Appendix C.

4.3.2 Sensitivity Analysis

Water Level and Wave Height

A sensitivity analysis was completed, to assess the effects of varying water level and wave height on beach profile response to extreme events. The COSMOS model was run for the water levels and peak wave heights listed in Table 4.1. The November 1953 storm profile was used and peak wave heights were scaled for the appropriate return period. Output from the COSMOS model is provided in Appendix C.

Table 4.1 COSMOS Runs to Evaluate Sensitivity to Water Level and Wave Height

Run	Profile	Water Level Return Period	Water Level (m IGLD'85)	Wave Height Return Period	Wave Height (m) ¹
1	1	100-year	177.9	20-year (2 storms)	4.8
2	1	10-year	177.7	20-year	4.8
3	1	10-year	177.7	2-year	4.0

¹ Hs transformed to 15 m depth

The COSMOS model predicted higher uprush and significantly more erosion of the beach profiles when the profile was exposed to two 20-year return period wave events at the 100 year water level (Run 1). At Profile 1 for example, wave uprush extended to elevation 179.0 m. This is representative of the beach response when exposed to two consecutive storms, with no time for the profile to recover between the storm events.

When the water level was reduced to the 10-year return period water level combined with the 20 year return period waves (Run 2), the wave uprush reduced. For Run 3 (10-year return period water level and 2 year return period waves), wave uprush reduced further and the profile erosion was less. In general, the profile response is more sensitive to changes in water level. During high water levels, it is not unreasonable to expect that the profile may be exposed to two storm events, over the fall or winter, without time for recovery.

Sediment Grain Size

A sensitivity analysis was also completed to assess the effects of varying sediment grain size. The COSMOS model was run for the base case (100 year return period water level with 20 year return period waves), with grain sizes of 0.10 mm and 0.50 mm for comparison with the base case (0.18 mm). Output from the COSMOS model is provided in Appendix C. Both wave uprush and beach profile response are sensitive to grain size. When the grain size was reduced to 0.10 mm, uprush extended to higher elevations with increased erosion. When the grain size was increased to 0.50 mm, erosion was significantly reduced.

5.0 DYNAMIC BEACH HAZARD LIMIT

The results of the COSMOS modeling were used to develop recommendations for the beach hazard limit. The results from the base case event, 100-year return period water level and 20 year return period wave presented in Section 4.3.1 were used to define an elevation representing the limit for wave uprush and beach profile response. Consideration was given to the sensitivity analysis presented in Section 4.3.2, in selecting the elevation. This elevation varies along the length of the study site as demonstrated by the results for the representative profiles modelled. The wave uprush and beach profile response elevations are listed in Table 5.1 for the profiles modeled, and the wave uprush limit for the study area is plotted in Appendix D. In areas where the dune has been removed and the backshore regraded, such as the lot immediately east of Profile 1, elevations are lower and the setback is further landward.

Table 5.1 Recommended Elevation for Wave Uprush and Beach Profile Response

Profile	Recommended Elevation for Wave Uprush and Beach Profile Response (m IGLD 1985)
1	179.5
2	179.5
3	179.0
4	179.0

A low water level adjustment of 15 m measured horizontally inland from the elevation for wave uprush and beach profile adjustment is recommended; this is consistent with the 2011 Shoreline Management Plan Update (Baird, 2011). The topography data used to develop the beach profiles and mapping was the 2010 DEM provided by SCRCA. The data were collected during an extended period of low water levels.

Changes in beach profile elevation occur in response to lake level variations. During periods of higher lake levels, the beach profile erodes, and during periods of lower lake levels, the beach profile accretes. This can have an impact on the horizontal position of the 100-year flood elevation and in turn, on the location of the flood and dynamic beach hazard limits. Lake Huron water levels were below average from approximately 1998 to 2014, and this resulted in significant accretion at Ipperwash Beach. Based on analyses of beach profiles, presented in Baird (2011), a 15 m horizontal adjustment to the dynamic beach hazard limit was recommended.

An additional setback of 10 m from the elevation for wave uprush and beach profile response, plus the low water level adjustment (15 m) is recommended, for a total setback of 25 m from the elevation for wave uprush and beach profile response. This is considered a safety buffer based on variability as indicated in the sensitivity analysis.

At the west end of the study area, near Centre Sideroad, elevations are below the wave uprush elevation. The setback defined in the 2011 Shoreline Management Plan Update (Baird, 2011) is recommended in this area, as shown on the mapping in Appendix D. Additional measures may be required to address the flood hazard.

The recommended dynamic beach hazard limit is plotted in Appendix D.

6.0 SHORE PROTECTION

Seawalls have been constructed along much of the shoreline of West Ipperwash Beach. The seawalls are generally constructed of stone, concrete or steel sheet pile; examples are shown in Figure 6.1.



Figure 6.1 Examples of Stone and Concrete Seawall and Steel Sheet Pile Seawall in the Study Area

The effectiveness of the existing structures was assessed through a review of their performance during storm conditions and an assessment of wave overtopping. During wave overtopping, water passes over the structure. If there is sufficient overtopping, the inland areas behind the structure are flooded, and in extreme cases, exposed to wave action. This can result in scour and a loss of the back-fill material inshore of the structure. Examples of the seawalls along West Ipperwash Beach, following storm events in March 1973, when the monthly mean water level was 177.0 m, are shown in Figures 6.2a and b.

The EurOtop Overtopping Manual indicates that for urban settings, where there are buildings, houses or cottages immediately shoreward of the coastal structure, mean overtopping discharge should be limited to $0.001 \text{ m}^3/\text{s}/\text{m}$ (EurOtop, 2016).

Overtopping was calculated for some typical structures along West Ipperwash Beach using Ahrens and Heimbaugh (1988). The inputs required include: the depth at the toe of the structure; wave height, which is depth limited at the toe of the structure; and freeboard. Overtopping rates were calculated for the 100-year flood level (177.9 m).



Figure 6.1a March 1973 Scour behind Seawall from Overtopping after Storm Event



Figure 6.2b March 1973 Scour behind Seawall from Overtopping after Storm Event

Table 6.1 Calculated Overtopping Rates for Selected Seawalls on West Ipperwash Beach

Location	Structure Crest Elevation (m IGLD'85)	Depth at Toe of Structure during 100-year Water Level (m)	Depth Limited Wave Height (m)	Freeboard (m)	Vertical Wave Uprush (m)	Overtopping (m ³ /s/m)
6164 Jane St	177.98	0.20	0.16	0.08	0.89	1.087
6268 Spruce St	178.81	0.67	0.54	0.91	1.34	0.004
Cedar Dr 6230	179.20	0.24	0.19	1.30	10.91	0
Juniper Lane 6210	179.35	0.27	0.22	1.45	0.99	0

The results of the overtopping analysis indicate that structures with a crest elevation below 179.2 m are not sufficient to reduce the risk of flooding. The sensitivity of the walls to overtopping, considering scour in front of the wall was also assessed. With 1 m of scour in front of the wall, overtopping exceeded the recommended limit in all cases.

Some of the most common mechanisms for seawall failure include: overtopping and scour of the backfill, scour and undermining at the toe of the seawall, and flanking around the ends of the seawall when the adjacent property is not adequately protected.

In general, seawalls are not recommended on dynamic beaches. A beach offers natural protection against flood and erosion damage. Dunes absorb wave energy during large storms, protecting inland areas. They also provide a reservoir of sand to replace beach material that is carried offshore during a storm. The construction of seawalls prevents the beach from behaving dynamically. Seawalls restrict the natural beach response. When seawalls are constructed on the dynamic beach, wave reflection and scour occur when the wall is exposed to wave action. This may lead to ultimate failure of the wall and a reduction in beach width.

7.0 CONSULTATION AND ENGAGEMENT

7.1 Kettle and Stony Point First Nation

The Supreme Court of Canada determined that First Nations have use of the foreshore beach, but that lot parcels are privately owned. The following motion was passed by the SCRCA Board of Directors in 2012.

“That the board of Directors acknowledges the discussion paper on the SCRCA jurisdiction on West Ipperwash Beach area dated September 7th, 2012 and further concurs that their understanding, at this time, is that the St. Clair Conservation Authority does not have regulatory jurisdiction over First Nations activity described under Section 28 of the Conservation Authorities Act.”

An information letter about the project and request for feedback was provided to Chippewas of Kettle and Stony Point First Nation. KSPFN’s Consultation Coordinator contacted the SCRCA project coordinator to discuss the project. The consultant and conservation authority was invited to attend KSPFN council on August 15, 2016 to discuss the project and answer questions. Baird provided a presentation on the project for band council. KSPFN provided their current Beach Management Strategy (see attached in Appendix E).

The final draft assessment will be emailed to KSPFN. Additional consultation will be determined based on feedback received and municipal support.

7.2 West Ipperwash Landowners and Associated Members

An open house community meeting was held on August 30, 2016 at the Indian Hills Golf Club, to inform the shoreline community about the West Ipperwash Dynamic Beach Assessment and to provide an opportunity for feedback. The notice was mailed and hand delivered to the residences within the reach (Approximately 68 residences). The notice was also emailed to Guy Riopelle, President of West Ipperwash Beach Property Owners Association, who further distributed the notice to the email contact list. The notice was also posted on the Conservation Authority’s website. A frequently asked questions and answers sheet was also posted on the website and distributed at the community meeting. The meeting was attended by approximately 50 people in the afternoon session and approximately 8 people in the evening session. A summary of comments received by the Conservation Authority and responses can be found in Appendix E.

The final draft assessment will be emailed to all in attendance and the Conservation Authority contact list. The assessment will be posted on the Authority’s website for comment by all parties. Additional consultation will be determined based on feedback received and municipal support.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The *SCRCA Lake Huron Shoreline Management Plan Update – 2011* includes mapping for the erosion, flood and dynamic beach hazards. In the Shoreline Management Plan, the dynamic beach hazard limit was delineated in accordance with the Technical Guide (MNR 2001), which includes a flooding allowance of 15 m measured horizontally from the 100-year flood level plus a dynamic beach allowance of 30 m. A 15 m horizontal adjustment landward, was added to account for low water levels profile adjustment.

This study provides a site-specific assessment of the dynamic beach hazard at West Ipperwash Beach, between Centre Sideroad and West Ipperwash Road. The methodologies used in this study, to estimate the dynamic beach hazard limit are based on accepted engineering and scientific principles and are consistent with the requirements of the Provincial Policy Statement (2005) and the Technical Guideline (MNR, 2001).

8.1 Dynamic Beach Hazard Recommendations

1. The limit of the dynamic beach hazard limit can reasonably be established based on the limit for wave uprush and beach profile response to the 100 year return period water level and the 20 year return period wave event. This elevation varies along the study area. Recommendations have been made based on the COSMOS beach profile modeling, and considering sensitivity to water level, wave height and sediment grain size. A low water level adjustment of 15 m measured horizontally inland from the elevation for wave uprush and beach profile adjustment is recommended; this is consistent with the 2011 Shoreline Management Plan Update (Baird, 2011). An additional setback of 10 m measured horizontally inland, from the low water level adjustment is recommended, for a total setback of 25 m from the elevation for wave uprush and beach profile response. This is considered a safety buffer based on variability as indicated in the sensitivity analysis.
2. The recommended dynamic beach hazard limit is plotted in Appendix D. The beach profile modeling supports an adjustment approximately 0 to 30 metres lakeward (dependent on location), to the dynamic beach hazard limit recommended in the Lake Huron Shoreline Management Plan Update - 2011.
3. It should be noted that the recommended dynamic beach hazard limit is the minimum allowance in accordance with the provisions of the *Provincial Policy Statement* and supporting *Technical Guide*. The dynamic beach hazard is determined at the 100-year flood level and with a 20-year return period wave. There is a risk that water levels and wave heights could exceed these values and that the beach could erode further inland over a period of 100 years. Shore owners must recognize that there are inherent risks associated with flooding, erosion and dynamic beach hazards along the shorelines of the Great Lakes and that these hazards cannot be eliminated.

8.2 General Recommendations

1. Dunes provide natural protection. In areas where the dune is undisturbed, the dune should be retained. Where the natural dune height has been lowered, the dune should be restored with native or comparable sand and beach access should be controlled (e.g. dune walkovers) to minimize disturbances to the dune profile and vegetation.
2. Although the shoreline contains specialized vegetation and habitat, these natural features are not specifically addressed in this report. Important ecological elements should not be disregarded when new development is proposed. Within the dynamic beach hazard limit, natural heritage features (e.g. existing vegetation and dunes) should be retained. Where natural vegetation has been removed, regenerating native vegetation and encouraging dune development will improve the level of natural protection and provide ecological enhancement.
3. Construction of seawalls on the natural dune should be discouraged.

9.0 REFERENCES

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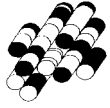
Nairn, R.B. and Southgate, H.N., 1993. Deterministic Profile Modelling of Nearshore Processes. Part 2. Sediment Transport and Beach Profile Development. Coastal Engineering, Elsevier. Vol. 19. p. 57-96.

Philpott, 1988. Lake Huron Wave Database, report prepared for the Ministry of Natural Resources.

Southgate, H.N. and Nairn, R.B., 1993. Deterministic Profile Modelling of Nearshore Processes. Part 1. Sediment Transport and Beach Profile Development. Coastal Engineering, Elsevier. Vol. 19. p. 27-56.

APPENDIX B

PARTICLE SIZE DISTRIBUTION

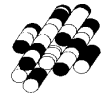


PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S1**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**
 TEST DATE: **Aug 11, 2016**
 TESTED BY: **S.R.**
 LAB NO.: **1178A**

COARSE SIEVES

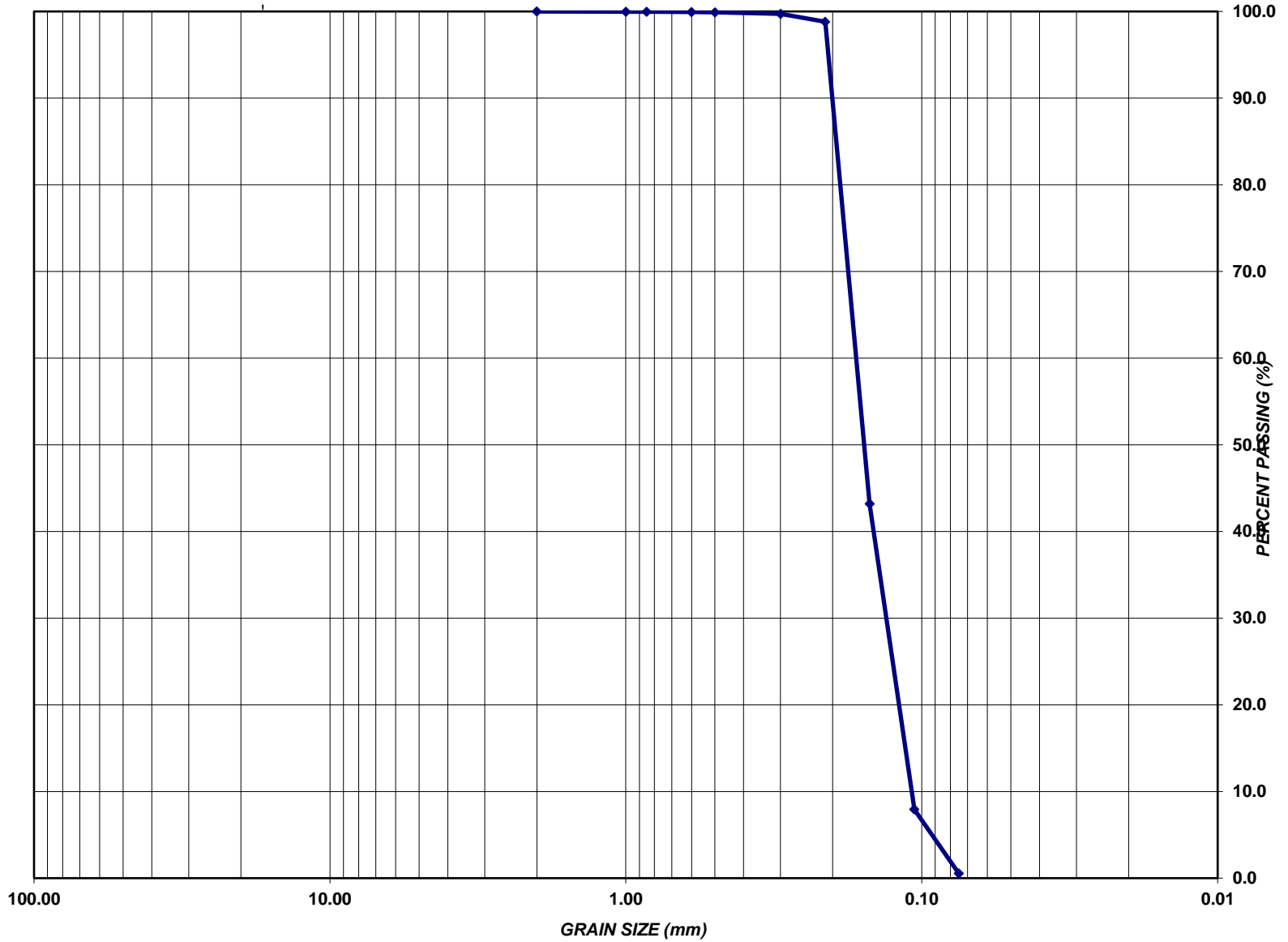
SIEVE SIZE		CUM. WT. RET.	PERCENT RET.	PERCENT PASSING	Weight of Fractions	
Standard	(mm)				Fraction Weight	
Dry Weight (g)		268.6				
No. 10	2.00	0.00	0.0	100.0	0.00	
No. 18	1.00	0.09	0.0	100.0	3.49	
No. 20	0.850	0.12	0.0	100.0	5.44	
No. 30	0.600	0.19	0.1	99.9	0.07	
No. 35	0.500	0.29	0.1	99.9	0.10	
No. 50	0.300	0.77	0.3	99.7	0.48	
No. 70	0.212	3.20	1.2	98.8	2.43	
No. 100	0.150	152.59	56.8	43.2	149.39	
No. 140	0.106	247.32	92.1	7.9	94.73	
No. 200	0.075	267.11	99.4	0.6	19.79	
PAN		268.54				
Dry Weight After Sieving (g)		268.5				
Percent Loss After Sieving		0.02				



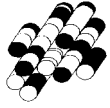
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 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S1**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 LAB NO.: **1178A**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**

GRAIN SIZE DISTRIBUTION
 U.S. STANDARD SIEVE SIZES



SIEVE SIZE		PERCENT PASSING	GENERAL GRADATION
Standard	(mm)	Sample	
No. 10	2.00	100.0	
No. 18	1.00	100.0	
No. 20	0.85	100.0	
No. 30	0.60	99.9	
No. 35	0.50	99.9	
No. 50	0.30	99.7	
No. 70	0.21	98.8	
No. 100	0.15	43.2	
No. 140	0.11	7.9	
No. 200	0.08	0.6	

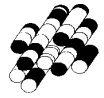


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 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S2**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**
 TEST DATE: **Aug 11, 2016**
 TESTED BY: **S.R.**
 LAB NO.: **1178B**

COARSE SIEVES

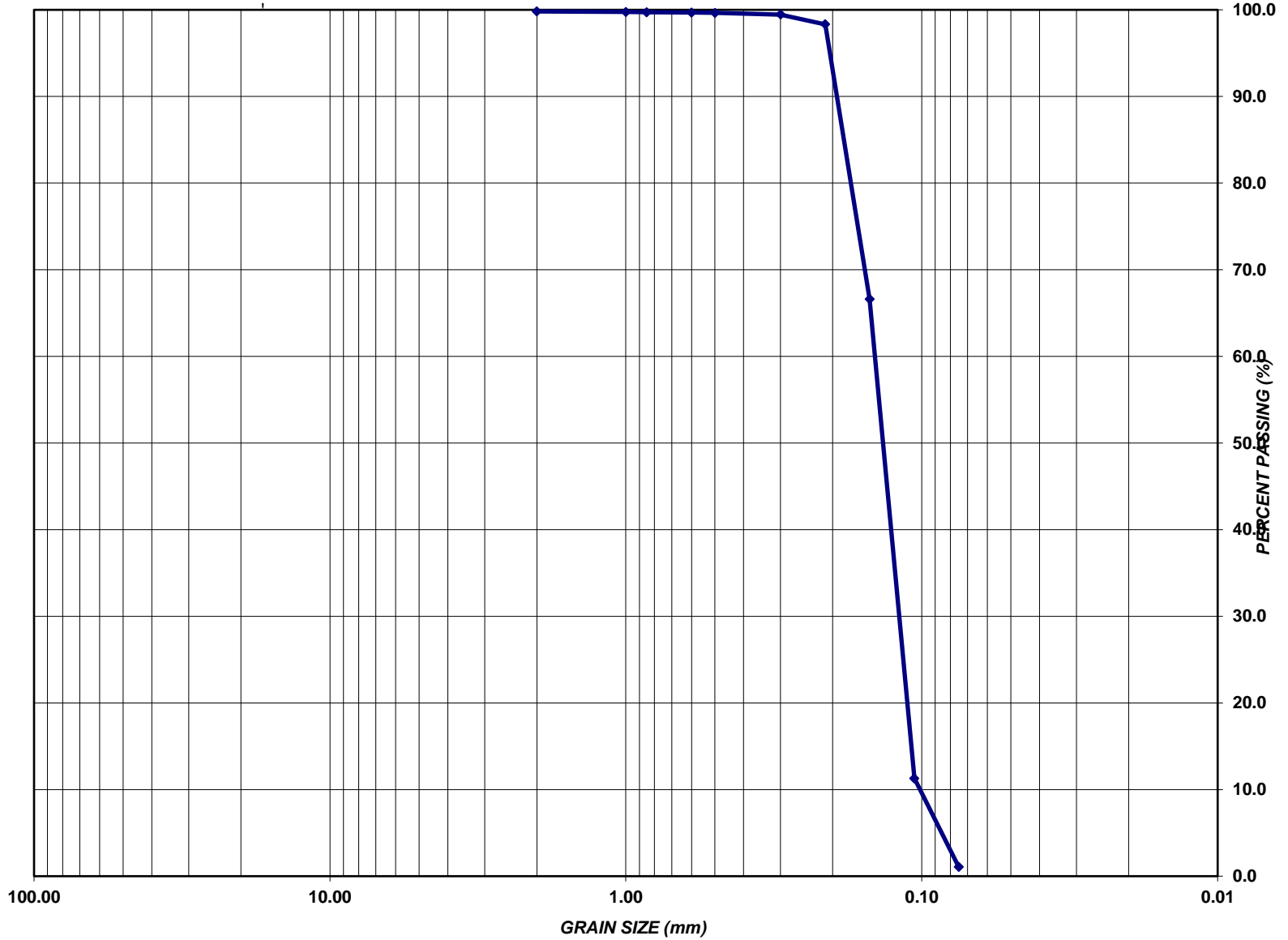
SIEVE SIZE		CUM. WT. RET.	PERCENT RET.	PERCENT PASSING	Weight of Fractions	
Standard	(mm)				Fraction Weight	
Dry Weight (g)		408.5				
No. 10	2.00	0.75	0.2	99.8	0.00	
No. 18	1.00	1.00	0.2	99.8	3.49	
No. 20	0.850	1.12	0.3	99.7	5.44	
No. 30	0.600	1.30	0.3	99.7	0.18	
No. 35	0.500	1.48	0.4	99.6	0.18	
No. 50	0.300	2.22	0.5	99.5	0.74	
No. 70	0.212	6.83	1.7	98.3	4.61	
No. 100	0.150	136.33	33.4	66.6	129.50	
No. 140	0.106	362.44	88.7	11.3	226.11	
No. 200	0.075	404.14	98.9	1.1	41.70	
PAN		408.34				
Dry Weight After Sieving (g)		408.3				
Percent Loss After Sieving		0.04				



