N O T I C E T O
CLOCA BOARD OF DIRECTORS

Please find enclosed the Agenda and supporting documents for the **CLOCA Annual Board of Directors'** meeting on **Tuesday, January 15, 2019, 5:00 p.m**., at 100 Whiting Avenue, Authority's Office Boardroom.

The list below outlines upcoming meetings and events for your information.

UPCOMING MEETINGS & EVENTS

DATE	TIME	EVENT	LOCATION
Tuesday, January 15/19	5:00 p.m.	Central Lake Ontario Conservation Authority (CLOCA) Board of Directors' Annual General Meeting	100 Whiting Avenue Authority's Office Boardroom
Tuesday, January 15/19	Immediately following CLOCA Meeting	Central Lake Ontario Source Protection Authority (CLOSPA) Board Meeting	100 Whiting Avenue Authority's Office Boardroom
Tuesday, January 15/19	Immediately following CLOSPA Meeting	Central Lake Ontario Conservation Fund (CLOCF) Board Meeting	100 Whiting Avenue Authority's Office Boardroom
Friday, February 8/19	7:00 to 9:00 p.m.	Stargazing and Snowshoe	Enniskillen CA 7274 Holt Rd., Clarington
Tuesday *February 12/19	5:00 p.m.	CLOCA Board of Directors' General Meeting	100 Whiting Avenue Authority's Office Boardroom
March 8 to 10/19 (Closed March 11-12) March 13 to 17/19 March 23 to 24/19 March 30 to 31/19	9:30 a.m. to 12 Noon or 12:00 Noon to 2:30 p.m.	Annual Maple Syrup Festival	Purple Woods CA 38 Coates Road East, Oshawa

prior Tuesday meeting due to Monday being a statutory holiday

LATEST NEWS

Check Out our Website! www.cloca.com
Discover your local Conservation Area.
Register as a Conservation Volunteer Programs & Services
Mobile access to online information with CLOCA's new mobile website and Free Conservation Areas App

"Healthy Watersheds for Today and Tomorrow"

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

A G E N D A

ANNUAL AUTHORITY MEETING

Tuesday, January 15, 2019 - 5:00 P.M.

MEETING LOCATION: 100 WHITING AVENUE, OSHAWA
AUTHORITY'S ADMINISTRATIVE OFFICE, BOARDROOM

CIRCULATION LIST

Authority Members:	Dave Barton	Authority Staff:	C. Darling, Chief Administrative Officer
	Bob Chapman		H. Brooks, Director, Watershed Planning & Natural Heritage
	Ron Hooper		R. Catulli, Director, Corporate Services
	Janis Jones		G. Geissberger, Marketing & Communications Coordinator
	Chris Leahy		D. Hope, Land Management & Operations Supervisor
	Sterling Lee		C. Jones, Director, Planning & Regulations
	Tito-Dante Marimpietri		P. Lowe, Director, Community Engagement
	Ian McDougall		P. Sisson, Director, Engineering & Field Operations
	Don Mitchell		M. Stauffer, Administrative Assistant/Recording Secretary
	Rhonda Mulcahy		
	John Neal		
	Brian Nicholson		
	David Pickles		
	Corinna Traill		
	Steve Yamada		

SUPPORTING DOCUMENTS

AGENDA ITEM:

1. CHAIR'S WELCOME

2. DECLARATIONS of interest by members on any matters herein contained

3. ADOPTION OF MINUTES of November 20, 2018 pg. **1**

4. CHAIR'S REMARKS – D. Mitchell

5. PRESENTATIONS - Special Presentation to Outgoing Member, Joe Drumm

(1) Naming of CLOCA Trail in Heber Down Conservation Authority pg. **8**

Moved by: Don Mitchell
Seconded by:

WHEREAS Joe Drumm has served as a political representative for the Town Whitby for 41 years;
AND WHEREAS Joe Drumm has been an appointee to Central Lake Ontario Conservation Authority (CLOCA) representing the Town of Whitby for 41 years (1977-2018);
AND WHEREAS Joe Drumm has been the longest serving Conservation Authority Board Member in the province;
AND WHEREAS Joe Drumm dedicated four years as Chair of CLOCA from 1983-1986;
AND WHERAS Joe Drumm has continuously supported CLOCA and particularly CLOCAs Conservation Areas as a critical community asset;
THEREFORE, LET IT BE RESOLVED THAT the trail located at Heber Down Conservation Area, connecting the Cochrane St. parking lot to the Devils Den Nature trail be given the name of "Joe Drumm Trail";
AND FURTHER THAT Joe Drumm be thanked for his years of service to CLOCA.

Cont'd

6. ELECTION OF OFFICERS

At this point in the proceedings the 2018 elected officers will vacate their positions, and the Chief Administrative Officer will officiate for the 2019 election of Chair.

Resolution Required: THAT in the event of a vote by ballot, Patricia Lowe and Perry Sisson be designated as scrutineers; and further that all election ballots be destroyed.

Authority Chair

(Three calls will be made for nominations. No seconder is required. Where more than one nominee stands for office, an election by secret ballot will be conducted.)

Nominations:

Resolution Required: THAT nominations for the position of Authority Chair be closed.

Election:

The newly elected Chair will assume the Chair to conduct the remainder of the meeting.

Authority Vice-Chair

(Three calls will be made for nominations. No seconder is required. Where more thanone nominee stands for office, an election by secret ballot will be conducted.)

Nominations:

Resolution Required: THAT nominations for the position of Authority Vice-Chair be closed.

Election:

7. SIGNING OFFICERS

Resolution Required: THAT the Signing Officers of the Authority be any two of the following: The Chair, Vice-Chair, Chief Administrative Officer/Secretary-Treasurer, and Director of Corporate Services.

8. SOLICITORS

Central Lake Ontario Conservation Authority utilizes the services of six (6) legal firms:

- Beard, Winter – flood plain regulation advice and litigation
- Borden Ladner Gervais – property tax and related matters
- Boychyn & Boychyn – real estate and property transactions
- Gardiner, Roberts – land related matters – planning and regulation matters
- Hicks, Morley – employment and labour related matters
- Littler Canada - legal matters for personnel/human resources

Resolution Required: THAT the firms Beard, Winter, Toronto; Borden Ladner Gervais, Toronto; Boychyn & Boychyn, Oshawa; Gardiner, Roberts, Toronto; Hicks Morley, Toronto; and Littler Canada be appointed Solicitors for the Authority, as required.

9. BORROWING BY-LAW

Resolution Required: THAT the Central Lake Ontario Conservation Authority's signing officers are hereby authorized on behalf of the Central Lake Ontario Conservation Authority to borrow from time to time, from the banking institution under agreement with the Central Lake Ontario Conservation Authority, up to $1,000,000 to meet current expenditures until Provincial grants and/or Regional funding are received, with interest as may be determined by agreement between the bank and the Central Lake Ontario Conservation Authority.

SUPPORTING DOCUMENTS

10. CONSERVATION ONTARIO COUNCIL

Resolution Required: THAT the Chair be appointed as the Authority's representative on the Conservation Ontario Council. Alternative designates are the Vice-Chair and the Chief Administrative Officer.

11. ENFORCEMENT OFFICERS

(i) Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation #42/06

Resolution Required: THAT L. Benham, L. Bulford, J. Burgess, E. Cameron, J. Hetherington, C. Jones, M. Guindon, S. Penney and P. Sisson be appointed Enforcement Officers under the Development, Interference with Wetlands and Alteration to Shorelines and Watercourses Regulation #42/06.

12. ENFORCEMENT OFFICERS

(ii) Conservation Areas Regulation #101/90

Resolution Required: THAT T. Backus, B. De Waal, H. Hirschfeld, D. Hope and J. Maas and A. Cooper be appointed Enforcement Officers under the Conservation Areas Regulation #101/92.