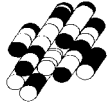
PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S2**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 LAB NO.: **1178B**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**

GRAIN SIZE DISTRIBUTION
 U.S. STANDARD SIEVE SIZES



SIEVE SIZE		PERCENT PASSING	GENERAL GRADATION
Standard	(mm)	Sample	
No. 10	2.00	99.8	
No. 18	1.00	99.8	
No. 20	0.85	99.7	
No. 30	0.60	99.7	
No. 35	0.50	99.6	
No. 50	0.30	99.5	
No. 70	0.21	98.3	
No. 100	0.15	66.6	
No. 140	0.11	11.3	
No. 200	0.08	1.1	

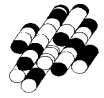


PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S3**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**
 TEST DATE: **Aug 11, 2016**
 TESTED BY: **S.R.**
 LAB NO.: **1178C**

COARSE SIEVES

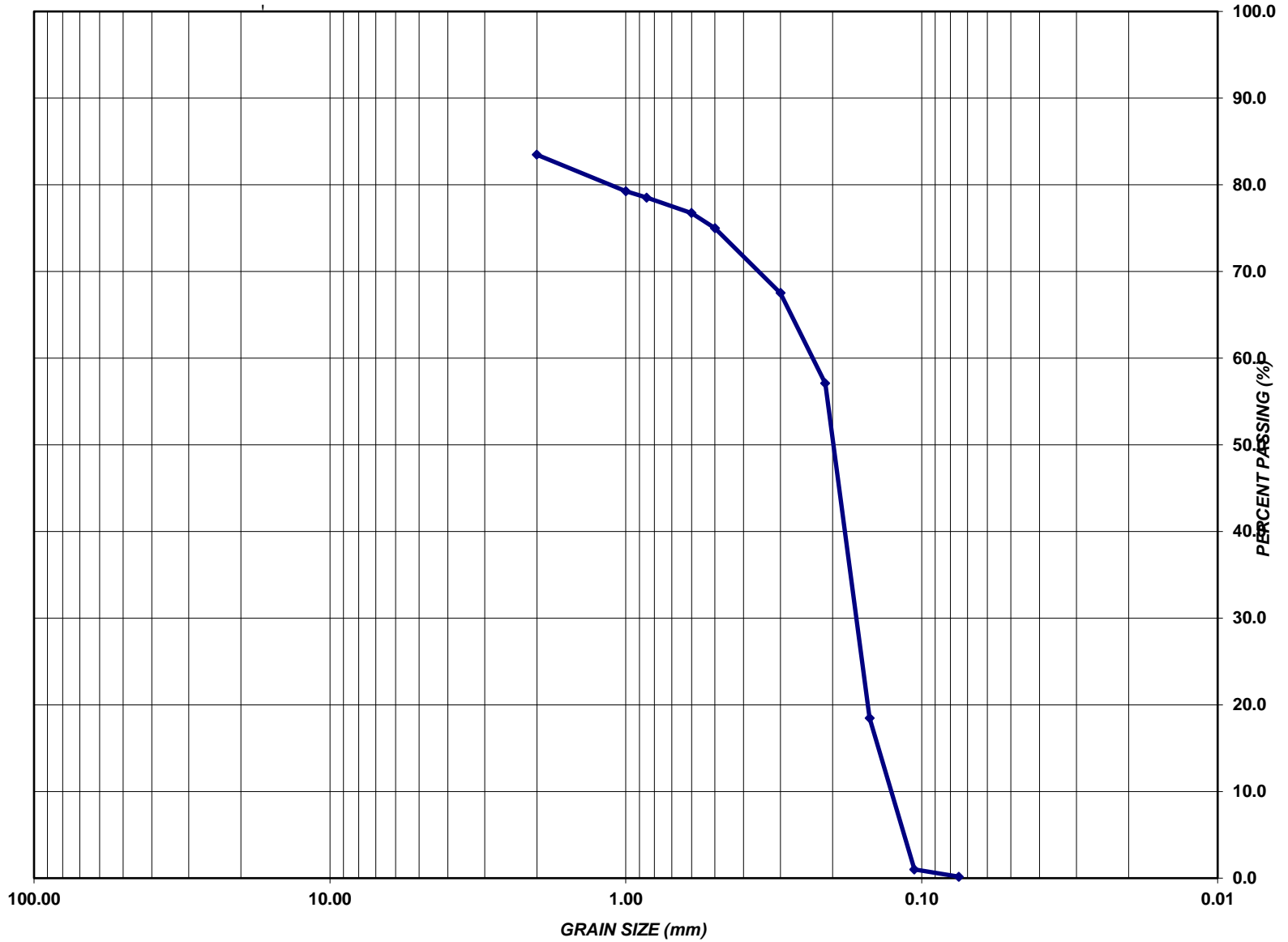
SIEVE SIZE		CUM. WT. RET.	PERCENT RET.	PERCENT PASSING	Weight of Fractions	
Standard	(mm)				Fraction Weight	
Dry Weight (g)		420.1				
No. 10	2.00	69.44	16.5	83.5	0.00	
No. 18	1.00	87.12	20.7	79.3	3.49	
No. 20	0.850	90.27	21.5	78.5	5.44	
No. 30	0.600	97.74	23.3	76.7	7.47	
No. 35	0.500	105.08	25.0	75.0	7.34	
No. 50	0.300	136.48	32.5	67.5	31.40	
No. 70	0.212	180.27	42.9	57.1	43.79	
No. 100	0.150	342.56	81.5	18.5	162.29	
No. 140	0.106	415.96	99.0	1.0	73.40	
No. 200	0.075	419.42	99.8	0.2	3.46	
PAN		419.97				
Dry Weight After Sieving (g)		420.0				
Percent Loss After Sieving		0.04				



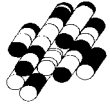
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 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S3**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 LAB NO.: **1178C**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**

GRAIN SIZE DISTRIBUTION
 U.S. STANDARD SIEVE SIZES



SIEVE SIZE		PERCENT PASSING	GENERAL GRADATION
Standard	(mm)	Sample	
No. 10	2.00	83.5	
No. 18	1.00	79.3	
No. 20	0.85	78.5	
No. 30	0.60	76.7	
No. 35	0.50	75.0	
No. 50	0.30	67.5	
No. 70	0.21	57.1	
No. 100	0.15	18.5	
No. 140	0.11	1.0	
No. 200	0.08	0.2	

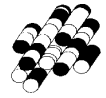


PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S5**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**
 TEST DATE: **Aug 11, 2016**
 TESTED BY: **S.R.**
 LAB NO.: **1178D**

COARSE SIEVES

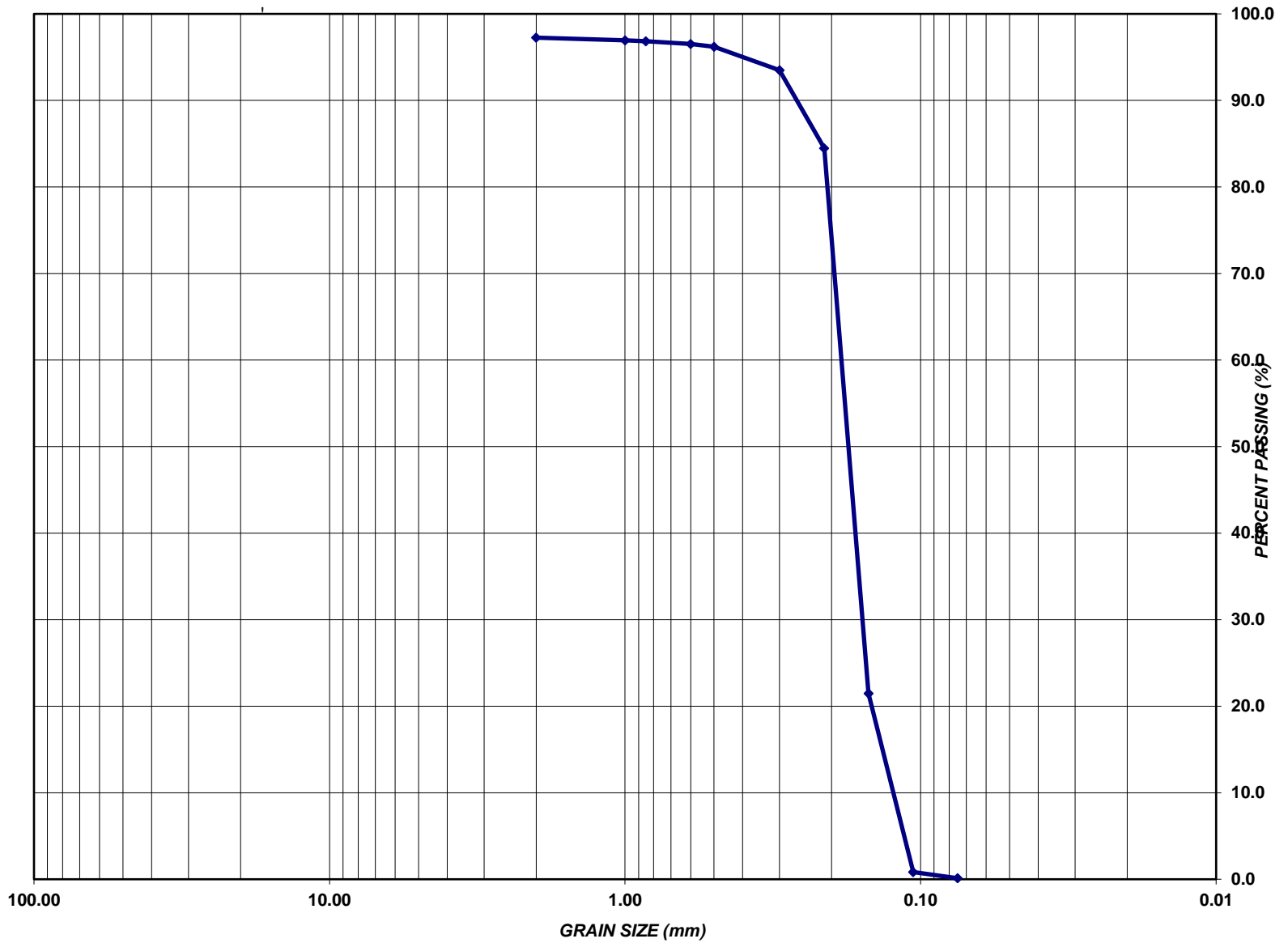
SIEVE SIZE		CUM. WT. RET.	PERCENT RET.	PERCENT PASSING	Weight of Fractions	
Standard	(mm)				Fraction Weight	
Dry Weight (g)		458.5				
No. 10	2.00	12.60	2.7	97.3	0.00	
No. 18	1.00	14.09	3.1	96.9	3.49	
No. 20	0.850	14.56	3.2	96.8	5.44	
No. 30	0.600	15.93	3.5	96.5	1.37	
No. 35	0.500	17.47	3.8	96.2	1.54	
No. 50	0.300	29.90	6.5	93.5	12.43	
No. 70	0.212	71.22	15.5	84.5	41.32	
No. 100	0.150	360.07	78.5	21.5	288.85	
No. 140	0.106	454.71	99.2	0.8	94.64	
No. 200	0.075	457.95	99.9	0.1	3.24	
PAN		458.30				
Dry Weight After Sieving (g)		458.3				
Percent Loss After Sieving		0.04				



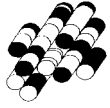
PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S5**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 LAB NO.: **1178D**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**

GRAIN SIZE DISTRIBUTION
 U.S. STANDARD SIEVE SIZES



SIEVE SIZE		PERCENT PASSING	GENERAL GRADATION
Standard	(mm)	Sample	
No. 10	2.00	97.3	
No. 18	1.00	96.9	
No. 20	0.85	96.8	
No. 30	0.60	96.5	
No. 35	0.50	96.2	
No. 50	0.30	93.5	
No. 70	0.21	84.5	
No. 100	0.15	21.5	
No. 140	0.11	0.8	
No. 200	0.08	0.1	

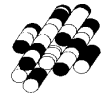


PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S6**
 SAMPLE SUPPLIER:

FILE NO.: **1-16-0497**
 SAMPLE DATE: **Aug 10, 2016**
 SAMPLED BY: **Client**
 TEST DATE: **Aug 11, 2016**
 TESTED BY: **S.R.**
 LAB NO.: **1178E**

COARSE SIEVES

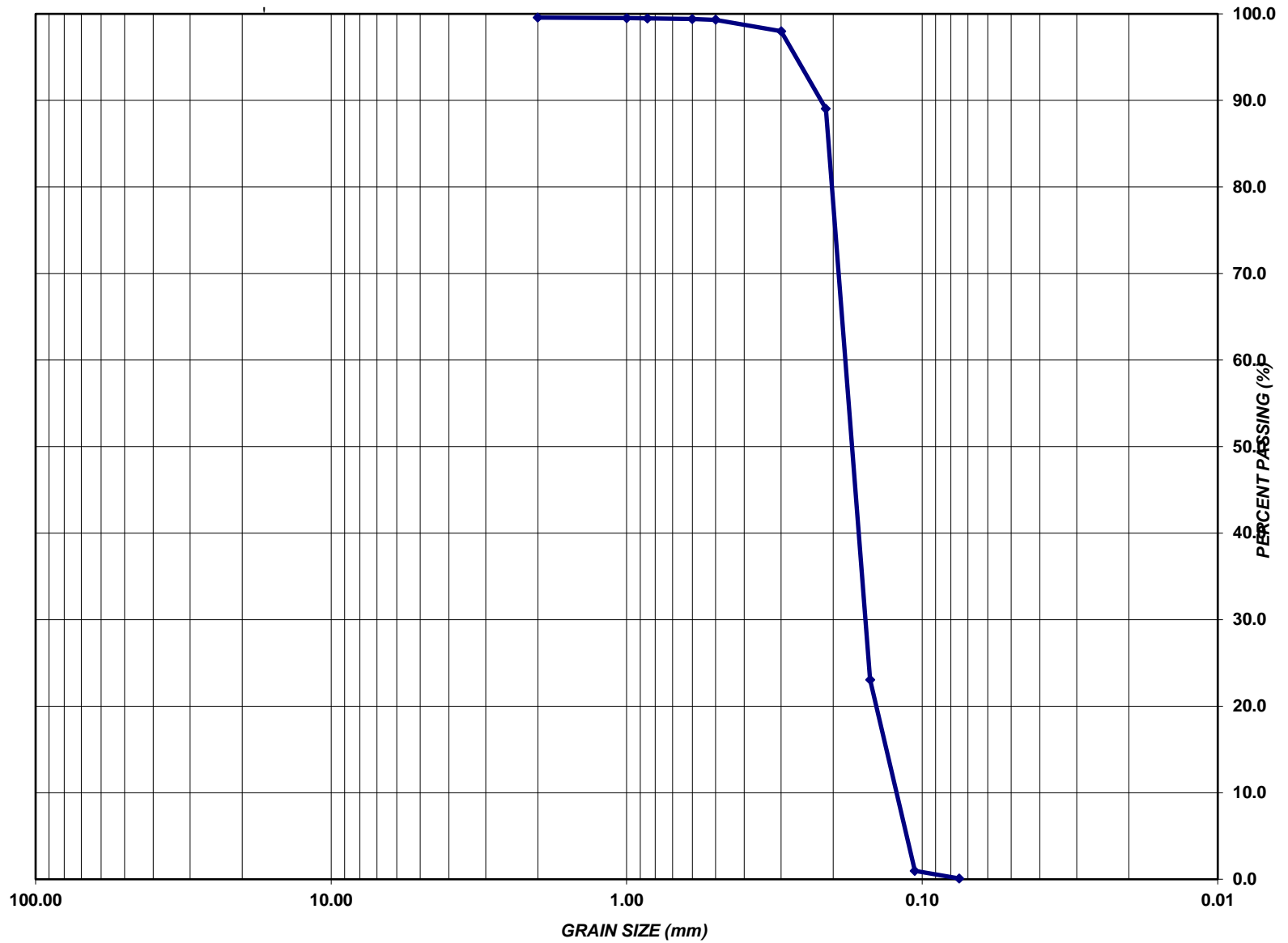
SIEVE SIZE		CUM. WT. RET.	PERCENT RET.	PERCENT PASSING	Weight of Fractions	
Standard	(mm)				Fraction Weight	
Dry Weight (g)		436.5				
No. 10	2.00	1.88	0.4	99.6	0.00	
No. 18	1.00	2.19	0.5	99.5	3.49	
No. 20	0.850	2.32	0.5	99.5	5.44	
No. 30	0.600	2.60	0.6	99.4	0.28	
No. 35	0.500	2.98	0.7	99.3	0.38	
No. 50	0.300	8.76	2.0	98.0	5.78	
No. 70	0.212	47.88	11.0	89.0	39.12	
No. 100	0.150	335.89	76.9	23.1	288.01	
No. 140	0.106	432.31	99.0	1.0	96.42	
No. 200	0.075	436.11	99.9	0.1	3.80	
PAN		436.30				
Dry Weight After Sieving (g)		436.3				
Percent Loss After Sieving		0.05				



PROJECT: **Ipperwash area on Lake Huron**
 LOCATION: **Lampton Shores, On.**
 CLIENT: **Baird & Associates**
 MATERIAL DESCRIPTION: **Sand and Gravel**
 SAMPLE LOCATION: **IP-S6**
 SAMPLE SUPPLIER:

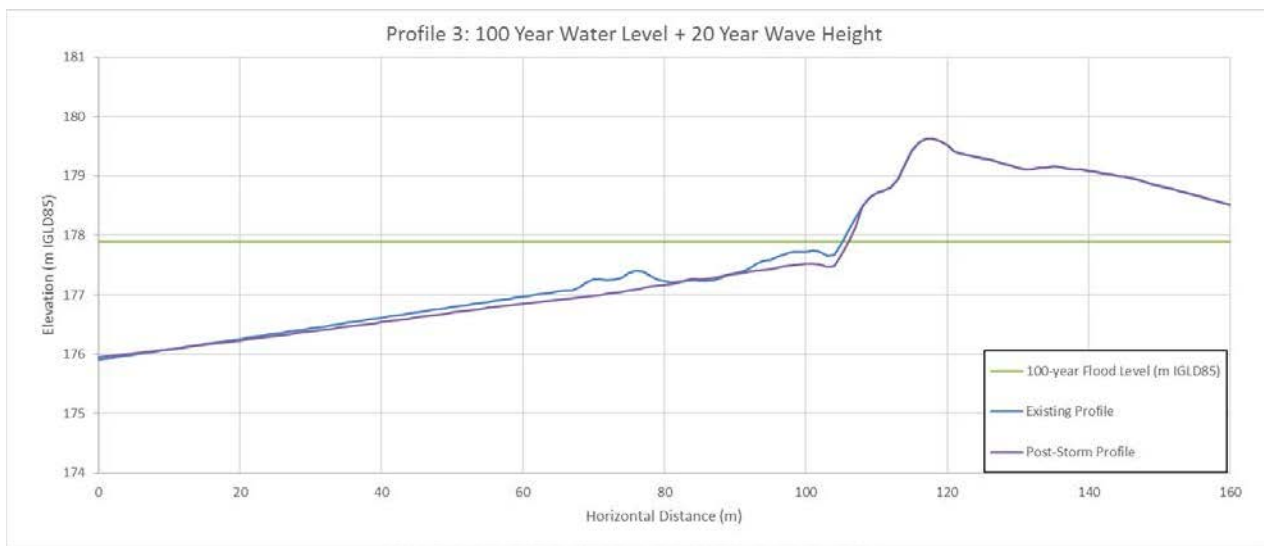
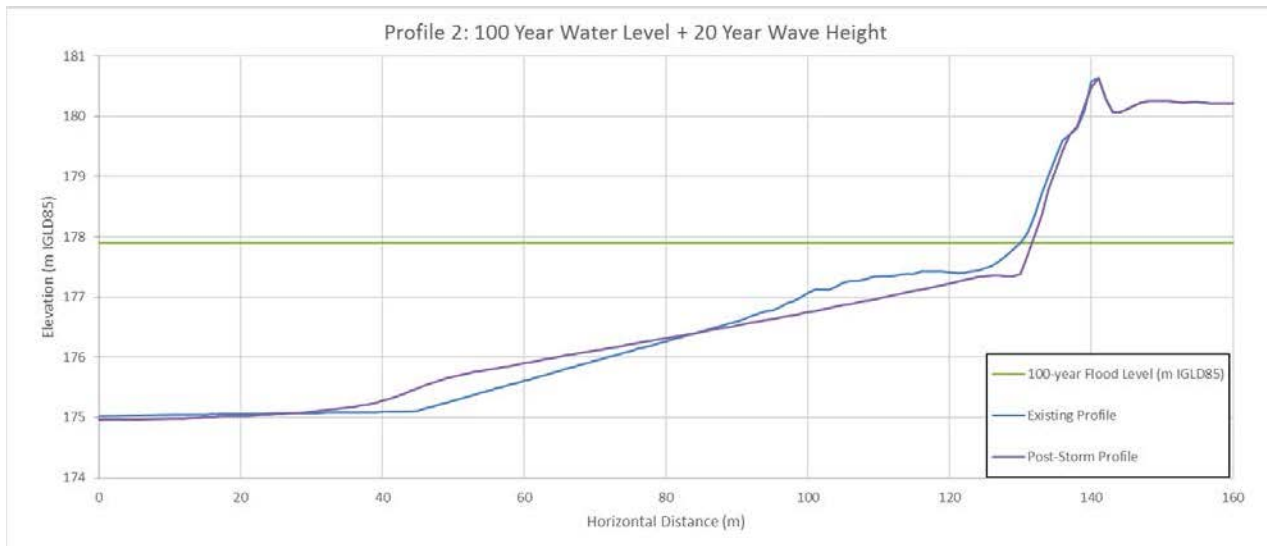
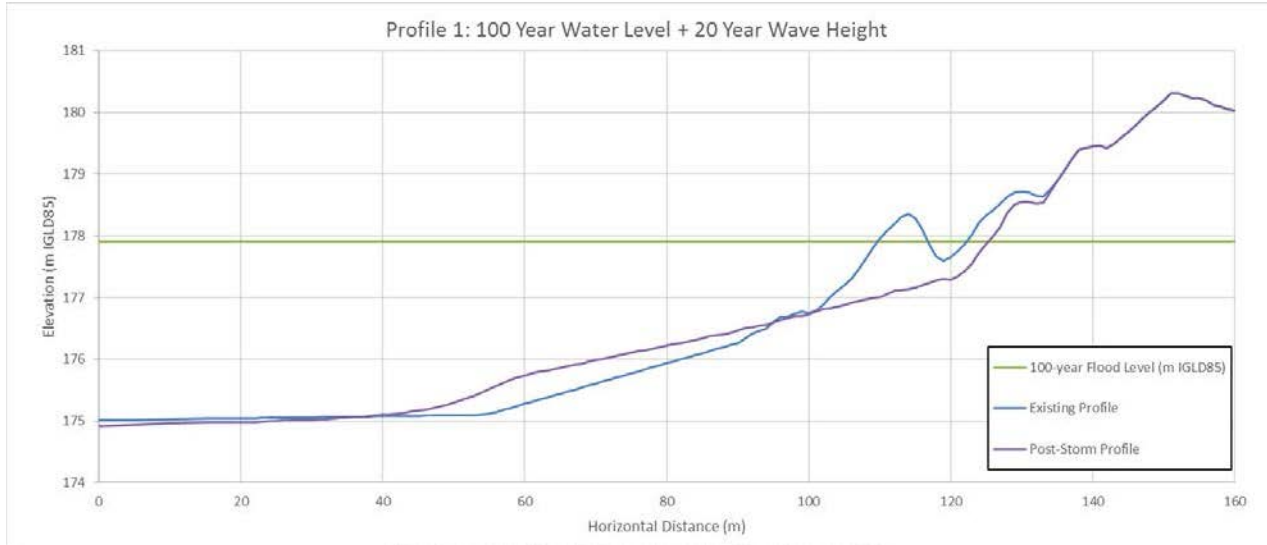
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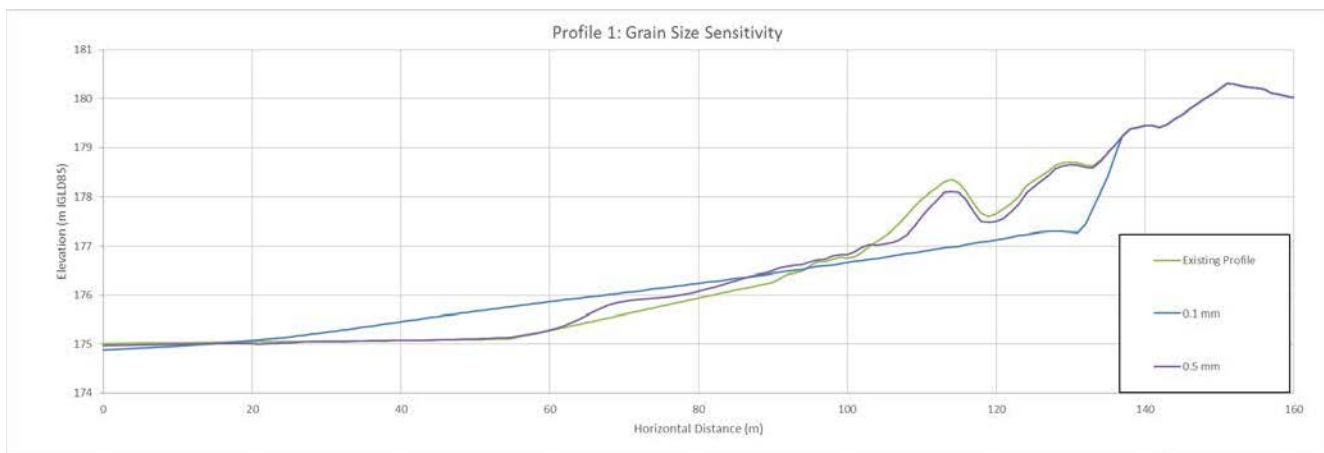
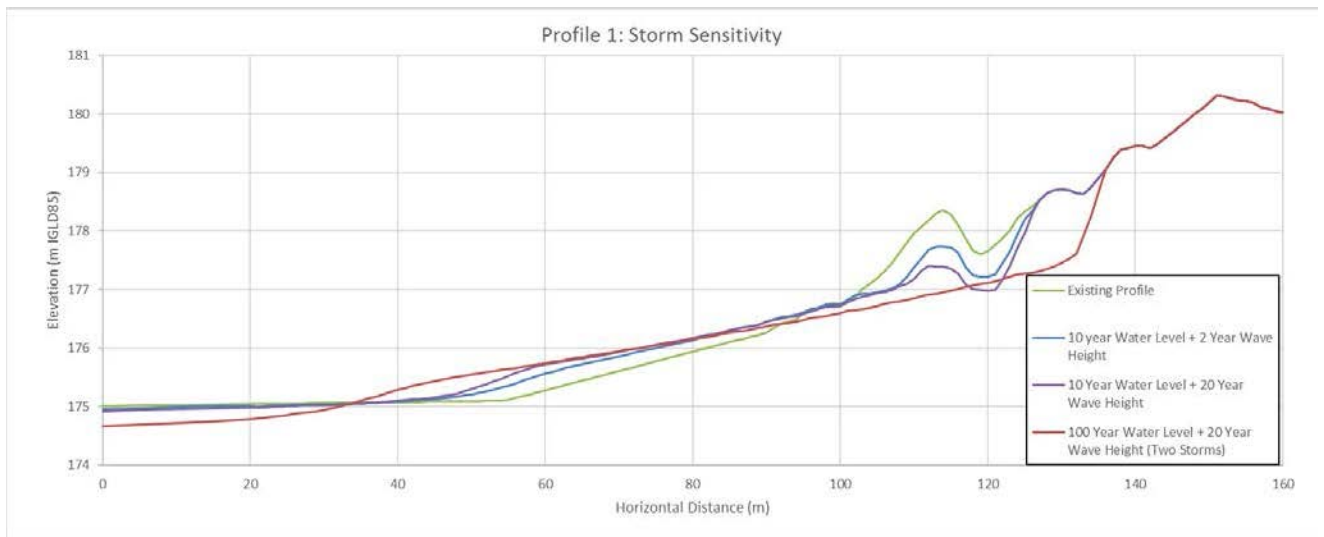
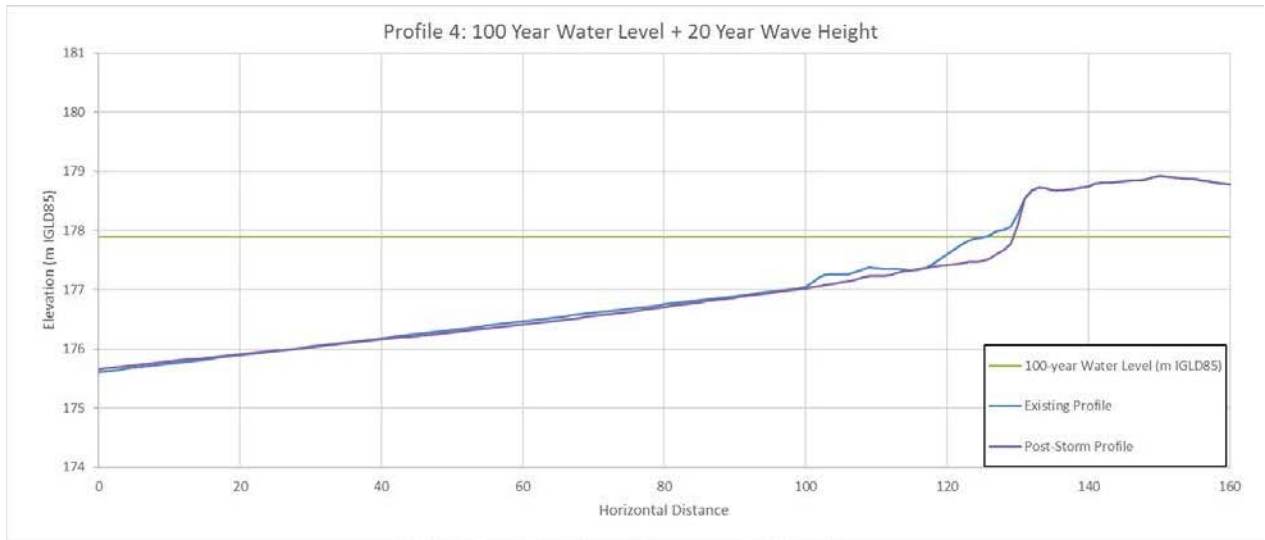
GRAIN SIZE DISTRIBUTION
 U.S. STANDARD SIEVE SIZES

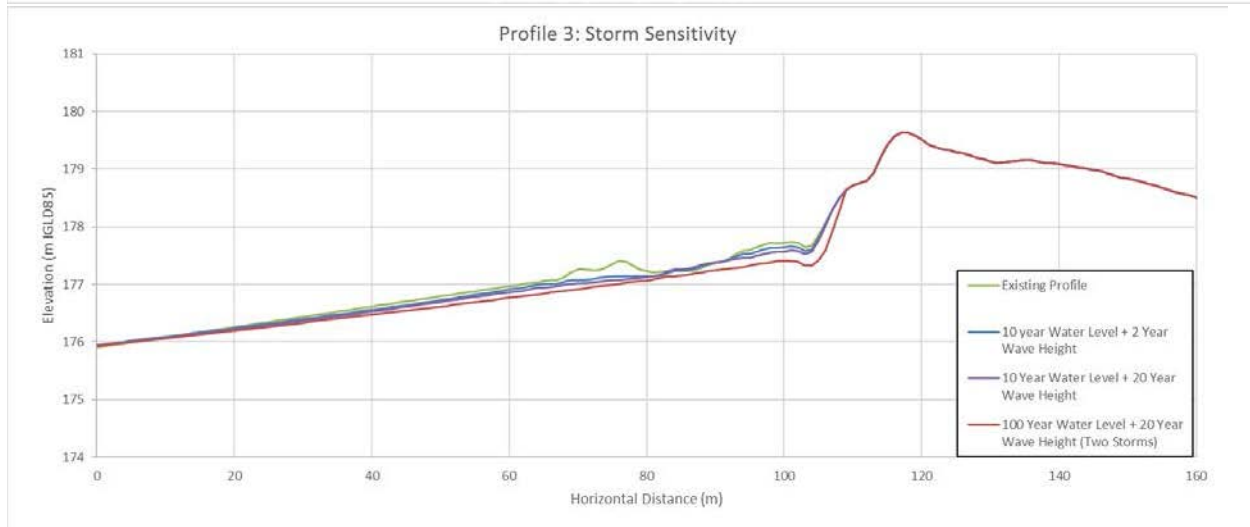
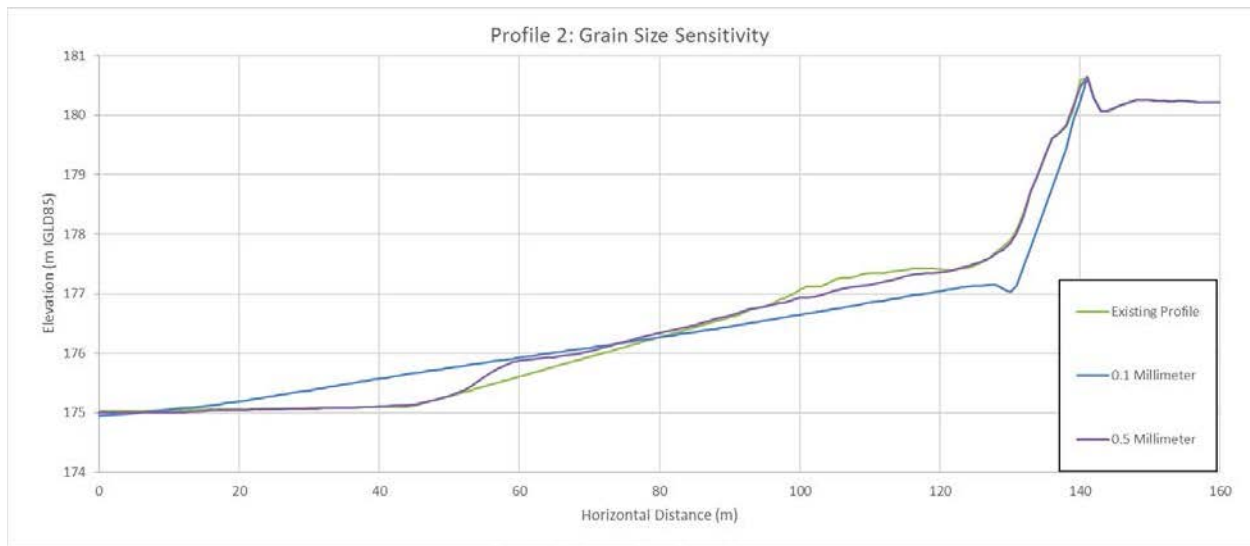
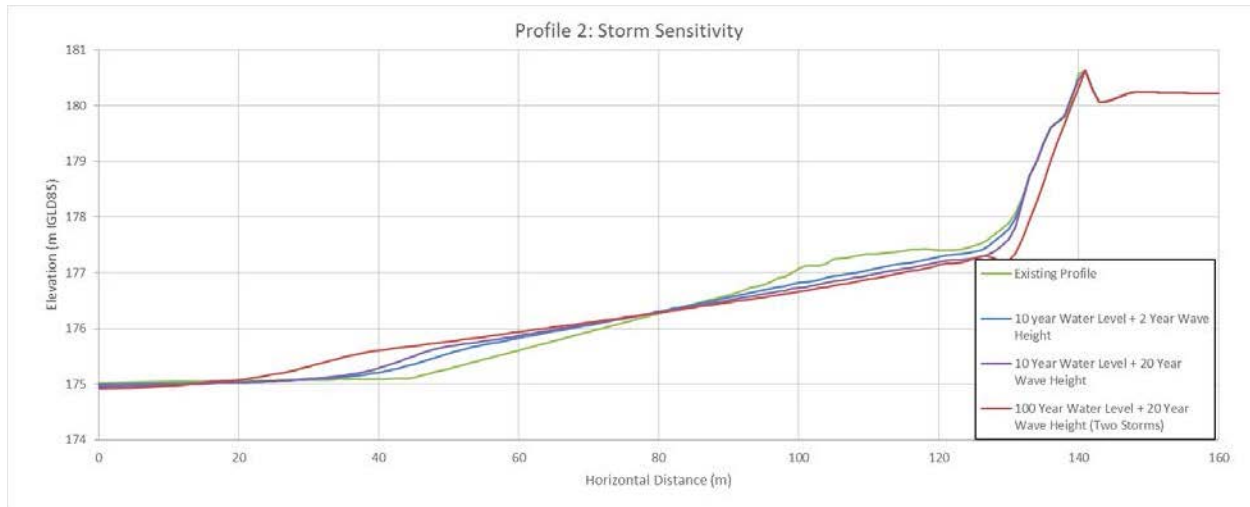


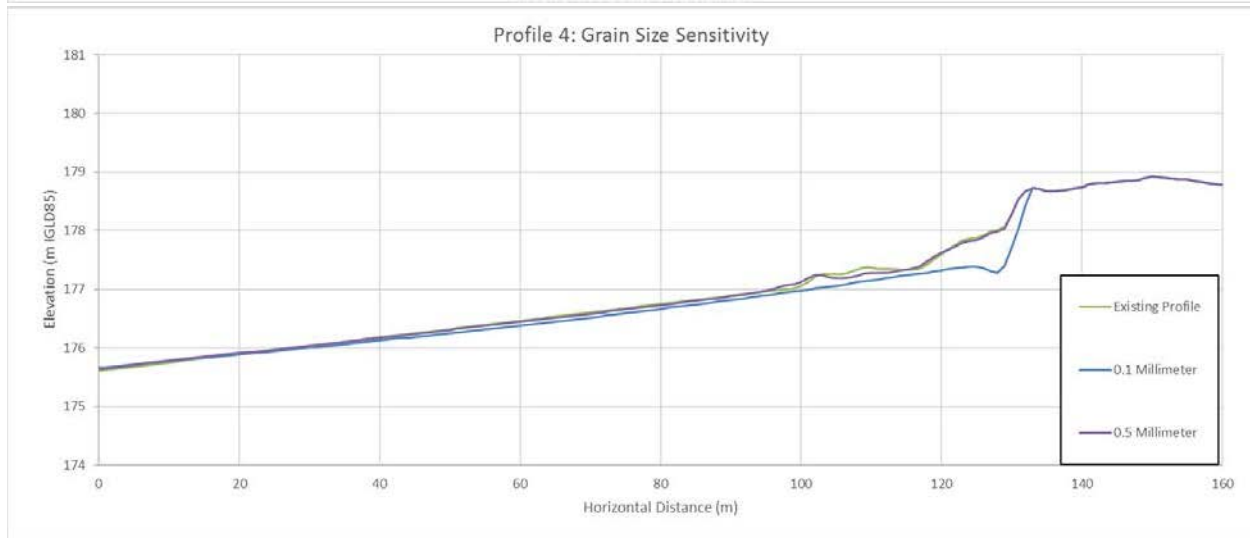
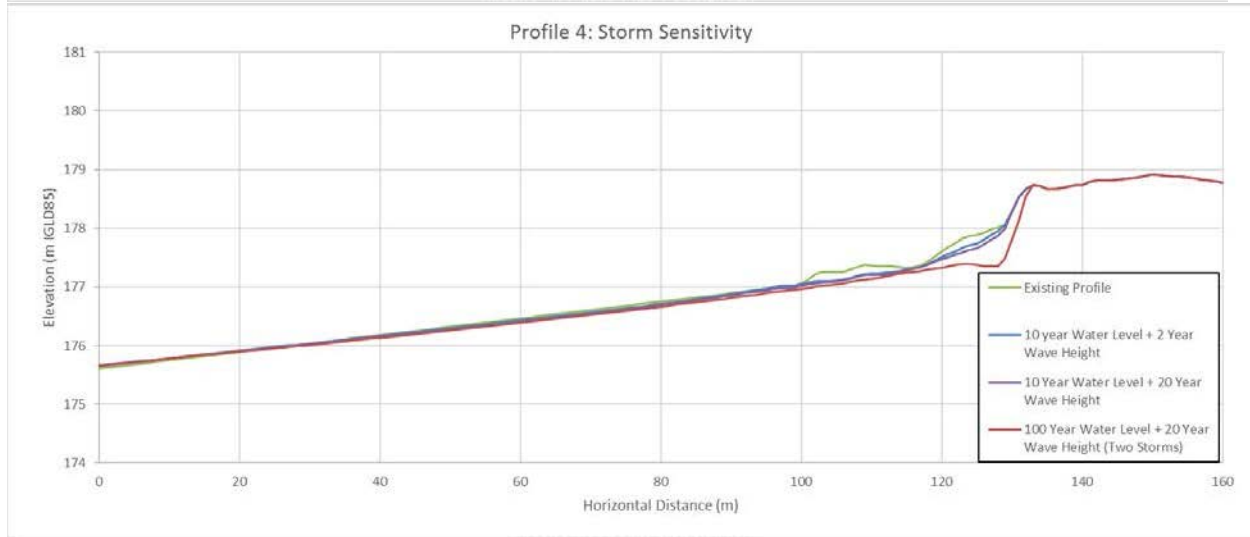
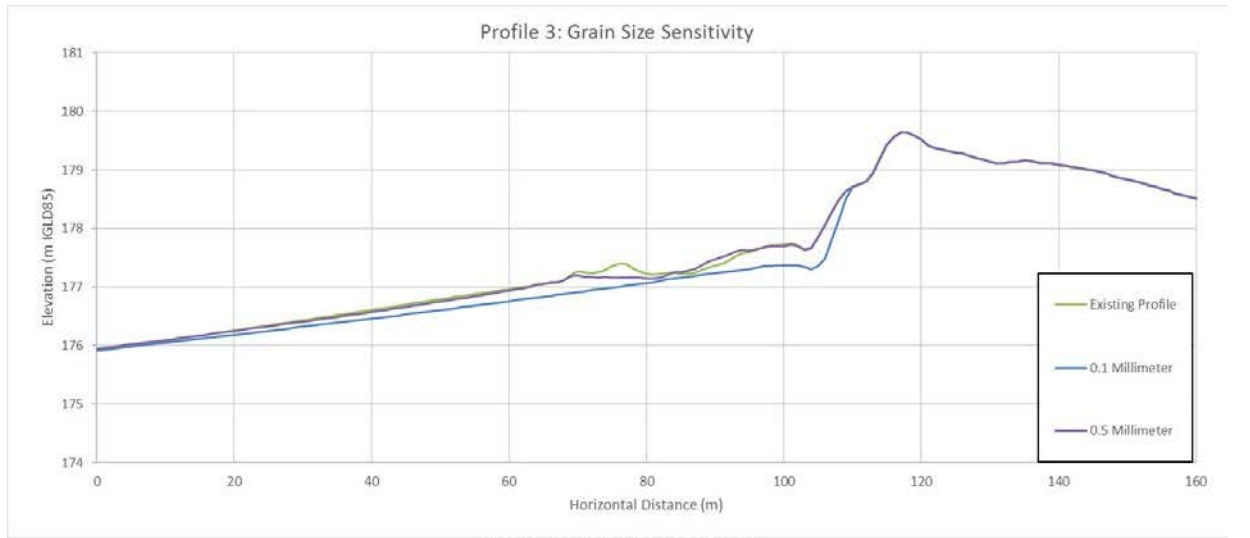
SIEVE SIZE		PERCENT PASSING	GENERAL GRADATION
Standard	(mm)	Sample	
No. 10	2.00	99.6	
No. 18	1.00	99.5	
No. 20	0.85	99.5	
No. 30	0.60	99.4	
No. 35	0.50	99.3	
No. 50	0.30	98.0	
No. 70	0.21	89.0	
No. 100	0.15	23.1	
No. 140	0.11	1.0	
No. 200	0.08	0.1	