13. CORRESPONDENCE

(1) Regional Municipality of Durham — pg. **9**
Re: Appointments to the Central Lake Ontario Conservation Authority

14. DEVELOPMENT REVIEW & REGULATION

(1) Staff Report #4614-19 — pg. **11**
Re: Permits Issued for Development, Interference with Wetlands and Alteration to Shorelines and Watercourses - November 1 to December 31, 2018

(2) Staff Report #5616-19 — pg.**13**
Re: CLOCA Comments on Proposed Amendments to the Planning Act (Bill 66)

15. DIRECTOR, COMMUNITY ENGAGEMENT

(1) Staff Report #5621-19 — pg. **27**
Re: 2018 Year in Review

16. DIRECTOR, WATERSHED PLANNING & NATURAL HERITAGE

(1) Staff Report #5620-19 — pg. **28**
Re: Preserving and Protecting our Environment for Future Generations: A Made –in-Ontario Environment Plan – CLOCA Comments

17. DIRECTOR, ENGINEERING AND FIELD OPERATIONS

(1) Staff Report #5619-19 — pg.**38**
Re: Westside Marsh Overflow Channel Monitoring and Maintenance Plan

Cont'd

SUPPORTING DOCUMENTS

18. DIRECTOR, CORPORATE SERVICES

(1) Staff Report #5618-19 pg. **48**
Re: BDO Canada Audit of Financial Statements for the Year Ended December 31, 2018

19. CHIEF ADMINISTRATIVE OFFICER

(1) Staff Report #5613-19 pg. **72**
Re: Common Membership – Different Boards

(2) Staff Report #5615-19 pg. **73**
Re: Status Report of Implementation of CLOCA Strategic Plan 2016-2020

(3) Staff Report #5617-19 pg. **92**
Re: Port Darlington Shoreline Management Status Update and Proposed Next Steps

20. CONFIDENTAL MATTERS
None

21. MUNICIPAL AND OTHER BUSINESS

22. ADJOURNMENT

A G E N D A

SUPPORTING DOCUMENTS

MEETING OF: Authority - Annual

DATE: Tuesday, January 15, 2019

TIME: 5:00 p.m.

LOCATION: 100 Whiting Avenue, Oshawa

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

M I N U T E S N O. 7
AUTHORITY MEETING
Tuesday, November 20, 2018 - 5:00 P.M.
MEETING LOCATION: 100 WHITING AVENUE, OSHAWA
AUTHORITY'S ADMINISTRATIVE OFFICE, BOARDROOM

Present:	Adrian Foster, Vice Chair John Aker Shaun Collier Derrick Gleed Ron Hooper Joe Neal John Neal David Pickles Nester Pidwerbecki
	C. Darling, Chief Administrative Officer B. Boardman, Administrative Assistant/Recording Secretary H. Brooks, Director, Watershed Planning & Natural Heritage L. Bulford, Development Planner R. Catulli, Director, Corporate Services J. Davidson, Conservation Areas Planner G. Geissberger, Marketing & Communications Coordinator C. Jones, Director, Planning & Regulations P. Lowe, Director, Community Engagement P. Sisson, Director, Engineering & Field Operations
Others:	Karen & Kaitlyn Smith Ray, Malavanh, Reese & Leilani Chong Sarah, Maddie & Charlie Davidson Karl, Lucy, Sarah & Isabelle Wunderlich Olexander Wlaskenko, Station Gallery
Absent:	Don Mitchell, Chair Dave Barton Joe Drumm Tom Rowett Elizabeth Roy

The Vice Chair called the meeting to order at 5:00 p.m.