APPENDIX C
COSMOS MODEL RESULTS



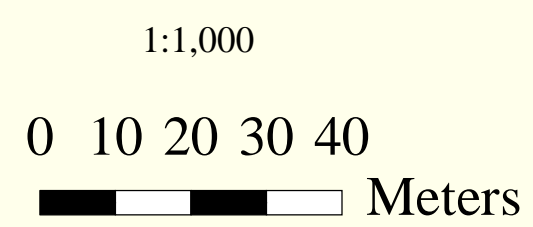






APPENDIX D

RECOMMENDED DYNAMIC BEACH HAZARD LIMIT MAPPING



West Ipperwash Beach - Dynamic Beach Limit Assessment
 2010 Bare Earth Elevation (SCRCA DEM), Spring 2015 Aerial Photograph

Base Aerial Photo: 2015, SCRCA
 Elevation: 2010 Bare Earth, SCRCA
 Spatial Reference: NAD 1983 UTM Zone 17N
 Map Published: 2017-04-07
Every reasonable effort has been made to insure the accuracy of this map. However, Baird assumes no liability arising from its use. This map provided without warranty of any kind, either expressed or implied.

APPENDIX E
PUBLIC MEETINGS

Comments and Responses from the Public Open Houses held on August 30, 2016
St. Clair Region Conservation Authority
West Ipperwash Dynamic Beach Assessment

Comment	Response
General	
Question regarding the definition of a dynamic beach and in particular, if the West Ipperwash Beach meets the criteria in terms of sand particle size.	The sand at West Ipperwash is classified as fine sand and the beach meets the Technical Guide (MNR, 2001) criteria for a dynamic beach.
Will a similar study be completed for Central Ipperwash?	The scope and priority of a study for Centre Ipperwash beach hazards needs to be discussed with involved additional parties (ie. MNRF)
Development	
Why is development not permitted on the footprint of the existing structure?	See Table 6.1 of the Board approved Shoreline Mgt Plan Development guidelines. This may be permitted dependent on site and the location of the hazard.
Why is there a restriction on home improvements, inside renovations?	See Table 6.1 of the Board approved Shoreline Mgt Plan Development guidelines. It is permitted
The guidelines must be fair and reasonable for existing buildings.	SCRCA acknowledges. CA Regulations Committee decisions for development can be appealed to the CA Board of Directors
Is there any regulation that prohibits dune removal.	Yes, O. Regulation 171/06 on non-first nation lands/rights applies. The Conservation Authority must administer and enforce for the purposes of protection from flooding and erosion.
Environment	
Can SCRCA provide information on dune and beach management?	A Best Management Brochure will be produced for this study, with links to additional resources.
Concern was expressed regarding the use of vehicular traffic on the beach and its impacts on dunes and dune plantings.	Vehicular traffic is not generally recommended on beaches for the reasons given, and others. This however is outside the scope of the study.
Can we bring in sand as part of the beach management process.	Beach nourishment is one approach that could be considered.

Comment	Response
	Beach nourishment should be designed by a coastal engineer, considering wave exposure, sediment processes, beach nourishment profile, sand sourcing, possible structures to retain sand and maintenance requirements, costing, permitting, etc.
Wondering about the black mud on Ipperwash Beach. What is the source and can it be removed? Removal of the organic material is removing sand also, and adding to erosion of the beach.	Management of the organic material that deposits on the beach is outside the project scope. However, this material appears to be comprised of vegetation, possibly from updrift beach erosion in response to recent higher water levels. The bathymetric feature (shelf) at Kettle Point traps alongshore transport. Methods of separating the organics from the sand can be reviewed. A concern with removal of the black organic material, is the removal of sand with the organic material. Sand removal causes beach erosion. The beach protects the backshore during storm events. There are also environmental concerns with its removal.
Can you provide a list of plants that are suitable for the dunes.	Information is provided in the Best Management Practices brochure, available on the SCRCA web site.
Dunes and vegetation are natural and they should not be removed.	SCRCA agrees. Dunes protect the backshore, vegetation stabilizes the dunes and provides habitat for a large number of species.
Shore Protection	
Can we replace seawalls that are in need of repair?	As stated in Baird’s 2017 W. Ipperwash dynamic beach assessment report, “in general, seawalls are not recommended on dynamic beaches”. Depending on the location of seawall, wave reflection and scour can ultimately lead to failure of the wall and negatively impact beach width. Table 6.1 of the 2006 Board approved Shoreline Mgt Plan Development guidelines states that seawalls can be replaced, provided the wall will not have a negative impact on beach processes.. There are methods to mitigate negative impacts which can be reviewed.

Comment	Response
Do you recommend gabion baskets for shore protection?	Gabion baskets are not recommended at this site. They cannot withstand the wave conditions on the Great Lakes. Seawalls in general are not recommended on dynamic beaches. Additional information is provided in the report and the Shoreline Management Plan Update.
Other	
Why were water levels low for an extended period of time in recent years?	Lake levels are largely controlled by precipitation and evaporation. Variations in water level are natural.
Who is funding the project?	SCRCA shoreline municipalities as an update to the Shoreline Management Plan.
Are you aware of funding sources that could be applied for, to pay for beach maintenance?	SCRCA Planning Department staff would direct you to Jessica Van Zwol, Healthy Watershed Specialist, Ext. 241 jvanzwol@scrca.on.ca for information as funding sources change frequently.

A number of enquiries were made regarding specific properties and SCRCA has responded to them individually.



CONSERVING IPPERWASH BEACH

BEST MANAGEMENT PRACTICES



► DYNAMIC BEACHES EXPLAINED

Beaches are dynamic and undergo continuous change due to the natural processes of erosion and accretion. A beach offers natural protection against flood and erosion damage. Dunes absorb wave energy during large storms, protecting inland areas. They also provide a reservoir of sand to replace beach material that is carried offshore during a storm.



High Water

The width of a dynamic beach changes with water level and wave conditions. When water levels are high the dune erodes, as the sand is temporarily transported off shore. This helps to protect the beach by creating a sand bar that reduces incoming wave energy. After a storm event the waves transport the sand landward back onto the beach, wind blows the sand and beach vegetation traps and recovers it gradually rebuilding the dunes over time. Development setbacks are applied on dynamic beaches to protect property owners. The setbacks recognize the dynamic nature of the beach and allow for unhindered dynamic beach cycles.



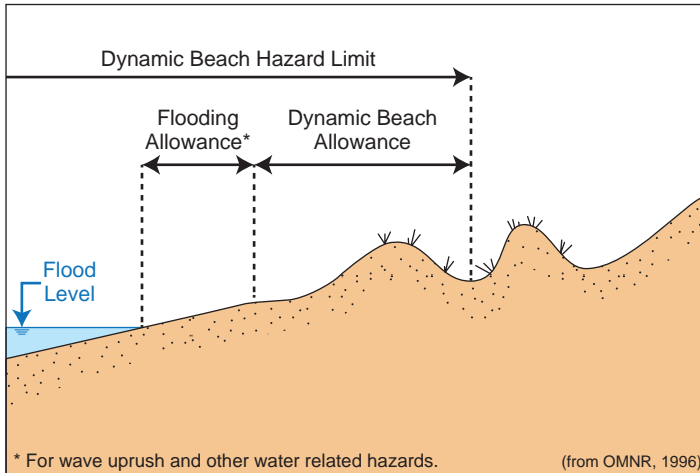
Low Water

BEACH CONSERVATION TIPS

- Limit the disturbance of natural vegetation growth on the dune. The roots of the plants hold and help retain sand within the dynamic beach.
- Continuous mechanical grooming is not considered to be best practice. Beach grooming by machines can result in sand loss from the beach. If it is necessary to bring in heavy equipment to groom, more beach sensitive machine groomers should be used. Hand cleaning with a rake is preferred if grooming must be done, as it will minimize sand loss.
- Increasing habitat connectivity (long continuous stretches of dunes and dune grass) has a very positive impact on the beach ecology as it provides species with continuous and uninterrupted habitat.
- Frequently travelling along the same path can cause a trail to form which can damage dunes and result in erosion. Therefore, accessing the beach over or through the dunes is not recommended.
- One of many ways to create a healthy pathway is by constructing a flexible boardwalk from rope and wooden planks, a document with more information can be found in the Links and Other Resources section.

► WHY SETBACKS ARE IMPORTANT

It is important to observe development setbacks and to develop outside of the dynamic beach hazard limit. This is a proactive rather than reactive approach. It allows the beach to provide natural protection during high water levels and storm events. By observing setbacks, **you reduce the risk to your property.**



► PLANTING AND TRANSPLANTING DUNE GRASS

Plants are crucial to dynamic beach processes and the stabilization of coastal dunes. The presence of vegetation reduces wind speeds close to the ground and allows sand to accumulate and form a protective dune. American Beachgrass, a.k.a. Marram grass, (*Ammophila breviligulata*) is a very effective stabilizing plant, native to the Lake Huron region. The Lake Huron Centre for Coastal Conservation (LHCCC) has produced a document that outlines the process of harvesting and transplanting dune grass, which we have provided in our Links and Other Resources section.

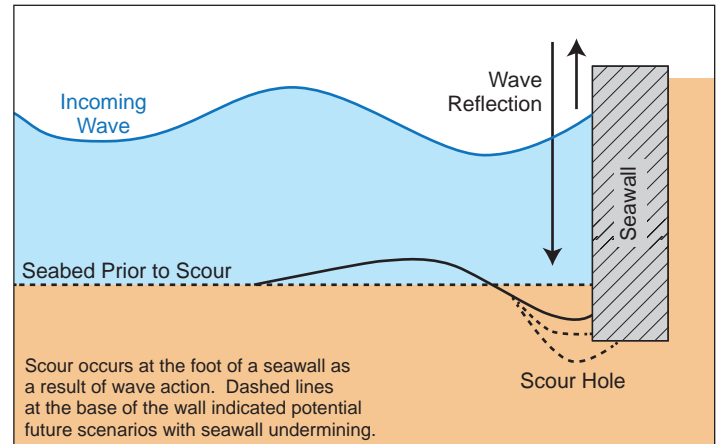
LINKS AND OTHER RESOURCES

- Dune care notes and rope boardwalk
<http://lakehuron.ca/uploads/pdf/Parks.Canada.dune.Poster.Aug272007.pdf>
- Transplanting Dune Grass
<http://lakehuron.ca/index.php?page=transplanting-beachgrass>
- <https://www.scrca.on.ca/>



► SEAWALLS

The construction of seawalls prevents the beach from behaving dynamically. Seawalls restrict the natural beach response. When seawalls are constructed on the dynamic beach, wave reflection and scour occur when the wall is exposed to wave action. This may lead to ultimate failure of the wall and a reduction in beach width, since there is an increased rate of sand loss.



Dune Grass



Seawall Failure

Table 6.1 SCRCA Board Approved April 2006 (Red text = changes as a result of the West Ipperwash Dynamic Beach Assessment which was an area specific analysis. Housekeeping in green – to align with current Board approved policies)

SCRCA Lake Huron Shoreline Development Guidelines

Development Activity	Lakeshore Area 1			Lakeshore Area 2	
	Flood	Dynamic Beach	Erosion	Dynamic Beach (dbh)	Erosion
Existing Developed Lots					
Repairs/Maintenance (No intensification of use)	Yes	Yes	Yes	Yes	Yes
Interior Alterations (No intensification of use)	Yes	Yes	Yes	Yes	Yes
Minor Additions (less than 30% of < footprint/area of existing dwelling)	No	No	Conditional ¹	Yes - landward of foredune and existing dwelling, and design must minimize dune impact**.	Dependent upon Erosion Rate **
Major Additions (equal to or greater than 30% of < footprint/area of existing dwelling)	No	No	No	Yes - landward of foredune and existing dwelling and design must minimize dune impact**	Dependent upon Erosion Rate & landward of existing dwelling**
Rebuilding of dwelling destroyed by forces other than flooding and erosion (ie. fire)	yes - if same size/footprint and utilizes maximum lot depth (most landward location)			Yes – same/size footprint, most landward location and design must minimize dune impact.	yes - most landward location
Rebuilding of dwelling destroyed by flooding and/or erosion	No	No	No	No	No
Relocation of dwelling away from shoreline	Optional on the part of the landowner; encouraged by CA			Owner should consider this as a future option, depending on severity of hazard	
Existing Vacant Lots (Infilling)					
New Dwellings* <i>W. Ipperwash- area specific analysis</i>	No	No	No	Conditional ^{3/7} <i>No; unless Conditional⁷ met.</i>	Conditional ⁴
Septic Systems	No	No	No	Yes-most landward location	Yes - most landward location
New Development					
Creation of New Lot(s) (ie. Severance, subdivisions)	No	No	No	No	No
Technical Severance***	Yes	Yes	Yes	Yes	Yes
Lot Consolidation	Yes	Yes	Yes	Yes	Yes
Land Use designation/zone changes	Support Changes to planning documents to Hazard, Natural Environment or Open Space designations			Support Changes to planning documents to a lakeshore overlay (subscript "L") designation	
	Do not support proposed zoning, land use designation or official plan changes which further intensify land use: ie. Seasonal residential to multi-unit dwelling				
Accessory Structures					
Unattached Garages	No	No	No	No	Dependent upon Erosion Rate & landward of existing dwelling
Major Structures (structure greater than 14m ²)	No	No	No	No	Dependent upon Erosion Rate & landward of existing dwelling
Minor Structures (10 m2 - 14m2)	No	No	Conditional ²	Yes – landward of foredune and existing dwelling.	Dependent upon Erosion Rate & landward of existing dwelling
Swimming Pools	No	No	No	No	Dependent upon Erosion Rate & landward of existing dwelling
New Septic Systems	No	No	No	Yes - landward of existing dwelling	Yes - landward of existing dwelling
Decks (Existing)					
Repair and Maintenance	Yes	Yes	Yes	Yes	Yes
Decks (New)	No	No	No closer than 3m to top of bank and not connected to dwelling - size restriction may apply	If landward of the foredune - size restriction may apply & design must minimize impact to dune	Yes
Boardwalks and/or stairs (existing)					
Repair and Maintenance	Yes	Yes	Yes	Yes	Yes
Boardwalks and/or stairs (new)	No	Yes - may require design by coastal engineer	Yes - may require design by coastal engineer	Yes - may require design by coastal engineer	Yes - may require design by coastal engineer
Site Alteration					
Fill Placement	Conditional ⁵	<i>No; unless Conditional^{7**}</i>	Conditional ⁶	<i>No; unless Conditional^{7**}</i>	Conditional ⁶
Fill Removal	Conditional ⁵	<i>No; unless Conditional^{7**}</i>	Conditional ⁶	<i>No; unless Conditional^{7**}</i>	Conditional ⁶
Re-grading	Conditional ⁵	<i>No; unless Conditional^{7**}</i>	Conditional ⁶	<i>No; unless Conditional^{7**}</i>	Conditional ⁶
In Water Structures					
Groynes					

New	No		
Partial Replacement	Yes		
Complete Replacement	Yes - design by coastal engineer indicating no impact on littoral transport and coastal processes, with approval of adjacent landowners		
Repair and Maintenance	Yes		
Shoreline Protection			
Repair and Maintenance	Yes	Yes; minor but protection must not cause any new negative impacts to dbh	Yes; minor – but protection must not cause any new negative impacts to dbh
Replacement	Yes	No, unless Conditional ⁷ met	No, unless Conditional ⁷ met
New	yes - design by coastal engineer indicating no impact on littoral transport and coastal processes, with approval of adjacent landowners No for dynamic beach hazard (dbh)		

Notes: Proposed development partially located within two zones automatically defaults to more restrictive zone requirements

Definition

Development:

- 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

Legend

Yes - Permissible
No - not allowed

Conditional¹ - yes, provided calculated erosion rate is less than 0.3 m/yr and slope stability is addressed
 Conditional² - yes, provided structure is inland from primary dwelling if calculated erosion rates are greater than 0.3m/yr
 Conditional³ - yes, one dwelling, most landward location, building is movable by design, impacts to dunes is minimized and outside critical main dune feature, and provided that more than 50% of existing lots/parcels in the residential/cottage area are developed**
 Conditional⁴ - yes, dependent upon erosion rate - one dwelling, most landward location and outside 60 year recession (50year Measurement # 587-626), building is movable by design, and provided that more than 50% of existing lots/parcels in the residential/cottage area are developed**.
 Conditional⁵ - yes, provided BMPs followed
 Conditional⁶ -yes, as part of engineered shoreline stabilization or flood proofing
 Conditional⁷ - must be demonstrated by a coastal engineer works will not negatively impact db, aggravate existing hazards and/or create new hazards to updrift and downdrift properties. Protection needs approval of adjacent properties and cannot be to protect replacement, redevelopment, new dwelling in the dbh.

*Includes redevelopment

** Coastal assessment and/or protection must meet established coastal professional engineering standards and procedures.
 Development in dbh must assess siting replacement, relocation outside dbh. Assess to include but not limited to; max lot depth and width, area outside dbh, ZB requirements, same size, footprint, same use, same number of dwelling units as existing.
 5 metre access to and along required if in hazard.

***A technical severance is a boundary adjustment where no new lot is created.

Works clearly falling within the following criteria will not require written permission of the St. Clair Region Conservation Authority:

- Seasonal removal of sand around existing dwellings in dune or dynamic beach areas and as necessary to permit entrance into existing structures
- Seasonal removal of sand from roads/laneways
- Erection, Construction or placement of structure less than 9m² with no utilities
- dbh works by hand; Sitting area – 18 m², side yard setback >4.5 m. One Access only 1.2 m wide, side yard setback >3 m. Best management practice.



Low topography,
dune is overtopped
during design event

Study Limits

Centre Sideroad

Williz Road

Hobb's Road

Juniper Lane

Cedar Drive

Cams Road

Spruce Street

William Street

Wakefield Street

Margaret Place

Agnes Place

Ruth Place

Sandy Trail

Trillium Road

Orchard Road



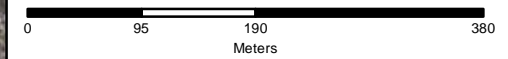
Shoreline Management Areas

BEFORE STUDY

- Shoreline Area 1 Wave Uprush plus 15 m
- Shoreline Area 2 - Dynamic Beach

AFTER STUDY

- Shoreline Area 1 Wave Uprush Adjusted
- Shoreline Area 2 Dynamic Beach



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 THIS IS NOT A PLAN OF SURVEY
 Orthoimagery, Spring 2015

Prepared By: Tracy Prince
April 7, 2017

ST CLAIR REGION CONSERVATION AUTHORITY
Statement of Revenue and Expenditure
For the 3 Months Ended 31/3/2017

12.(i)

	Actual To Date			Annual Budget		Variance from Budget	
	Revenue	Expenditures	Surplus(Deficit)	Revenue	Expenditures	Revenue	Expenditures
Flood Control & Erosion Control	\$603,988	\$107,576	\$496,412	\$557,420	\$557,420	\$46,568	(\$449,844)
Capital Projects/WECI	\$263,792	\$8,805	\$254,987	\$30,000	\$30,000	\$233,792	(\$21,195)
Conservation Area's Capital Development	\$80,000	\$5,725	\$74,275	\$71,000	\$71,000	\$9,000	(\$65,275)
IT Capital	\$4,836	\$1,064	\$3,772	\$19,200	\$19,200	(\$14,364)	(\$18,136)
Equipment	\$17,700	\$3,746	\$13,954	\$72,000	\$72,000	(\$54,300)	(\$68,254)
Planning & Regulations	\$292,891	\$89,126	\$203,765	\$502,933	\$502,933	(\$210,042)	(\$413,807)
Technical Studies	\$380,451	\$29,600	\$350,851	\$297,137	\$297,137	\$83,314	(\$267,537)
Recreation	\$154,513	\$89,555	\$64,958	\$1,301,890	\$1,301,890	(\$1,147,377)	(\$1,212,335)
Property Management	\$44,853	\$45,731	(\$878)	\$248,430	\$248,430	(\$203,577)	(\$202,699)
Education and Communication	\$90,220	\$58,069	\$32,151	\$193,821	\$193,821	(\$103,601)	(\$135,752)
Source Water Protection	\$57,697	\$21,460	\$36,237	\$175,000	\$175,000	(\$117,303)	(\$153,540)
Conservation Services/Healthy Watersheds	\$644,160	\$152,286	\$491,873	\$555,605	\$555,605	\$88,555	(\$403,319)
Administration/AOC Management	\$556,189	\$184,544	\$371,645	\$1,115,204	\$1,115,204	(\$559,015)	(\$930,660)
	\$3,191,290	\$797,287	\$2,394,003	\$5,139,640	\$5,139,640	(\$1,948,350)	(\$4,342,353)

Notes:

1. Municipal matching, non-matching, 3-D Special and Recreation levies totaling \$823,855 have been invoiced and are recorded in the actual revenue reported above. See General Levy Report for amounts outstanding.
2. The significant variances from budget to actual is reflective of the nature/timing and uniqueness of the particular projects. The variances will reduce and disappear as the year progresses.

**ST. CLAIR REGION CONSERVATION AUTHORITY
DISBURSEMENTS FROM Jan. 1 - March 31, 2017**

**12.(ii)
Sarah Kellestine**

CHQ. #	DATE	VENDOR	DESCRIPTION	AMOUNT
18566	1/10/2017	21 SHELL & VARIETY	Fuel	\$ 204.00
18567	1/10/2017	BAIRD & ASSOCIATES	Consulting Fees	\$ 24,340.20
18568	1/10/2017	Bird Studies Canada	Monitoring	\$ 600.00
18569	1/10/2017	Bluewater Anglers	Advertising	\$ 400.00
18570	1/10/2017	BUFFETT, TAYLOR & ASSOCIATES I	Group Benefits	\$ 12,341.33
18571	1/10/2017	Canadian Linen & Uniform	Mats	\$ 121.32
18572	1/10/2017	CANSEL	GPS Repair	\$ 1,796.25
18573	1/10/2017	CONSERVATION ONTARIO	Levy	\$ 14,512.50
18574	1/10/2017	D'arcy D.W. Bell Professional Corporation	Lease Review	\$ 330.50
18575	1/10/2017	DOWLER KARN PROPANE	Fuel	\$ 494.60
18576	1/10/2017	Drumm, Nicole	Employee Expenses	\$ 57.63
18577	1/10/2017	DUN-RITE LANDSCAPING INC.	Snow Removal	\$ 489.29
18578	1/10/2017	Forest Agricultural Society	Hall rental	\$ 75.00
18579	1/10/2017	FOREST CITY BUSINESS EQUIPMENT	Photocopier	\$ 901.64
18580	1/10/2017	PATTY HAYMAN	Employee Expenses	\$ 285.93
18581	1/10/2017	Heritage Renovations Limited	Windows	\$ 24,549.89
18582	1/10/2017	KELLY JOHNSON	Employee Expenses	\$ 35.00
18583	1/10/2017	Sarah Kellestine - Petty Cash	Petty Cash	\$ 35.20
18584	1/10/2017	KLEEFMAN CLEANING SERVICES	Office Cleaning	\$ 396.63
18585	1/10/2017	LOVERS ATWORK OFFC.FURNITR.INC	Desk Hardware and Monitor arms	\$ 4,004.06
18586	1/10/2017	BRIAN MCDOUGALL	Employee Expenses	\$ 29.14
18587	1/10/2017	Middlesex Soil & Crop Improvem	Booth Fee	\$ 125.00
18588	1/10/2017	Mt. Brydges Ford Sales Ltd.	Vehicle Maintenance	\$ 45.16
18589	1/10/2017	ONTARIO MINISTER OF FINANCE	Employer Health Tax	\$ 3,279.18
18590	1/10/2017	Ontario Municipal Management Institute	Subscription	\$ 95.00
18591	1/10/2017	TRACY PRINCE	Employee Expenses	\$ 70.33
18592	1/10/2017	PUROLATOR COURIER	Postage	\$ 41.95
18593	1/10/2017	Schooley Mitchell Telecom Consultants	Savings Sharing	\$ 2,411.60
18594	1/10/2017	JEFF SHARP	Employee Expenses	\$ 143.00
18595	1/10/2017	Shannon Vending Limited	Coffee	\$ 109.90
18596	1/10/2017	Thomson Reuters Canada	Subscription	\$ 220.27
18597	1/10/2017	TOWNSHIP OF WARWICK	Utilities	\$ 88.31
18598	1/10/2017	JESSICA VAN ZWOL	Employee Expenses	\$ 74.89

18599	1/10/2017 WASTE MANAGEMENT OF CANADA COR	Garbage Collection	\$	284.02
18600	1/10/2017 Wyoming Tree Service	Snow Removal	\$	623.76
18601	1/10/2017 RFS Canada	Photocopier	\$	236.60
18602	2/2/2017 ALS CANADA LIMITED	Water Samples	\$	1,517.03
18603	2/2/2017 1841792 ONT. INC., BILL BRON E	Electrical work	\$	173.97
18604	2/2/2017 MUNICIPALITY OF BROOKE-ALVINST	Hall rental	\$	195.00
18605	2/2/2017 BUFFETT, TAYLOR & ASSOCIATES I	Group Benefits	\$	12,473.53
18606	2/2/2017 Campbells Outdoor Power Equipm	Supplies	\$	94.51
18607	2/2/2017 Canadian Linen & Uniform	Mats	\$	141.53
18608	2/2/2017 CONSERVATION ONTARIO	ESRI Maintenece 2017	\$	3,937.32
18609	2/2/2017 DALLAS CUNDICK	Employee Expenses	\$	143.50
18610	2/2/2017 DISTINCT IMPRESSION	Advertising	\$	326.57
18611	2/2/2017 DOWLER KARN PROPANE	Fuel	\$	101.69
18612	2/2/2017 FOREST CITY BUSINESS EQUIPMENT	Photocopier	\$	372.90
18613	2/2/2017 Gilbert, Janice	Phragmities	\$	1,487.50
18614	2/2/2017 Golder Associates	Consulting Fees	\$	3,164.23
18615	2/2/2017 Hub Creative Group	Advertising	\$	395.50
18616	2/2/2017 Industrial Health and Safety Environment	First Aid Supplies	\$	88.87
18617	2/2/2017 Karelsen Construction Ltd	Maintenance for Brights Grove	\$	330.00
18618	2/2/2017 Sarah Kellestine	Employee Expenses	\$	59.31
18619	2/2/2017 KLEEFMAN CLEANING SERVICES	Mats	\$	455.39
18620	2/2/2017 KYIS EMBROIDERY	Uniform	\$	27.12
18621	2/2/2017 Lambton Shores Phrgmites Community Group	Phragmities	\$	2,737.74
18622	2/2/2017 Lambton County Arbor Week Committee	Donation	\$	1,750.00
18623	2/2/2017 LOBLAW COMPANIES LIMITED	Meeting Supplies	\$	9.68
18624	2/2/2017 MCDONNELL MOTORS LTD.	Vehicle Maintenance	\$	40.63
18625	2/2/2017 The National Farmers Union - Ontario	Booth Fee	\$	300.00
18626	2/2/2017 SHARON NETHERCOTT	Employee Expenses	\$	378.42
18627	2/2/2017 NOTHERS	Meeting Supplies	\$	92.43
18628	2/2/2017 ONTARIO MINISTER OF FINANCE	Employer Health Tax	\$	3,014.46
18629	2/2/2017 PUROLATOR COURIER	Postage	\$	126.41
18630	2/2/2017 RFS Canada	Photocopier	\$	118.30
18631	2/2/2017 RIDGETOWN INDEPENDENT NEWS	Advertising	\$	61.02
18632	2/2/2017 Shannon Vending Limited	Meeting Supplies	\$	109.90
18633	2/2/2017 SHOREPLAN ENGINEERING LTD.	Consulting Fees	\$	11,390.41
18634	2/2/2017 Spen-Arde Holdings Inc	Advertising	\$	53.39
18635	2/2/2017 STRATHROY SPORTS EXCELLENCE	Uniform	\$	67.75

18636	2/2/2017 SUN MEDIA CORPORATION	Advertising	\$ 264.54
18637	2/2/2017 SUPERIOR COMPUTER SALES INC.	Computers	\$ 2,239.10
18638	2/2/2017 MIKE TIZZARD	Employee Expenses	\$ 618.05
18639	2/2/2017 BILL TURNER	Employee Expenses	\$ 618.05
18640	2/2/2017 WATSON TIM-BR MART	Supplies	\$ 35.60
18641	2/2/2017 Wyoming Tree Service	Snow Removal	\$ 367.25
18642	2/16/2017 KEVAN BAKER	Employee Expenses	\$ 97.63
18643	2/16/2017 DAVID BESELAERE	Polr Barn	\$ 600.00
18644	2/16/2017 Canadian Linen & Uniform	Mats	\$ 81.18
18645	2/16/2017 CDW CANADA INC.	Boardroom Projector	\$ 1,181.22
18646	2/16/2017 DOWLER KARN PROPANE	Fuel	\$ 206.65
18647	2/16/2017 HAYTER-WALDEN PUBLICATIONS INC	Advertising	\$ 20.77
18648	2/16/2017 KENN'S PRINTING LTD.	Supplies	\$ 50.85
18649	2/16/2017 KYIS EMBROIDERY	Uniform	\$ 18.08
18650	2/16/2017 LANDSTRA CATERING	Lunch Meeting	\$ 243.88
18651	2/16/2017 LOBLAW COMPANIES LIMITED	Meeting Supplies	\$ 31.82
18652	2/16/2017 MECHANICAL ADVERTISING	Advertising	\$ 375.89
18653	2/16/2017 MOFFATT & POWELL (RONA)	Supplies	\$ 36.98
18654	2/16/2017 PETROLIA HOME HARDWARE	Supplies	\$ 74.57
18655	2/16/2017 TRACY PRINCE	Employee Expenses	\$ 498.50
18656	2/16/2017 PUROLATOR COURIER	Postage	\$ 79.65
18657	2/16/2017 RICOH Canada Inc	Photocopier	\$ 179.91
18658	2/16/2017 Shannon Vending Limited	Meeting Supplies	\$ 109.90
18659	2/16/2017 SHOREPLAN ENGINEERING LTD.	Consulting Fees	\$ 5,654.76
18660	2/16/2017 SIGNS AND DESIGNS	Signage	\$ 406.80
18661	2/16/2017 Spen-Arde Holdings Inc	Advertising	\$ 53.39
18662	2/16/2017 Strathroy & District Chamber o	Mayor Luncheon	\$ 90.40
18663	2/16/2017 STRATHROY TIRE SALES & SERVICE	Vehicle Maintenance	\$ 49.99
18664	2/16/2017 TOWNSHIP OF ENNISKILLEN	Utilities	\$ 325.34
18665	2/16/2017 TOWN OF PLYMPTON-WYOMING	Utilities	\$ 127.45
18666	2/16/2017 TOWNSHIP OF DAWN-EUPHEMIA	Utilities	\$ 20.00
18667	2/16/2017 WATSON TIM-BR MART	Supplies	\$ 1,158.54
18668	2/16/2017 Wyoming Tree Service	Snow Removal	\$ 481.38
18669	2/21/2017 MPW Chartered Professional Accountants LLP	Audit - Consulting Fees	\$ 14,985.21
18670	2/21/2017 BUFFETT, TAYLOR & ASSOCIATES I	Group Benefits	\$ 12,407.43
18672	3/6/2017 MUNICIPALITY OF BROOKE-ALVINST	Hall rental	\$ 75.00
18673	3/6/2017 Canadian Linen & Uniform	Mats	\$ 80.88

18674	3/6/2017 STEPHEN CLARK	Employee Expenses	\$	335.49
18675	3/6/2017 DOWLER KARN PROPANE	Fuel	\$	137.83
18676	3/6/2017 MELISSA GILL	Employee Expenses	\$	604.17
18677	3/6/2017 Sarah Kellestine - Petty Cash	Petty Cash	\$	193.65
18678	3/6/2017 KLEEFMAN CLEANING SERVICES	Office Cleaning	\$	389.00
18679	3/6/2017 LANDSTRA CATERING	Lunch Meeting	\$	54.22
18680	3/6/2017 LARRY MACDONALD CHEV OLDS	Vehicle Maintenance	\$	1,209.45
18681	3/6/2017 LOBLAW COMPANIES LIMITED	Service Awards	\$	1,912.65
18682	3/6/2017 MIDDLESEX PRINTING CORPORATION	Supplies	\$	1,084.30
18683	3/6/2017 Ogden, Erica	Employee Expenses	\$	88.13
18684	3/6/2017 PUROLATOR COURIER	Postage	\$	14.68
18685	3/6/2017 RFS Canada	Photocopier	\$	118.30
18686	3/6/2017 RIDGETOWN INDEPENDENT NEWS	Advertising	\$	61.02
18687	3/6/2017 Shawna Riley	Lunch Meeting	\$	180.00
18688	3/6/2017 SRNA/LMBTN CHAMBER OF COMMERCE	Membership fees	\$	363.55
18689	3/6/2017 STRATHROY HOME HARDWARE BUILDI	Supplies	\$	25.00
18690	3/6/2017 SUN MEDIA CORPORATION	Advertising	\$	321.37
18691	3/6/2017 TOWNSHIP OF WARWICK	Utilities	\$	400.00
18692	3/6/2017 TOWNSHIP OF ST. CLAIR	Utilities	\$	58.02
18693	3/6/2017 Van Niekerk, Andy and Lori	Discussion panel	\$	841.44
18694	3/6/2017 ONTARIO MINISTER OF FINANCE	Employer Health Tax	\$	3,065.86
18695	3/9/2017 HSE INTEGRATED ILTD.	Supplies	\$	88.87
18696	3/10/2017 ROYAL CANADIAN LEGION	Venue Rental	\$	200.00
18697	3/16/2017 ALS CANADA LIMITED	Water Samples	\$	1,011.35
18698	3/16/2017 MUNICIPALITY OF BROOKE-ALVINST	Hall rental	\$	59.00
18699	3/16/2017 Canadian Linen & Uniform	Mats	\$	80.88
18700	3/16/2017 CONSERVATION ONTARIO	2015-2016 Swoop license fee	\$	457.94
18701	3/16/2017 Copper Kettle Catering	Lunch Meeting	\$	788.35
18702	3/16/2017 Deborah Ward Consulting	Consulting Fees	\$	565.00
18703	3/16/2017 Ferriera Law	Legal Fees	\$	2,271.30
18704	3/16/2017 GENCARE SERVICES	Service Maintenance	\$	604.55
18705	3/16/2017 Golder Associates	Consulting Fees	\$	7,223.64
18706	3/16/2017 Grafiks Marketing & Communica	Advertising	\$	1,186.50
18707	3/16/2017 HAYTER-WALDEN PUBLICATIONS INC	Advertising	\$	80.00
18708	3/16/2017 HEYLAND FARMS LTD./DOUG MCGEE	Grass Seed	\$	550.00
18709	3/16/2017 HOSKIN SCIENTIFIC LIMITED	Supplies	\$	672.35
18710	3/16/2017 The Independent	Advertising	\$	327.70

18711	3/16/2017 Jalna Farms	Horse carriage	\$	1,356.00
18712	3/16/2017 JAMES O POAG JEWELLER LIMITED	Service Awards	\$	150.00
18713	3/16/2017 KENN'S PRINTING LTD.	Supplies	\$	36.73
18714	3/16/2017 KYIS EMBROIDERY	Uniform	\$	54.24
18715	3/16/2017 BRIAN MCDUGALL	Employee Expenses	\$	365.04
18716	3/16/2017 PODOLINSKY FARM EQUIPMENT	Supplies	\$	132.64
18717	3/16/2017 PUROLATOR COURIER	Postage	\$	93.50
18718	3/16/2017 RICOH Canada Inc	Photocopier	\$	487.15
18719	3/16/2017 GIRISH SANKAR	Employee Expenses	\$	171.76
18720	3/16/2017 ALISON SEIDLER	Employee Expenses	\$	316.92
18721	3/16/2017 SOMERVILLE NURSERIES INC.	Tree Deposit	\$	13,772.00
18722	3/16/2017 STRATHROY HOME HARDWARE BUILDI	Supplies	\$	103.93
18723	3/16/2017 SUPERIOR COMPUTER SALES INC.	Computers	\$	1,598.95
18724	3/16/2017 WATFORD HOME HARDWARE BUILDING	Supplies	\$	16.94
18725	3/16/2017 WATSON TIM-BR MART	Supplies	\$	389.05
18726	3/16/2017 Wyoming Tree Service	Snow Removal	\$	311.88
18727	3/30/2017 Brooke-Alvinston Skating Club	Lunch Meeting	\$	1,625.00

TOTAL CHEQUE DISBURSEMENTS - BANK #1 -**\$ 232,139.02****INTERNET BANKING January 1 2017 to March 31 2017**

TRANS #	DATE	VENDOR	DESCRIPTION	AMOUNT
8581	1/31/2017	BELL CANADA	Telephone/Internet	\$ 572.00
8582	1/31/2017	BLUEWATER POWER	Utilities	\$ 148.14
8583	1/31/2017	BROOKE TELECOM CO-OP	Telephone/Internet	\$ 408.79
8584	1/31/2017	Canada Revenue Agency - HST	HST	\$ 1,947.69
8585	1/31/2017	Canadian Savings Bond	Canada Savings Bonds	\$ 200.00
8586	1/31/2017	ENTEGRUS SERVICES INC. (CHATHA	Utilities	\$ 933.09
8587	1/31/2017	Execulink Telecom	Telephone/Internet	\$ 768.86
8588	1/31/2017	FCDQ (DESJARDINS)	Office Supplies	\$ 230.99
8590	1/31/2017	HYDRO ONE Networks Inc.	Utilities	\$ 3,520.25
8591	1/31/2017	MASTERCARD	Employee Expenses	\$ 4,250.95
8592	1/31/2017	Municipality of Lambton Shores - Property Taxes	Property Tax	\$ 446.44
8593	1/31/2017	OMERS	Pension	\$ 26,979.02
8594	1/31/2017	PETRO CANADA INC.	Fuel	\$ 1,859.13

8595	1/31/2017 RECEIVER GENERAL	Source Deductions	\$ 46,361.64
8596	1/31/2017 Rogers Cable Communications Inc	Telephone/Internet	\$ 710.60
8599	1/31/2017 Township of St. Clair - Property Taxes	Property Tax	\$ 13,786.34
8600	1/31/2017 UNION GAS LIMITED	Utilities	\$ 459.18
8601	1/31/2017 WORKPLACE SAFETY & INS. BOARD	WSIB	\$ 4,702.87
8602	1/31/2017 Township of St. Clair - Property Taxes	Property Tax	\$ 955.60
8603	2/28/2017 BELL CANADA	Telephone/Internet	\$ 470.85
8604	2/28/2017 BLUEWATER POWER	Utilities	\$ 75.06
8605	2/28/2017 BROOKE TELECOM CO-OP	Telephone/Internet	\$ 410.72
8606	2/28/2017 Canadian Savings Bond	Canada Savings Bonds	\$ 200.00
8607	2/28/2017 City of Sarnia - Property Tax	Property Tax	\$ 109.84
8608	2/28/2017 Corpotation of the town of Petrolia - Property Taxes	Property Tax	\$ 210.00
8609	2/28/2017 ENTEGRUS SERVICES INC. (CHATHA	Utilities	\$ 899.42
8610	2/28/2017 Execulink Telecom	Telephone/Internet	\$ 861.41
8611	2/28/2017 FCDQ (DESJARDINS)	Office Supplies	\$ 465.71
8613	2/28/2017 HYDRO ONE Networks Inc.	Utilities	\$ 3,641.06
8614	2/28/2017 MASTERCARD	Employee Expenses	\$ 5,853.92
8616	2/28/2017 Municipality of Chatham-Kent - Property Taxes	Property Tax	\$ 5,316.98
8617	2/28/2017 Municipality of Southwest Middlesex - Property Tax	Property Tax	\$ 1,224.00
8618	2/28/2017 Municipality of Brooke Alvinston - Property Taxes	Property Tax	\$ 1,080.11
8619	2/28/2017 Municipality of Middlesex Centre - Property Tax	Property Tax	\$ 377.00
8620	2/28/2017 Municipality of Strathroy Caradoc - Property Tax	Property Tax	\$ 909.88
8621	2/28/2017 OMERS	Pension	\$ 31,109.78
8622	2/28/2017 PETRO CANADA INC.	Fuel	\$ 908.26
8623	2/28/2017 RECEIVER GENERAL	Source Deductions	\$ 46,995.82
8624	2/28/2017 Rogers Cable Communications Inc	Telephone/Internet	\$ 712.06
8625	2/28/2017 Township of Warwick - Property Taxes	Property Tax	\$ 953.00
8626	2/28/2017 UNION GAS LIMITED	Utilities	\$ 93.46
8627	2/28/2017 WORKPLACE SAFETY & INS. BOARD	WSIB	\$ 4,770.84
8628	3/31/2017 BELL CANADA	Telephone/Internet	\$ 514.90
8629	3/31/2017 BLUEWATER POWER	Utilities	\$ 72.29
8630	3/31/2017 Brandt, David	Speaker at conference	\$ 1,820.79
8631	3/31/2017 BROOKE TELECOM CO-OP	Telephone/Internet	\$ 410.72
8632	3/31/2017 Canadian Savings Bond	Canada Savings Bonds	\$ 200.00
8633	3/31/2017 ENTEGRUS SERVICES INC. (CHATHA	Utilities	\$ 910.89
8634	3/31/2017 FCDQ (DESJARDINS)	Office Supplies	\$ 188.11
8636	3/31/2017 HYDRO ONE Networks Inc.	Utilities	\$ 3,309.22

8637	3/31/2017 MASTERCARD	Employee Expenses	\$	1,940.15
8638	3/31/2017 OMERS	Pension	\$	34,841.46
8639	3/31/2017 PETRO CANADA INC.	Fuel	\$	2,287.18
8640	3/31/2017 RECEIVER GENERAL	Source Deductions	\$	52,235.59
8641	3/31/2017 Rogers Cable Communications Inc	Telephone/Internet	\$	753.08
8642	3/31/2017 Township of Dawn-Euphemia property taxes	Property Tax	\$	342.22
8643	3/31/2017 UNION GAS LIMITED	Utilities	\$	256.65
8644	3/31/2017 WORKPLACE SAFETY & INS. BOARD	WSIB	\$	5,314.06

TOTAL INTERNET DISBURSEMENTS - BANK NO. 1 -

\$ 322,288.07

PAYROLL RUNS

PAYROLL NO. 1	\$	49,569.30
PAYROLL NO. 2	\$	48,872.04
PAYROLL NO. 3	\$	50,060.67
PAYROLL NO. 4	\$	50,075.50
PAYROLL NO. 5	\$	51,437.59
PAYROLL NO. 6	\$	60,341.86
PAYROLL NO.		
PAYROLL NO.		