DECLARATIONS of interest by members on any matters herein contained - NONE

ADOPTION OF MINUTES (Agenda pg. 1)
Res. #74 Moved by J. Aker
Seconded by John Neal

THAT the Authority minutes of September 18, 2018 be adopted as circulated.
CARRIED

Awards were presented to the Artists for the "It's My Nature" Art Competition that was launched as part of our community engagement for the preparation of the Conservation Lands Master Plan. The artists and their families left after the awards were handed out.

Cont'd

DEVELOPMENT REVIEW & REGULATION

(1) Staff Report #5604-18 (Agenda pg. 11)
Re: Permits Issued for Development, Interference with Wetlands and Alteration to Shorelines and Watercourses – September 1 to October 31, 2018

Res. #75 Moved by R. Hooper
Seconded by N. Pidwerbecki

THAT Staff Report #5604-18 be received for information.
CARRIED

DIRECTOR, COMMUNITY ENGAGEMENT

(1) Staff Report #5608-18 (Agenda pg. 14)
Re: 2018 Durham Children's Watershed Festival Summary

Res. #76 Moved by D. Pickles
Seconded by J. Aker

THAT Staff Report #5608-18 be received for information.
CARRIED

DIRECTOR, WATERSHED PLANNING & NATURAL HERITAGE

(1) Staff Report #5606-18 (Agenda pg. 19)
Re: "It's My Nature" Art Competition – Conservation Lands Master Plan Project

Res. #77 Moved by John Neal
Seconded by J. Aker

THAT Staff Report #5606-18 be received for information.
CARRIED

(2) Staff Report #5607-18 (Agenda pg. 24)
Re: Conservation Lands Master Plan Project – Stakeholder and Public Information and Learning Sessions

Res. #78 Moved by R. Hooper
Seconded by D. Gleed

THAT Staff Report #5607-18 be received for information.
CARRIED

DIRECTOR, ENGINEERING & FIELD OPERATIONS

(1) Staff Report #5609-18 (Agenda pg. 29)
Re: Summer/Fall – CLOCA's Conservation Areas

Res. #79 Moved by D. Pickles
Seconded by S. Collier

THAT Staff Report #5609-18 be received for information.
CARRIED

Cont'd

DIRECTOR, ENGINEERING & FIELD OPERATIONS – Cont'd

(2) Staff Report #5610-18 (Agenda pg. 32)
Re: Smoke Free Conservation Areas

Res. #80 Moved by J. Aker
Seconded by N. Pidwerbecki

THAT Staff Report #5610-18 be received for information; and,
THAT staff be directed to implement a Smoke Free Policy for all Central Lake Ontario Conservation Areas.
CARRIED

DIRECTOR, CORPORATE SERVICES

(1) Staff Report #5605-18 (Agenda pg. 35)
Re: 2019 Proposed Fees for Authority Services & Programs; Plan Review Services & Regulation Administration

Res. #81 Moved by J. Aker
Seconded by D. Pickles

THAT Staff Report #5605-18 be received; and,
THAT the 2019 Proposed Fees for Authority Services and Programs and Planning Services and Regulation Services be adopted, effective January 1, 2019.

AMENDMENT Moved Joe Neal
Seconded by

THAT Planning Services and Regulation Services increase at a rate of 2%
AMENDMENT LOST, Lack of Seconder

Councillor Joe Neal requested a recorded vote.

MEMBER	YEA	NAY	CONFLICT	ABSENT
J. Aker	X			
D. Barton				X
S. Collier	X			
J. Drumm				X
A. Foster	X			
D. Gleed	X			
R. Hooper	X			
D. Mitchell				X
Joe Neal		X		
John Neal		X		
D. Pickles	X			
N. Pidwerbecki	X			
T. Rowell				X
E. Roy				X
TOTAL	7	2		5

Res. #81 CARRIED

Cont'd

DIRECTOR, CORPORATE SERVICES – Cont'd

(2) Staff Report #5612-18 (Agenda pg. 41)
Re: 2019 Preliminary Budget and Levy Submission