TOTAL PAYROLL RUNS -

\$ 310,356.96

TOTAL DISBURSEMENTS -

\$ 864,784.05

2017 GENERAL LEVY SUMMARY

GLYSUM2017
Sarah Kellestine
Mar 31 2017

MUNICIPALITY	GROSS LEVY	PAID TO DATE	OUTSTANDING
Sarnia	\$ 308,381.00	\$ 77,095.25	\$ 231,285.75
Chatham-Kent	102,822.00	102,822.00	0.00
Brooke-Alvinston Twp.	12,305.00	12,305.00	0.00
Dawn Euphemia Twp.	18,819.00	4,704.75	14,114.25
Enniskillen Twp.	13,372.00		13,372.00
Lambton Shores M.	38,420.00	38,420.00	0.00
Oil Springs V	1,529.00	1,529.00	0.00
Petrolia T	18,883.00	18,883.00	0.00
Plympton-Wyoming T	40,012.00		40,012.00
Point Edward V	18,483.00	18,483.00	0.00
St. Clair Twp.	85,473.00		85,473.00
Warwick Twp.	15,875.00	15,875.00	0.00
Adelaide Metcalfe Twp.	13,552.00		13,552.00
Middlesex Centre Twp.	16,494.00	16,494.00	0.00
Newbury V	1,190.00	1,190.00	0.00
Southwest Middlesex M.	8,829.00		8,829.00
Strathroy-Caradoc M.	64,417.00	16,104.25	48,312.75
TOTAL	\$ 778,856.00	\$ 323,905.25	\$ 454,950.75

Non-registered account #440-17189

February 28, 2017

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13704

ST. CLAIR REGION
CONSERVATION AUTHORITY
205 MILL POND CRESCENT
STRATHROY ON N7G 3P9



Your Investment Report

Account Summary

This table provides an overview of your account, including the opening and closing balance for the reporting period.

Your Investments	Opening Value Jan 1, 2017	Closing Value Feb 28, 2017	Balance on Feb 28, 2017 (CAD\$)
Canadian Dollar Investments			
Cash Account	1,393,615.14	1,395,550.35	1,395,550.35
	1,393,615.14	1,395,550.35	1,395,550.35
Grand Total (CAD\$)			1,395,550.35
		Last Statement Dec 31, 2016	1,393,615.14

You can access your up-to-date account information online through BMO Nesbitt Burns Gateway at: <https://gateway.bmonesbittburns.com>. If you have not yet registered for Gateway access, please contact your Investment Advisor.

We're here to help

Our team is dedicated to helping you succeed in meeting all of your wealth management goals. Please call any member of the team referenced below if you have questions about Your Investment Report. Visit bmo.com/nesbittburns for the latest information on investing and wealth planning.

JONATHAN BATCH
Investment Advisor
519-646-3044

Batch Investment Group
www.batchinvestmentgroup.com
Assistant: Sharon Tingley
sharon.tingley@nbpcd.com

DAVID HAAK
Branch Manager
(519) 672-8560

Suite 1900, One London Place, 255 Queens Avenue, London, ON N6A 5R8

BMO Nesbitt Burns Inc. is a Member - Canadian Investor Protection Fund.
Member of the Investment Industry Regulatory Organization of Canada.

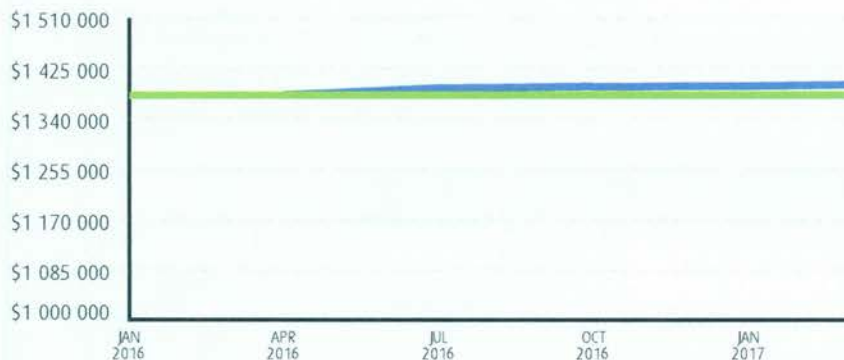
► Changes to your account

This table provides a summary of the change in value of your account, including all deposits, withdrawals and the change in market value of your investments, for both the current year and as of the start of reporting. Where applicable, balances have been converted to Canadian dollars, see page 1 for exchange rates.

	This Year (2017)	Since January 1, 2016
Opening Value	1,393,615.14	1,379,179.68
Deposited	+ 0.00	+ 0.00
Withdrawn	- 0.00	- 0.00
Net Invested	= 0.00	= 0.00
Change In Market Value	+ 1,935.21	+ 16,370.67
Closing Value on Feb 28, 2017	1,395,550.35	1,395,550.35

Non-registered account #440-17189

Net Invested is the value of total deposits less the value of total withdrawals.



● MARKET VALUE
● NET INVESTED

The Change in Market Value of your account since January 1, 2016 is \$16,370.67.




This amount includes gains, losses and income received with respect to the investments held in your account.

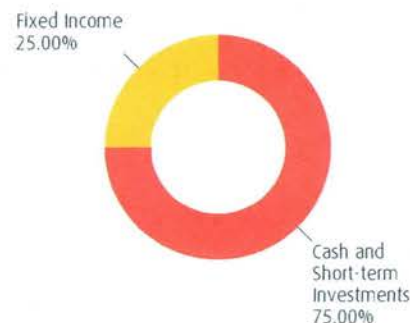
Non-registered account #440-17189

► Summary of your investments in Canadian dollars

Your Investor Profile

Investment Objective Income
Time Horizon 10 yrs and more

Investment Category	Amount	Target %	Holdings %
 Cash and Short-term Investments	1,045,550.35	10.00	75.00
 Fixed Income	350,000.00	90.00	25.00
 Equities	0.00	0.00	0.00
Total	1,395,550.35		100.00



The investments in your account have been chosen based on the investment objectives you selected on the Client Account Agreement. As your life circumstances change, it is important to talk to your Investment Advisor about updating these objectives as may be applicable.

Your Canadian Dollar Investments

All amounts are reported in Canadian Dollars.

► Income you received

Type of Income	Current Month	Year to Date
Interest	1,935.21	1,935.21
Total	1,935.21	1,935.21

► Your investment details

	Quantity	Cost		Market Value on February 28, 2017	
		Per Unit	Total	Per Unit	Total
Cash Account					
• Cash and Short-term Investments					
CASH			0.35		0.35
HOME TRUST COMPANY GIC ANNUAL DUE 05/15/2017 1.800%	100,000	100.000	100,000.00	100.000	100,000.00
HOMEQUITY BANK GIC ANNUAL DUE 05/15/2017 1.650%	50,000	100.000	50,000.00	100.000	50,000.00



Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Your investment details (continued)

	Quantity	Per Unit	Cost		Market Value on February 28, 2017	
				Total	Per Unit	Total
PEOPLES TRUST GIC ANNUAL DUE 05/15/2017 1.800%	100,000	100.000		100,000.00	100.000	100,000.00
HSBC BANK OF CDA GIC ANNUAL DUE 08/16/2017 1.400%	50,000	100.000		50,000.00	100.000	50,000.00
ROYAL BANK OF CDA GIC ANNUAL DUE 08/16/2017 1.400%	100,000	100.000		100,000.00	100.000	100,000.00
VANCITY GIC ANNUAL DUE 08/16/2017 1.400%	100,000	100.000		100,000.00	100.000	100,000.00
BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 11/20/2017 0.850%	243,615	100.000		243,615.00	100.000	243,615.00
VANCITY GIC ANNUAL DUE 02/20/2018 1.350%	301,935	100.000		301,935.00	100.000	301,935.00
Subtotal				1,045,550.35		1,045,550.35
Fixed Income						
Fixed Income						
CANADIAN WESTERN BANK GIC ANNUAL DUE 05/13/2019 2.200%	100,000	100.000		100,000.00	100.000	100,000.00
EQUITABLE BANK GIC ANNUAL DUE 05/13/2019 2.200%	100,000	100.000		100,000.00	100.000	100,000.00
HOMEQUITY BANK GIC ANNUAL DUE 05/13/2021 2.220%	50,000	100.000		50,000.00	100.000	50,000.00
PRESIDENT'S CHOICE BANK GIC ANNUAL DUE 05/13/2021 2.360%	100,000	100.000		100,000.00	100.000	100,000.00

Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Your investment details (continued)

	Cost		Market Value on February 28, 2017	
	Quantity	Per Unit	Total	Per Unit
Fixed Income Subtotal			350,000.00	350,000.00
Subtotal			350,000.00	350,000.00
Total for Cash Account			1,395,550.35	1,395,550.35
Total Canadian Dollar Investments			1,395,550.35	1,395,550.35

Average cost and market price indicator descriptions can be found in Important information about your account at the end of this statement.

▶ Account activity for this month

Date	Activity	Description	Quantity	Unit Price	Commission	Amount
Cash Account						
Jan 1, 2017		Opening Cash Balance				0.14
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-25,000		0.00	25,000.00
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-25,000		0.00	25,000.00
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-25,000		0.00	25,000.00
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-25,000		0.00	25,000.00
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-50,000		0.00	50,000.00

Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Account activity for this month (continued)

Date	Activity	Description	Quantity	Unit Price	Commission	Amount
Feb 15, 2017	Redemption	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-50,000		0.00	50,000.00
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	161.27
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	161.27
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	161.27
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	322.53
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	161.27
Feb 15, 2017	Interest	BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 200000.00 BND			0.00	322.53
Feb 15, 2017	Redemption	BANK OF MONTREAL MORTGAGE GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE REDEMPTION 4401718913	-100,000		0.00	100,000.00

Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Account activity for this month (continued)

Date	Activity	Description	Quantity	Unit Price	Commission	Amount
Feb 15, 2017	Interest	BANK OF MONTREAL MORTGAGE GIC 30 DAY CASHABLE ANNUAL DUE 05/15/2017 INT 0.850% CASHABLE INTEREST CPN INT ON 100000.00 BND			0.00	645.07
Feb 17, 2017	Bought	VANCITY GIC ANNUAL DUE 02/20/2018 01.350% FEB 17 FLAT	301,935	100.0000	0.00	-301,935.00
Feb 28, 2017		Closing Cash Balance				0.35

This report includes only activity recorded in your account since your last report. For a more comprehensive listing of your account activity, sign into your BMO Nesbitt Burns Gateway at: <https://gateway.bmonesbittburns.com>.



Non-registered account #440-17189

Your Year-to-Date Fees Summary

► Fees you paid

This section summarizes all compensation received by BMO Nesbitt Burns with respect to your account. Our compensation comes from two sources: what we charge you directly (Operating and Transaction Charges), and what we receive through any third parties.

	CAD (\$)
Operating charges	
Total operating charges	0.00
Transaction charges	
Total transaction charges	0.00
Total fees you paid in 2017	0.00

► Payments BMO received from third parties

	CAD (\$)
GIC Commission	754.84
Total payments BMO Nesbitt Burns received from third parties in 2017	754.84

► Bulletin board

The USD/CAD conversion rate is: 1.3281, as of February 28, 2017

Convert to eStatements.

Stay organized, save time and eliminate clutter by opting to receive your monthly statements electronically. Your eStatements are also accessible online for up to seven years after the statement was originally printed.

To turn off your paper statements, log on to <https://gateway.bmonesbittburns.com>.

Important Notice Regarding Your Trade Confirmations.

BMO Nesbitt Burns clients who are registered to receive eStatements only will be enrolled in the Electronic Documents (eDocuments) Program.

In Spring 2017, these clients will begin receiving electronic trade confirmations. This change provides greater convenience, security and access to your trade confirmations.

For example, electronic trade confirmations will be stored in Gateway for seven years, and paper trade confirmations will no longer be delivered in the mail.

We will extend this option to our non individual accounts (e.g. corporate, trust, estate) in the near future.

At this time, non individual accounts and individual clients currently receiving paper statements will continue to receive paper trade confirmations. Please stay tuned for further communications.

Please see examples of standard operating charges in the Important Information about your Account section. Some fees and charges may be reported as before-tax amounts and applicable tax is being reported separately within the 'Sales Tax' line item. Where this is not possible the sales tax is included within the line item. Please contact your Investment Advisor if you have any questions about your 'Year-to-Date Fees Summary'.

Non-registered account #440-17189

▶ Important information about your account

About this statement

BMO Nesbitt Burns Inc. shall assume the contents of this statement has been acknowledged as correct, approved and consented by you unless we receive written notice to the contrary within 45 days after it is sent to you.

Please let your Investment Advisor or Branch Manager know if there are any changes in your personal or financial situation so that we can ensure you are on track to meet your investment objectives.

The Average Cost and Total Cost for long positions incorporates the book cost of your investment, comprised of, the total amount paid, transaction charges, commissions and fees, adjusted for any corporate actions, reinvested distributions and return of capital. The Average Cost and Total Cost for short positions incorporates the book cost of your investment comprised of the total amount received, net of any transaction charges, commissions and fees, adjusted for distributions (other than dividends), returns of capital and corporate actions. Book cost on transferred in securities reflects the book cost provided by the transferring institution, or if not provided, the market value on the date of the transfer.

Client cash balances in non-registered accounts are held by BMO Bank of Montreal, and client cash balances in registered accounts are held by BMO Trust Company.

Legend of Average Cost indicators

M - Market Value information was used to estimate part or all of the Average Cost for this security position.

N/D - Average cost for this security holding cannot be determined.

O - Market Value information as of October 2, 2015 was used to estimate part or all of the Average Cost for this security position.

Valuations of the securities positions shown in this statement are provided by BMO Nesbitt Burns and are based on information and sources BMO Nesbitt Burns believes to be reliable. However, the market value cited may be subject to change and we cannot be held responsible if the actual market price differs from the said market price.

BMO Nesbitt Burns Inc. acted as principal in all transactions shown in this statement with the symbol "‡" in the "Description" column. In all other transactions, BMO Nesbitt Burns acted as agent.

A free credit balance represent funds payable on demand which, although properly recorded in our books, are not segregated and may be used in the conduct of our business. All security positions displayed are segregated unless otherwise indicated. Should there be a security in which the account holds a portion of the quantity segregated and a portion registered in your name, this will be indicated under the security description column.

A copy of our most recent statement of our financial condition and a list of directors and senior officers are available on request. Clients in British Columbia are entitled to certain information about BMO Nesbitt Burns, including information about commission and fees, and any administrative proceedings that may relate to the firm and its staff. For Related and Connected Issuer and Conflicts of Interest Statement, please visit our website: http://www.bmo.com/nesbittburns/about/nb/bmonb/regulatory_documents/conflict_s_of_interest.

Price of the securities in your accounts

We strive to provide accurate and current prices for securities. However, because we use numerous information sources for pricing, we cannot guarantee pricing accuracy for securities. Please call your Investment Advisor for the most current prices.

Legend of Market Price Indicators

E - There is no active market for this security so we have estimated its market value.

N - We are unable to obtain a reliable market value for the security. Therefore, in accordance with our standard practice, the market value of the security is not determinable and has been set to zero. This does not mean that the security does not have a value but only that a value cannot be assigned at this time.

Deferred Sales Charge (DSC)

Securities with "Deferred Sales Charge" in the security description may be subject to deferred sales charges when sold.

Investor protection

Customers' accounts are protected by the Canadian Investor Protection Fund within specified limits. A brochure describing the nature and limits of coverage is available upon request.

For Preferred or Preferred Plus accounts, deposits in your Canadian dollar bank account with Bank of Montreal are insurable under the Canada Deposit Insurance Corporation Act.

Deposits in your US Dollar bank account with Bank of Montreal are not insurable under the Act and are not insured by the Canadian Investor Protection Fund.

Securities held by BMO Nesbitt Burns Inc. in your Account as well as any cash held temporarily by BMO Nesbitt Burns Inc. for subsequent credit to the chequing/savings component of your Account are not deposits which are insured under the Canada Deposit Insurance Corporation Act.

Insurance products

All insurance products, including segregated funds, are offered through BMO Nesbitt Burns Financial Services Inc. by licensed life insurance agents, and, in Quebec, by financial security advisors.

You can always reach us.

If you are unable to reach your BMO Nesbitt Burns Investment Advisor, the telephone number indicated on the front page of this statement will connect you with your BMO Nesbitt Burns Branch.

Please record your BMO Nesbitt Burns Branch telephone number for future reference.

A complete list of branches and contact information is available under "Contact Us" at www.bmonb.com.

Due to space limitations on the page, we may have used some abbreviations on your statement. These abbreviations stand for the following: NCI: Non-Certificate Issue (GIC/Mutual Funds); NVS: Non-Voting Shares; RS: Restricted Shares; RVS: Restricted Voting Shares; SUB: Subscription; SVS: Subordinate Voting Shares; WTS: Warrants; RTS: Rights; DSC: Deferred Sales Charge.

Operating Charges

Client households minimum annual fee = \$500; Administration of RRSP/RRIF Fee: \$125 per year; Administration of RESP/TFSA: \$50 per year; Administration of Locked-In RRSP, LIRA, LIF, LRIF Fee: \$62.50 per year; Transfer-out of Non-Registered or Registered Account: Fully and partial: \$135 per account; Partial withdrawal of a Registered Account (excluding TFSA, LIF, LRIF and RRIF): \$25 per request; Full Deregistration of a Registered Account (excluding TFSA): \$100 per account. GST / PST / HST where applicable will be added to these fees.

The GST/HST registration number for BMO Nesbitt Burns Inc. is 103854261RT

BMO Wealth Management is the brand name for a business group consisting of Bank of Montreal and certain of its affiliates, including BMO Nesbitt Burns Inc., in providing wealth management products and services. "Nesbitt Burns" is a registered trade-mark of BMO Nesbitt Burns Inc., a wholly-owned subsidiary of Bank of Montreal. ®/TM Registered trade-marks of Bank of Montreal, used under licence.

BMO Nesbitt Burns Inc. is a Member - Canadian Investor Protection Fund. Member of the Investment Industry Regulatory Organization of Canada.

BMO Nesbitt Burns refers to BMO Nesbitt Burns Inc. and your account at BMO Nesbitt Burns Inc.



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ST. CLAIR REGION CONSERVATION
 AUTHORITY
 205 MILL POND CRES
 STRATHROY ON N7G 3P9

Account Number: **460-16010**
 Account Type: Regular Account
 For the Period: **March 1 to 31, 2017**
 Last Statement: February 28, 2017

Address Information

148 Fullarton Street
 Suite 1801
 London ON
 N6A 5P3



Phone: (519) 679-9490
 Website: www.scotiawealthmanagement.com
 Branch Manager: Matt Berry





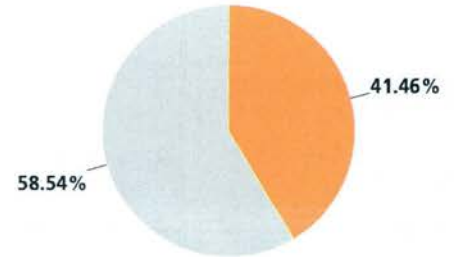
Your Wealth Advisor

Craig Emptage (519) 660-3259
craig.emptage@scotiawealth.com

CANADIAN Account Overview

Currency: CANADIAN DOLLAR

Asset Class Summary	Mar. 31, 2017 Market Value	% of Total Assets
 Fixed Income	301,356	41.46
 Other	425,485	58.54
Total Value of Account	\$726,841	100.00
Total Value on Last Statement, February 28, 2017	\$730,515	



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Details of Your Account Holdings

Type	Security Description	Quantity	Average Cost	Adjusted Book Value	Market Price	Market Value
Fixed Income						
CASH	MANULIFE STRATEGIC INCOME FUND CL F NL (659)	5,795.818	12.774	74,038	12.751	73,902
CASH	PIMCO MONTHLY INCOME FUND (CANADA) CL M (505) See Endnote 1	16,021.276	14.490	232,148	14.197	227,454
Total Fixed Income						\$301,356
Other						
CASH	MACKENZIE GLOBAL TACTICAL INVESTMENT GRADE BD FD SERIES PWF (6526)	21,968.849	9.991	219,499	9.889	217,250
CASH	SIGNATURE CANADIAN BOND CORP CLASS EF NL (15137)	20,991.394	10.294	216,092	9.920	208,235
Total Other						\$425,485
Total Account Holdings				\$741,777	\$726,841	

The average cost and adjusted book value displayed on this statement incorporates re-invested dividends and/or mutual fund distributions and does not necessarily reflect your original purchase price. Please see Average Cost & Adjusted Book Value in the Statement Notes for more information.

Monthly Activity

Date	Type	Activity	Description	Quantity	Price	Credit/Debit(-)
Opening Cash Balance						\$0.00
Mar. 01, 2017	CASH	DIVIDEND	PIMCO MONTHLY INCOME FUND (CANADA) CL M (505) REINVEST 02/28/17 @ \$14.1630 PLUS FRACTIONS OF 0.861 BOOK VALUE \$720.35	50		
Mar. 27, 2017	CASH	DIVIDEND	MACKENZIE GLOBAL TACTICAL INVESTMENT GRADE BD FD SERIES	69		

Monthly Activity - continued

Date	Type	Activity	Description	Quantity	Price	Credit/Debit(-)
			PWF (6526) REINVEST 03/24/17 @ \$9.8912 PLUS FRACTIONS OF 0.962 BOOK VALUE \$692.00			

Closing Cash Balance **\$0.00**

Summary



Income Summary

	This Period	Year-to-Date
Total Income	\$0	\$0



Go Paperless – with **Scotia Online!**

ScotiaMcLeod clients can choose paperless record keeping within **Scotia Online**. Receive monthly statements, trade confirmations, mutual fund prospectuses and annual trading summaries all within the secure environment of your **Scotia Online** account.

To learn more about the ScotiaMcLeod services and features available through **Scotia Online**, please contact your advisor or member of their team.

A Note From ScotiaMcLeod

At ScotiaMcLeod we are committed to meeting your needs. Your advisor and their support team are at your service to help with any questions that you have about your account. If for some reason you need to reach someone else to discuss your situation please call the branch manager whose name and number are on the front page or call the regional office at 1-866-895-0814.

Annual Statement Message

Please be advised that you can request a Fund Facts document for mutual funds purchased through your systematic or pre-authorized purchase plan or group investment plan by contacting your Wealth Advisor.

Online Tax Documents

You can now access your tax documents by logging on to Scotia Online (for those clients with current online access). For the 2016 tax year, clients with online access will also continue to receive all tax documents by mail. For next year's tax documents, if you do not wish to also receive them by mail, update your paperless preferences on your Scotia Online profile.

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To switch to a convenient, paperless option through Online Access, please contact your Wealth Advisor. Online access allows you to view your accounts when you want, review your transaction history, get quotes and access Scotia Capital research.

As a reminder, April 30th, 2017 is the tax deadline for most tax returns.

Your Personal Investment Profile

The following information reflects your stated investment objectives and risk tolerance for this account, as well as your overall investment knowledge. If you would like to make any changes, have questions about whether or not this is appropriate for you or would like to discuss how your current investments correspond to this profile, please contact your Wealth Advisor.

For more information, please review Guidelines for Investment Objectives and Related Account Risk Factors in the ScotiaMcLeod Relationship Disclosure Document and Terms and Conditions brochure.

Alternatively, please visit <http://www.scotiabank.com/ca/common/pdf/scotiamcleod/TandC.pdf>.

Investment Objectives

Income:	100%
Long Term Capital Appreciation:	
Short Term Capital Appreciation / Speculative Trading:	

Risk Tolerance

Low Risk:	85%
Medium Risk:	15%
High Risk:	

Overall Investment Knowledge

Investment Knowledge:	Medium
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Terms and Conditions

Terms and Conditions are applicable to your account(s). For further details of these terms and conditions go on-line or speak to your Investment Advisor. <http://www.scotiabank.com/ca/common/pdf/scotiamcleod/TandC.pdf>

Average Cost & Adjusted Book Value

Adjusted book value is average cost times the number of shares that you hold of a security. The average cost and adjusted book value displayed on this statement may represent: 1) your total cost, including commission and fees, of acquiring the security, 2) the value at the time the security was transferred into the account, 3) the effect of subsequently re-invested dividends and/or mutual fund distributions, 4) revisions as a result of security reorganizations and other corporate actions, 5) values which you have provided and requested that we reflect, or a combination of the foregoing. A statement message will advise you that an adjustment has been made in the month it occurs. This information has been calculated to the best of our ability unless provided by you. This information should not be used for the purposes of tax reporting.

Statement Frequency

Statements are issued whenever there has been activity in the account during the past month; otherwise statements are issued on a quarterly basis.

Relationship with TMX Group Limited

Scotia Capital Inc. (or an affiliate thereof) owns or controls an equity interest in TMX Group Limited ("TMX") (and has a nominee director serving on the board thereof). As such, Scotia Capital Inc. may be considered to have an economic interest in the listing of securities on an exchange owned or operated by TMX, including the Toronto Stock Exchange, the TSX Venture Exchange and the Alpha Exchange. No person or company is required to obtain products or services from TMX or its affiliates as a condition of Scotia Capital Inc. supplying or continuing to supply a product or service.



Leverage / Margin Risk Disclosure Statement

The use of leverage may not be suitable for all investors. Using borrowed money (whether through a margin account or any other method of borrowing) to finance the purchase of securities involves greater risk than using cash resources only. If you borrow money to purchase securities, your responsibility to repay the loan and pay interest as required by its terms remains the same even if the value of the securities purchased declines.

Wealth Advisor Information

Details of the individual representative who accepted your order(s) are available upon request. Please contact the Branch Manager.

Cash Balances

This section shows the balance in your account, including all transactions that have settled. A debit balance is indicated by "-" and represents an amount owed to Scotia Capital Inc. ("ScotiaMcLeod"). Free credit balances in Regular accounts represent funds payable on demand which, although properly recorded in our books, are not segregated and may be used in the conduct of our business. Cash balances in Registered accounts are held in trust by the trustee.

Asset Class Summary

Asset classes you hold will be displayed under the Asset Class Summary section in the statement. Only the asset classes of securities you hold in your account will be displayed on your statement. The classification "Other" includes Principal Protected Notes, Principal at Risk Notes, and some Exempt Market products. Please speak directly with your Wealth Advisor to ensure you understand the products held in your account. The term "Total Value of Account" refers to the total market value of priced securities within your account, by currency, including cash balances at the close of the date indicated.

Income Summary (Regular Accounts Only)

Dividend and/or interest income that has been credited to your account this month and year-to-date are summarized in this section. Accrued or deemed interest on debt or discount securities purchased or sold is not included.

Payment Information (RIF and LIF Accounts Only)

The information displayed reflects our records as of the statement date. Minimum Annual Payment refers to the minimum annual amount required from your RRIF account by Canada Revenue Agency. If, according to our records, you have elected to receive an annual amount greater than the minimum payment, then this amount will be displayed as the Elected Payment Amount. Withholding tax will be charged for amounts withdrawn in excess of the Minimum Annual Payment. The Year to Date Payment amount displayed is the total amount of the payments sent to you, after withholding tax has been deducted, if applicable.

Monthly Activity

This section shows all the activity in your account during the month. The Date column refers to the settlement date in the case of executed trades, or processing date in the case of other entries. Direct Funds Transfers made to your account on the last business day of the month may not appear on your month end statement until the following month.

Short Account

Proceeds from declared short sales have been segregated into a SHORT account and market increases and/or decreases from the original sale price are marked to the market. Such increases and or decreases are transferred to your margin account weekly. Transfers are reflected with the description "Mark to Market."

Details of Your Account Holdings

The market valuation information has been obtained from sources believed to be reliable; however, we cannot guarantee their accuracy. Our best efforts have been made to price all securities; however, in some circumstances, we may be unable to obtain valuations. A current market quotation can be made available upon request.

Segregated Quantity

Securities regulations stipulate that all fully paid and excess margin securities must be promptly segregated and are not available for use in the general conduct of our business. All security positions displayed under the account holdings section are segregated unless otherwise indicated. Should there be a security in which the account holds a portion of the quantity segregated and a portion registered in your name, this will be indicated under the security description column.

Remuneration for Order Flow

In connection with certain trades in securities that are executed for you in the U.S. marketplace, ScotiaMcLeod will receive remuneration for directing orders to a particular broker-dealer or market center for execution. The source and amount of any such remuneration received by ScotiaMcLeod in connection with any transaction executed on your behalf shall be disclosed to you upon request.

Member - Canadian Investor Protection Fund

Customers' accounts are protected by the Canadian Investor Protection Fund within specified limits. A brochure describing the nature and limits of coverage is available upon request.

Endnotes

1. There has been an adjustment made to this book value during the statement period.
2. There is no active market for this investment, and therefore the market value has been estimated.
3. There is no active market for this investment, and the market value cannot be determined.
4. If this position is sold, a sales charge may be applied to the proceeds.
5. Some or all of the book value of this position has been determined using a market value calculation.
6. The book value of this position cannot be determined.

Other Information

Employees of The Bank of Nova Scotia ("Scotiabank") and/or ScotiaMcLeod are not authorized to provide tax or legal advice. Please consult your accountant or lawyer on such matters.

The financial statement of Scotiabank and Scotia Capital Inc. as at the close of the last financial year and a current list of directors and officers will be furnished upon request. Clients in British Columbia are entitled to certain additional information about ScotiaMcLeod, including information about commissions and fees that we charge, and about any administrative proceedings that may relate to the firm or its staff.

This statement reflects all obligations of the firm to you. Please examine this statement of account promptly. Any errors or omissions or unauthorized discretionary transactions must be reported in writing within 60 days as of the date of this statement to: Director, Compliance Department, 1 Adelaide Street East, 7th floor, Toronto, Ontario, Canada M5C 2V9 or you will be precluded from asserting that errors or omissions have occurred.

T: 1-800-377-0065 F: 416-350-3088
em: scotiamcleodcomplaints@scotiabank.com

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Code Information

Code:	Nonvot	Resvot	Subvot
Definition:	Non-voting	Restricted Voting	Subordinate voting

Non-registered account #440-17189

March 31, 2017

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08978

ST. CLAIR REGION
CONSERVATION AUTHORITY
205 MILL POND CRESCENT
STRATHROY ON N7G 3P9



Your Investment Report

▶ Account Summary

This table provides an overview of your account; including the opening and closing balance for the reporting period.

Your Investments	Opening Value Mar 1, 2017	Closing Value Mar 31, 2017	Balance on Mar 31, 2017 (CAD\$)
Canadian Dollar Investments			
Cash Account	1,395,550.35	1,395,550.35	1,395,550.35
	1,395,550.35	1,395,550.35	1,395,550.35
Grand Total (CAD\$)			1,395,550.35
		Last Statement Feb 28, 2017	1,395,550.35

You can access your up-to-date account information online through BMO Nesbitt Burns Gateway at: <https://gateway.bmonesbitburns.com>. If you have not yet registered for Gateway access, please contact your Investment Advisor.

▶ We're here to help

Our team is dedicated to helping you succeed in meeting all of your wealth management goals. Please call any member of the team referenced below if you have questions about Your Investment Report. Visit bmo.com/nesbitburns for the latest information on investing and wealth planning.

JONATHAN BATCH
Investment Advisor
519-646-3044

Batch Investment Group
www.batchinvestmentgroup.com
Assistant: Sharon Tingley
sharon.tingley@nbpcd.com

DAVID HAAK
Branch Manager
(519) 672-8560

Suite 1900, One London Place, 255 Queens Avenue, London, ON N6A 5R8

BMO Nesbitt Burns Inc. is a Member - Canadian Investor Protection Fund.
Member of the Investment Industry Regulatory Organization of Canada.

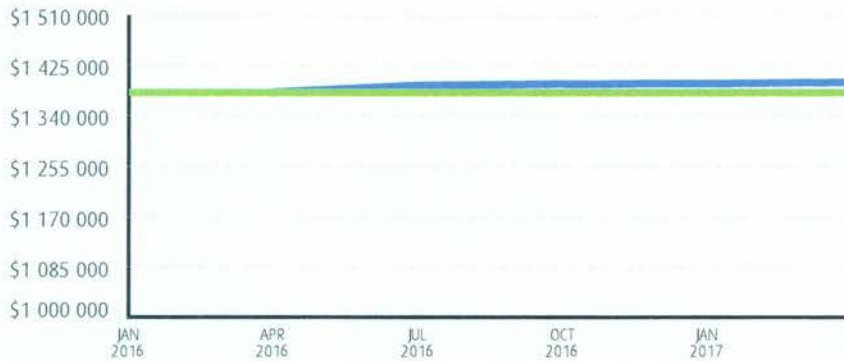
Non-registered account #440-17189

► Changes to your account

This table provides a summary of the change in value of your account, including all deposits, withdrawals and the change in market value of your investments, for both the current year and as of the start of reporting. Where applicable, balances have been converted to Canadian dollars, see page 1 for exchange rates.

	This Year (2017)	Since January 1, 2016
Opening Value	1,393,615.14	1,379,179.68
Deposited	+ 0.00	+ 0.00
Withdrawn	- 0.00	- 0.00
Net Invested	= 0.00	= 0.00
Change In Market Value	+ 1,935.21	+ 16,370.67
Closing Value on Mar 31, 2017	1,395,550.35	1,395,550.35

Net Invested is the value of total deposits less the value of total withdrawals.



● MARKET VALUE
● NET INVESTED

The Change in Market Value of your account since January 1, 2016 is \$16,370.67.




This amount includes gains, losses and income received with respect to the investments held in your account.

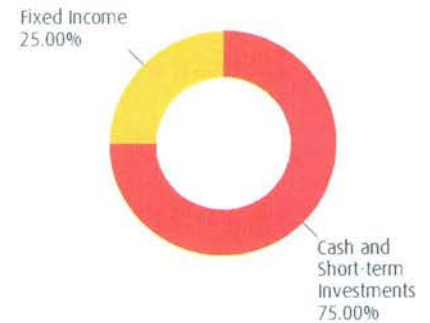
Non-registered account #440-17189

▶ Summary of your investments in Canadian dollars

Your Investor Profile

Investment Objective Income
Time Horizon 10 yrs and more

Investment Category	Amount	Target %	Holdings %
 Cash and Short-term Investments	1,045,550.35	10.00	75.00
 Fixed Income	350,000.00	90.00	25.00
 Equities	0.00	0.00	0.00
Total	1,395,550.35		100.00



The investments in your account have been chosen based on the investment objectives you selected on the Client Account Agreement. As your life circumstances change, it is important to talk to your Investment Advisor about updating these objectives as may be applicable.


Your Canadian Dollar Investments

All amounts are reported in Canadian Dollars.

▶ Income you received

Type of Income	Current Month	Year to Date
Interest	0.00	1,935.21
Total	0.00	1,935.21

▶ Your investment details

	Quantity	Cost		Market Value on March 31, 2017	
		Per Unit	Total	Per Unit	Total
Cash Account					
 Cash and Short-term Investments					
CASH			0.35		0.35
HOME TRUST COMPANY GIC ANNUAL DUE 05/15/2017 1.800%	100,000	100.000	100,000.00	100.000	100,000.00
HOMEQUITY BANK GIC ANNUAL DUE 05/15/2017 1.650%	50,000	100.000	50,000.00	100.000	50,000.00

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Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Your investment details (continued)

	Quantity	Per Unit	Cost		Market Value on March 31, 2017	
				Total	Per Unit	Total
PEOPLES TRUST GIC ANNUAL DUE 05/15/2017 1.800%	100,000	100.000		100,000.00	100.000	100,000.00
HSBC BANK OF CDA GIC ANNUAL DUE 08/16/2017 1.400%	50,000	100.000		50,000.00	100.000	50,000.00
ROYAL BANK OF CDA GIC ANNUAL DUE 08/16/2017 1.400%	100,000	100.000		100,000.00	100.000	100,000.00
VANCITY GIC ANNUAL DUE 08/16/2017 1.400%	100,000	100.000		100,000.00	100.000	100,000.00
BANK OF MONTREAL GIC 30 DAY CASHABLE ANNUAL DUE 11/20/2017 0.850%	243,615	100.000		243,615.00	100.000	243,615.00
VANCITY GIC ANNUAL DUE 02/20/2018 1.350%	301,935	100.000		301,935.00	100.000	301,935.00
Subtotal				1,045,550.35		1,045,550.35
Fixed Income						
Fixed Income						
CANADIAN WESTERN BANK GIC ANNUAL DUE 05/13/2019 2.200%	100,000	100.000		100,000.00	100.000	100,000.00
EQUITABLE BANK GIC ANNUAL DUE 05/13/2019 2.200%	100,000	100.000		100,000.00	100.000	100,000.00
HOMEQUITY BANK GIC ANNUAL DUE 05/13/2021 2.220%	50,000	100.000		50,000.00	100.000	50,000.00
PRESIDENT'S CHOICE BANK GIC ANNUAL DUE 05/13/2021 2.360%	100,000	100.000		100,000.00	100.000	100,000.00

Non-registered account #440-17189

Your Canadian Dollar Investments (continued)

All amounts are reported in Canadian Dollars.

▶ Your investment details (continued)

	Cost		Market Value on March 31, 2017		
	Quantity	Per Unit	Total	Per Unit	Total
Fixed Income Subtotal			350,000.00		350,000.00
Subtotal			350,000.00		350,000.00
Total for Cash Account			1,395,550.35		1,395,550.35
Total Canadian Dollar Investments			1,395,550.35		1,395,550.35



Average cost and market price indicator descriptions can be found in Important information about your account at the end of this statement.

▶ Account activity for this month

Date	Activity	Description	Quantity	Unit Price	Commission	Amount
Cash Account						
Mar 1, 2017		Opening Cash Balance				0.35
		<i>No Account Activity</i>				
Mar 31, 2017		Closing Cash Balance				0.35

This report includes only activity recorded in your account since your last report. For a more comprehensive listing of your account activity, sign into your BMO Nesbitt Burns Gateway at: <https://gateway.bmonesbitburns.com>.

Non-registered account #440-17189

Your Year-to-Date Fees Summary

► Fees you paid

This section summarizes all compensation received by BMO Nesbitt Burns with respect to your account. Our compensation comes from two sources: what we charge you directly (Operating and Transaction Charges), and what we receive through any third parties.

	CAD (\$)
Operating charges	
Total operating charges	0.00
Transaction charges	
Total transaction charges	0.00
Total fees you paid in 2017	0.00

► Payments BMO received from third parties

	CAD (\$)
GIC Commission	754.84
Total payments BMO Nesbitt Burns received from third parties in 2017	754.84

► Bulletin board

The USD/CAD conversion rate is: 1.3299, as of March 31, 2017

Important message for clients holding a Registered Retirement Savings Plan (RRSP), Registered Retirement Income Fund (RRIF) and/or a Tax-Free Savings Account (TFSA).

We have introduced important changes to the Trust Agreement that governs your RRSP/RRIF/TFSA account(s).

The changes take effect immediately and are intended to provide you with additional information and clarity around how your registered account is administered.

To receive a copy of the revised Trust Agreement(s), please contact your BMO Nesbitt Burns Investment Advisor, as indicated on this statement.

You can also view and print the updated RRSP/RRIF Trust Agreement at www.bmo.com/assets/pdfs/nesbitburns/Terms_En.pdf, and the updated TFSA Trust Agreement at www.bmo.com/assets/pdfs/nesbitburns/tfsa_tc_eng.pdf.

Convert to eStatements.

Stay organized, save time and eliminate clutter by opting to receive your monthly statements electronically. Your eStatements are also accessible online for up to seven years after the statement was originally printed.

To turn off your paper statements, log on to <https://gateway.bmonesbitburns.com>.

Important Notice Regarding Your Trade Confirmations.

BMO Nesbitt Burns clients who are registered to receive eStatements only will be enrolled in the Electronic Documents (eDocuments) Program.

In Spring 2017, these clients will begin receiving electronic trade confirmations. This change provides greater convenience, security and access to your trade confirmations.

For example, electronic trade confirmations will be stored in Gateway for seven years, and paper trade confirmations will no longer be delivered in the mail.

We will extend this option to our non individual accounts (e.g. corporate, trust, estate) in the near future.

At this time, non individual accounts and individual clients currently receiving paper statements will continue to receive paper trade confirmations. Please stay tuned for further communications.

Non-registered account #440-17189

▶ Important information about your account

About this statement

BMO Nesbitt Burns Inc. shall assume the contents of this statement has been acknowledged as correct, approved and consented by you unless we receive written notice to the contrary within 45 days after it is sent to you.

Please let your Investment Advisor or Branch Manager know if there are any changes in your personal or financial situation so that we can ensure you are on track to meet your investment objectives.

The Average Cost and Total Cost for long positions incorporates the book cost of your investment, comprised of, the total amount paid, transaction charges, commissions and fees, adjusted for any corporate actions, reinvested distributions and return of capital. The Average Cost and Total Cost for short positions incorporates the book cost of your investment comprised of the total amount received, net of any transaction charges, commissions and fees, adjusted for distributions (other than dividends), returns of capital and corporate actions. Book cost on transferred in securities reflects the book cost provided by the transferring institution, or if not provided, the market value on the date of the transfer.

Client cash balances in non-registered accounts are held by BMO Bank of Montreal, and client cash balances in registered accounts are held by BMO Trust Company.

Legend of Average Cost indicators

M - Market Value information was used to estimate part or all of the Average Cost for this security position.

N/D - Average cost for this security holding cannot be determined.

O - Market Value information as of October 2, 2015 was used to estimate part or all of the Average Cost for this security position.

Valuations of the securities positions shown in this statement are provided by BMO Nesbitt Burns and are based on information and sources BMO Nesbitt Burns believes to be reliable. However, the market value cited may be subject to change and we cannot be held responsible if the actual market price differs from the said market price.

BMO Nesbitt Burns Inc. acted as principal in all transactions shown in this statement with the symbol "†" in the "Description" column. In all other transactions, BMO Nesbitt Burns acted as agent.

A free credit balance represent funds payable on demand which, although properly recorded in our books, are not segregated and may be used in the conduct of our business. All security positions displayed are segregated unless otherwise indicated. Should there be a security in which the account holds a portion of the quantity segregated and a portion registered in your name, this will be indicated under the security description column.

A copy of our most recent statement of our financial condition and a list of directors and senior officers are available on request. Clients in British Columbia are entitled to certain information about BMO Nesbitt Burns, including information about commission and fees, and any administrative proceedings that may relate to the firm and its staff. For Related and Connected Issuer and Conflicts of Interest Statement, please visit our website: http://www.bmo.com/nesbitburns/about/nb/bmonb/regulatory_documents/conflict_s_of_interest.

Price of the securities in your accounts

We strive to provide accurate and current prices for securities. However, because we use numerous information sources for pricing, we cannot guarantee pricing accuracy for securities. Please call your Investment Advisor for the most current prices.

Legend of Market Price Indicators

E - There is no active market for this security so we have estimated its market value.

N - We are unable to obtain a reliable market value for the security. Therefore, in accordance with our standard practice, the market value of the security is not determinable and has been set to zero. This does not mean that the security does not have a value but only that a value cannot be assigned at this time.

Deferred Sales Charge (DSC)

Securities with "Deferred Sales Charge" in the security description may be subject to deferred sales charges when sold.

Investor protection

Customers' accounts are protected by the Canadian Investor Protection Fund within specified limits. A brochure describing the nature and limits of coverage is available upon request.

For Preferred or Preferred Plus accounts, deposits in your Canadian dollar bank account with Bank of Montreal are insurable under the Canada Deposit Insurance Corporation Act.

Deposits in your US Dollar bank account with Bank of Montreal are not insurable under the Act and are not insured by the Canadian Investor Protection Fund.

Securities held by BMO Nesbitt Burns Inc. in your Account as well as any cash held temporarily by BMO Nesbitt Burns Inc. for subsequent credit to the chequing/savings component of your Account are not deposits which are insured under the Canada Deposit Insurance Corporation Act.

Insurance products

All insurance products, including segregated funds, are offered through BMO Nesbitt Burns Financial Services Inc. by licensed life insurance agents, and, in Quebec, by financial security advisors.

You can always reach us.

If you are unable to reach your BMO Nesbitt Burns Investment Advisor, the telephone number indicated on the front page of this statement will connect you with your BMO Nesbitt Burns Branch.

Please record your BMO Nesbitt Burns Branch telephone number for future reference.

A complete list of branches and contact information is available under "Contact Us" at www.bmonb.com.

Due to space limitations on the page, we may have used some abbreviations on your statement. These abbreviations stand for the following: NCI: Non-Certificate Issue (GIC/Mutual Funds); NVS: Non-Voting Shares; RS: Restricted Shares; RVS: Restricted Voting Shares; SUB: Subscription; SVS: Subordinate Voting Shares; WTS: Warrants; RTS: Rights; DSC: Deferred Sales Charge.

Operating Charges

Client households minimum annual fee = \$500, Administration of RRSP/RRIF Fee: \$125 per year, Administration of RESP/TFSA: \$50 per year, Administration of Locked-In RRSP, LIRA, LIF, LRIF Fee: \$62.50 per year, Transfer-out of Non-Registered or Registered Account: Fully and partial: \$135 per account, Partial withdrawal of a Registered Account (excluding TFSA, LIF, LRIF and RRIF): \$25 per request, Full Deregistration of a Registered Account (excluding TFSA): \$100 per account. GST / PST / HST where applicable will be added to these fees.

The GST/HST registration number for BMO Nesbitt Burns Inc. is 103854261RT

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12. (iv)
S. Kellestine
31/03/2017

2015 Chair & Director's Per Diem and Mileage to Dec. 31, 2015

<u>Director's Name</u>	<u>Honourarium</u>	<u>Per Diem</u>	<u>Mileage</u>	<u>Total</u>
Steve Arnold	\$3,550.00	\$1,125.00	\$1,632.95	\$6,307.95
Diane Brewer		\$450.00	\$327.25	\$777.25
Alan Broad		\$300.00	\$184.58	\$484.58
Tony Bruinink		\$450.00	\$113.30	\$563.30
Andy Bruziewicz		\$450.00	\$0.00	\$450.00
Todd Case		\$375.00	\$183.70	\$558.70
Norm Giffen	\$1,675.00	\$600.00	\$0.00	\$2,275.00
Larry Gordon		\$525.00	\$452.65	\$977.65
Mike Kelch		\$300.00	\$287.10	\$587.10
Betty Ann MacKinnon		\$525.00	\$147.95	\$672.95
Kevin Marriott		\$375.00	\$291.50	\$666.50
Dan McMillan		\$375.00	\$170.50	\$545.50
John McCharles		\$375.00	\$263.45	\$638.45
Steve Miller		\$450.00	\$485.65	\$935.65
Frank Nemcek		\$375.00	\$210.10	\$585.10
Gerry Rupke		\$225.00	\$176.55	\$401.55
Cindy Scholten		\$525.00	\$464.75	\$989.75
Muriel Wright		\$450.00	\$176.55	\$626.55
	\$5,225.00	\$8,250.00	\$5,568.53	19,043.53

12. (iv)
S. Kellestine
31/03/2017

2016 Chair & Director's Per Diem and Mileage to Dec. 31, 2016

<u>Director's Name</u>	<u>Honourarium</u>	<u>Per Diem</u>	<u>Mileage</u>	<u>Total</u>
Steve Arnold	\$3,550.00	\$600.00	\$707.30	\$4,857.30
Diane Brewer		\$75.00		\$75.00
Alan Broad		\$450.00	\$321.20	\$771.20
Tony Bruinink		\$450.00	\$141.35	\$591.35
Andy Bruziewicz	\$1,675.00	\$375.00		\$2,050.00
Todd Case		\$375.00	\$170.50	\$545.50
Norm Giffen		\$600.00		\$600.00
Larry Gordon		\$525.00	\$499.40	\$1,024.40
Mike Kelch		\$300.00	\$294.80	\$594.80
Betty Ann MacKinnon		\$450.00	\$28.05	\$478.05
Kevin Marriott		\$375.00	\$298.65	\$673.65
Don McCallum		\$450.00	\$206.80	\$656.80
Dan McMillan		\$300.00	\$99.00	\$399.00
John McCharles		\$300.00	\$269.50	\$569.50
Steve Miller		\$600.00	\$759.00	\$1,359.00
Frank Nemcek		\$375.00	\$193.05	\$568.05
Gerry Rupke		\$225.00	\$196.35	\$421.35
Cindy Scholten		\$375.00	\$330.55	\$705.55
Muriel Wright		\$450.00	\$271.70	\$721.70
	\$5,225.00	\$7,650.00	\$4,787.20	17,662.20

SCRCA Joint Health & Safety Committee Meeting Minutes

Wednesday, November 30, 2016, 8:30 am

12.(vi)

Lower Board Room
205 Mill Pond Crest.
Strathroy, ON

Meeting called by:	JHSC Committee	Type of meeting:	Quarterly
Facilitator:	Kevan Baker	Minutes:	Sarah Kellestine
Attendees:	Kevan Baker, Don Skinner, Sarah Hodgkiss, Dallas Cundick Recorder: Sarah Kellestine		

Minutes of Agenda Items

1. Motion to approve September 21, 2016 meeting minutes
Motion: that "The Minutes of the September 21, 2016 JHSC meeting be approved as printed." **Moved/Seconded/Carried – Sarah/Don/Carried**

2. Business arising from the minutes
 - 2.1. Review of Action Items
Don Skinner reported on:
 - **Updated policy & procedure for dam safety** (*September 23, 2015 – item 4.1, Dec. 2, 2015, March 8 & June 8, 2016 – item 2.1 – Steve C., September 21, 2016 – item 2.1 – Don*) – see revisions from June 8, 2016 attached to Agenda
Discussion:
 - There isn't much left to work on.
 - Eliminate the diagrams.
 - Eliminate body hook as that would not pertain to the river.**Action Item(s):**
 - **Kevan** to talk to Steve Clark and bring finalized policy to the next meeting
 - **required length for fall restrict at Petrolia & proposed rescue plan** (*March 8, June 8, 2016 and September 21, 2016 – item 2.1 - Don*) – see also item 2.1 above.
Action Item(s):
 - **Water Department** to review the final report
 - **JHSC** to review at the March meeting for final approval.

 - Kevan Baker** reported on:
 - **Updates to training materials based on risk assessments** (*Sept. 21, 2016- item 2.1 – Kevan*)
Discussion:
 - ongoing
 - Kevan talked to departments on Nov 29th.**Action Item(s):**
 - **All departments** to make changes and **JHSC** to review at next meeting.
 - **Discussion with supervisors re: use of proper PPW (footwear)** (*Sept. 21, 2016- item 2.1 – Jeff*)
Discussion:
 - Supervisors are aware of the policy re: proper footwear for field work
 - All employees have an allowance for proper footwear for work in the field**Action Item(s):**
 - No further action required

- **External ladder safety training** (*March 8 2016 - item 4.2 and June 8, 2016 item 2.1 Jeff and Sept. 21, 2016 item 2.1 – Kevan*)
Action Item(s):
 - **Kevan** to ask Terry Barrie to review over the winter
 - **JHSC** to follow up at next meeting
- **Attaching shelves to the wall in the Biology area at Clark Wright** (Sept. 21, 2016 – item 3.3)
Discussion:
 - Completed – no further action required
- **Health & Safety Manual updates** (review updates made) (Sept. 21, 2016 – item 4.6)
Discussion:
 - Reviewed the Visitor Policy – need to establish a policy geared to the admin. office.**Action Item(s):**
 - **Sarah H.** to review Visitor Policy for the next meeting
 - **JHSC** to continue to review manual and forward changes to Heather

Jeff Sharp reported on:

- **development of updated Accident Packages (with accident scene diagram)** (*Dec. 2, 2015 – item 2.1 – Steve & March 8, June 8 and Sept. 21, 2016 – item 2.1 - Jeff*)
Discussion:
 - An accident reporting form will be developed and will be included in each vehicle.
 - If you are injured, reporting through WSIB is also required.**Action Item(s):**
 - **Jeff** to develop new form.
 - **Heather** to print and add to vehicles.
 - **Jeff** to review at a full staff meeting with all staff
- **review by management of Violence Policy & Procedure and Harassment Policy and Procedure** (Sept. 21, 2016 – item 4.3)
Discussion:
 - Needs to have a few things updated before it can be posted**Action Item(s):**
 - **Sarah H.** to review, update where necessary and give to Heather to print.
 - **Heather** to update signature and post.

3. Area Reports/Workplace Inspections

3.1. LCH, WWK, AWC, McLean - (**Kevan & Don**)

Discussion:

- Nothing major at the CA's to report on
- Reviewed 4 workplace inspections which have been completed.
- majority of the items have been resolved

Action Item(s):

- No further action required

3.2. LCH Education Centre – (**Kevan**)

Discussion:

- Completed workplace inspection first week in December, 2016

Action Item(s):

- No further action required

3.3. General CAs - Strathroy, CW, McKeough - (**Jeff**)

Discussion:

- no reports

3.4. Other Departments (JHSC as received)

Discussion:

- no reports

4. New Business

4.1. Review of Incident/Injury Investigation Reports since September 21, 2016 meeting (Kevan)

Discussion:

- One report – staff member was pushing trees and a tree swung back and hit him.
- First aid was required.

Action Item(s):

- hard hat and face shield to be used for this type of work in the future

4.2. Evacuation of office held on November 7th – suggestions re: accountability of staff once we meet at the front sign

Discussion:

- Suggestions include:
 - have the Supervisors account for their own staff
 - use the buddy system and account for the people in your area
 - if a missing person has a phone, call them to ensure they are accounted for
 - Supervisor or a staff to account for their area
 - Assign a person who is responsible to clear an area before they exit.
- Upstairs exterior door near Brian's office – review if it is /should be an emergency exit and if so, the stairway should be cleaned in the winter
- If an area has been cleared close the door to identify that the area is clear of people

Action Item(s):

- **Kevan** to review at the Supervisor's meeting and develop an accountability plan.

4.3. Establish new Health & Safety goals for 2017

Discussion:

- recommendation by Kevan to remove 2016 goal 5.8. "To incorporate the drivers' safety training program into our orientation of all staff." (in process)
- recommendation by Kevan to remove 2016 goal 5.10. "To Establish a new Workplace Inspection Report specific for each location" (completed)
- See Section 5 for new goals

Action Item(s):

- Goals and Objectives for 2017 to be revised as indicated in Section 5 below

4.4. Establish roles of JHSC Members for 2017

Discussion:

- Reviewed the JHSC roles

Action Item(s):

- No further action required

4.5. Establish JHSC Meeting Dates for 2017

Discussion:

- March 22, 2017
- June 21, 2017
- Sept. 20, 2017
- Nov. 29, 2017

Action Item(s):

- **Heather** to prepare updates for posting on Health & Safety bulletin boards

4.6. Appoint a co-chair from the worker reps

Action Item(s):

- Don Skinner will be the co-chair for the next year
- 4.7. Dallas – Health & Safety Certification Training

Action Item(s):

- Level 1 training scheduled for February 8, 9, 10, 2017
- Level 2 training scheduled for May 2, 3, 2017

5. Goals and Objectives in 2017

- 5.1. To regularly review MOL website to educate ourselves and learn from documented investigations and fines (ongoing)
- 5.2. To review Health and Safety Manual and make changes as necessary (ongoing)

Discussion:

- See item 2.1 (Kevan) above

Action Item(s):

- see 2.1 (Kevan) above

- 5.3. To appoint a worker rep. in October, 2017 for a 3-year term (to replace Don Skinner)
- 5.4. Conduct workplace inspections as required (at least one location each month)
- 5.5. To encourage supervisors to complete safety reviews and 5-point check lists on a more frequent basis (ongoing)
- 5.6. To update the JHSC files on the O drive (ongoing)
- 5.7. To recommend that Supervisors schedule retraining refreshers with their staff, once a month (ongoing)
- 5.8. To send occasional Health & Safety Bulletins to all staff (i.e. Hot & Cold Weather Alerts forwarded to all staff as received from Lambton Public Health)
- 5.9. To Establish a new Workplace Inspection Report specific to the Administration Office

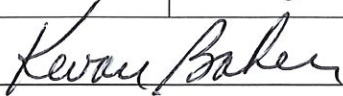
6. Proposed future 2017 meeting dates: See 4.5 for dates

7. Adjournment – 9:36 am


Motion: that “The meeting be adjourned.” **Moved/Second/Carried – Sarah/Don/C**

Misc. Information


Contacts:	Worker Co-chair/Inspector:	Don Skinner	dskinner@scrca.on.ca
	Management Co-chair:	Kevan Baker	kbaker@scrca.on.ca
	Worker Reps.:	Dallas Cundick	dcundick@scrca.on.ca
		Sarah Hodgkiss	shodgkiss@scrca.on.ca
		Don Skinner	dskinner@scrca.on.ca
	Committee Secretary:	Heather Long	hlong@scrca.on.ca
	Meeting Recorder:	Sarah Kellestine	skellestine@scrca.on.ca




 Signature of Co-chair



 Date



 Signature of Co-chair (worker rep.)



 Date

Staff Report

13.(i)

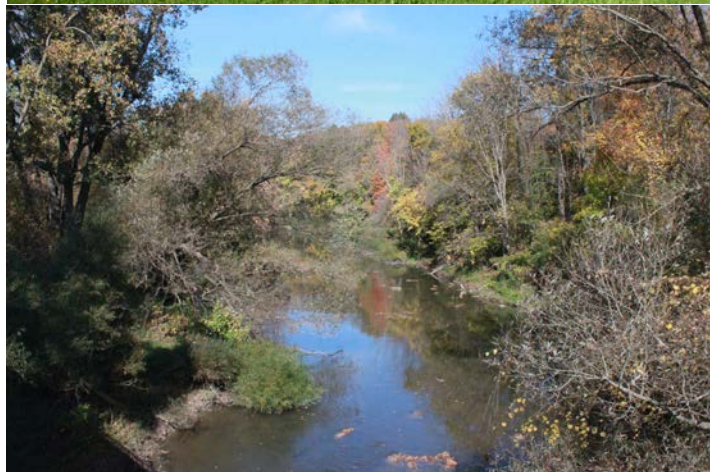


To: Board of Directors
Date: March 24, 2017
From: Rick Battson
Subject: SCRCA Members' Tour

Staff is proposing a Conservation Authority Tour on Thursday, June 22, 8:30 – 12:00. The bus will leave and return to the A.W. Campbell Conservation Area. We will have lunch followed by the Board meeting. This year, we will be focusing on projects in the central portion of our watershed.

Highlights of Tour

- A.W. Campbell Conservation Area
- Stewardship Projects
- Sydenham Nature Reserve
- Benthic and Fish Sampling Demonstration
- Tour of Munro Honey, Alvinston



Staff Report

13.(ii)



To: Board of Directors
Date: April 07, 2017
From: Sharon Nethercott, Melissa Gill
Subject: Conservation Education Progress Report

Winter Programing

Thanks to our many sponsors, free in-school programs were the focus of our winter season. A few primary classes also visited Henderson Conservation Area, experiencing a muddy, but enjoyable and educational winter program! Hand feeding Black-Capped Chickadees continues to be a highlight in our outdoor winter activities!

Program Development & Expansion

Innovation, Creativity & Entrepreneurship (ICE) Training

A new partnership has formed with the LKDSB to assist in ICE training sessions this spring with Wallaceburg District Secondary School. Education staff will deliver a 2 hour 'empathy building' workshop, in which students will be introduced to the health benefits of time spent in our local CAs. As a follow-up, the students will participate in a formal ICE training session. The student challenge will be to develop new concepts and ideas on how to encourage their peers to visit Conservation Areas for health benefits.

Pokecaching is a Pokemon Go inspired geocaching game that puts Geography curriculum into action. Participating students will use GPS units to locate Pokecaches filled with coloured tokens of differing value. Tokens will be collected for a "Battle At The Gym" at the conclusion of the 2 hour program. Lambton-Kent District School Board Enrichment students designed the game, prepared the power point and created a promotional flyer.

Community Partnerships

Great Lakes Student Conference: May 18th, 100 LKDSB grade 11 and 12 students will join SCRCA staff along the shores of the St. Clair River in Mooretown for a one day, student conference. Students will get hands-on opportunities and an in-depth look at the role of the Great Lakes in our communities. Many private and business partnerships helped to pull this exciting conference together, funded by the MOEECC.

Fun Fest: SCRCA staff will be participating in Kids Fun Fest 2017 on Saturday June 10th in Sarnia. The booth will highlight camping and SCRCA programs. Outdoor education staff will help kids explore the world of birds and offer a hands-on activity making their own bird nests using natural materials and mud!

Return the Landscape (RTL): Education staff has joined Return the Landscape board of directors to act as a liaison between SCRCA and RTL maintaining and growing this community partnerships.

Sarnia Lambton Arbor Week Committee: Education staff are helping to coordinate 4 public tree plantings in the 4 corners of Lambton County to celebrate Canada's 150th birthday. Plantings will take place in Sarnia, Forest, Oil Springs and Corunna. The Committee continues to host an Arbor Week Contest for area students. Each student in 3 winning classrooms will receive a Sugar Maple sapling to plant at home.

Special Events:

Maple Syrup Festival: approximately 700 people were welcomed to the Sugar Bush at A.W. Campbell Conservation Area on March 18th and 19th. Visitors were introduced to updated historical demonstrations of First Nations and Pioneer methods of collecting sap and turning it into liquid gold. Additional hands-on displays and horse-drawn wagon rides were a big attraction this year. The Alvinston Firefighters prepared pancake and sausage meals for hungry visitors.



Sydenham River Canoe Race: Mark your calendars for this year's Canoe Race: Sunday April 23, 2017. We look forward to another great turn out for this Conservation Education Fund Raiser. Check our website for more details.

Art Walk: SCRCA Staff will be participating in Art Walk in Sarnia on June 4th and 5th. Staffed booths will highlight some of the SCRCA's activities in our watershed.

Fun Fest: SCRCA staff will be participating in Kids Fun Fest 2017 on Saturday June 10th in Sarnia. The booth will highlight camping & Outdoor Education staff will offer a nature based art activity encouraging children to explore water colour paints on natural canvases (leaves, bark & twigs).