Res. #82 Moved by D. Pickles
Seconded by S. Collier

THAT Staff Report #5612-18 be received; and,
THAT the 2019 Preliminary Operating Levy Submission and Special Municipal Land Management Levy Submission totalling $4,053,960, and the Special Capital Requests for the following be approved for circulation to the Region of Durham:
1. $150,000 for the CLOCA Environmental Restoration Project
2. $100,000 for Year 2 of CLOCA Watershed Plan 5-Year Update
3. $40,000 for the Conservation Areas Master Plan
4. $25,000 for the Corbett Creek Floodplain Mapping and Drainage Study
5. $38,275 for the CLOCA Flood Forecasting System Upgrades

AMENDMENT Moved S. Collier
Seconded by D. Pickles

THAT the Region of Durham is requested to provide a one-time special levy in the amount of $84,472.48 to fund CLOCA's portion of the cost for a watermain on Ontoro Boulevard and Range Road in the event the CLOCA Board decides to support the petition and the petition is subsequently successful.

Councillor Joe Neal requested a recorded vote.

MEMBER	YEA	NAY	CONFLICT	ABSENT
J. Aker	X			
D. Barton				X
S. Collier	X			
J. Drumm				X
A. Foster	X			
D. Gleed	X			
R. Hooper	X			
D. Mitchell				X
Joe Neal	X			
John Neal		X		
D. Pickles	X			
N. Pidwerbecki	X			
T. Rowell				X
E. Roy				X
TOTAL	8	1		5

AMENDMENT CARRIED

Cont'd

DIRECTOR, CORPORATE SERVICES – Cont'd

Councillor Joe Neal requested a recorded vote on Staff Report #5612-18, as amended.

MEMBER	YEA	NAY	CONFLICT	ABSENT
J. Aker	X			
D. Barton				X
S. Collier	X			
J. Drumm				X
A. Foster	X			
D. Gleed	X			
R. Hooper	X			
D. Mitchell				X
Joe Neal	X			
John Neal		X		
D. Pickles	X			
N. Pidwerbecki	X			
T. Rowell				X
E. Roy				X
TOTAL	8	1		5

RES. #82, CARRIED AS AMENDED

CHIEF ADMINISTRATIVE OFFICER

(1) Staff Report #5600-18 (Agenda pg. 54)
Re: Corporate Successional Policy

Res. #83 Moved by R. Hooper
Seconded by N. Pidwerbecki

THAT Staff Report #5600-18 be received for information; and,
THAT the Board of Directors approve the attached Successional Policy.
CARRIED

(2) Staff Report #5601-18 (Agenda pg. 57)
Re: 2019 Meeting Schedule – Board of Directors

Res. #84 Moved by D. Pickles
Seconded by S. Collier

THAT Staff Report #5601-18 be received for information; and,
THAT the 2019 Meeting Schedule for Board of Directors be adopted.
CARRIED

(3) Staff Report #5602-18 (Agenda pg. 58)
Re: Summary of September 24, 2018 Conservation Ontario Council Meeting

Res. #85 Moved by D. Gleed
Seconded by R. Hooper

THAT Staff Report #5602-18 be received for information.
CARRIED

Cont'd

CHIEF ADMINISTRATIVE OFFICER – Cont'd

(4) Staff Report #5603-18 (Agenda pg. 68)
Re: Corporate Administrative and Meeting Procedural By-law – Integrity Commissioner Services

Res. #86 Moved by S. Collier
Seconded by D. Pickles

THAT Staff Report #5603-18 be received for information;
THAT the Enforcement of By-law and Policies as attached be approved and incorporated into CLOCA's Corporate Administrative and Meeting By-law
CARRIED

(5) Staff Report #5611-18 (Agenda pg. 70)
Re: Durham Region Land Acquisition Funding Policy for Conservation Authorities

Res. #87 Moved by S. Collier
Seconded by D. Gleed

THAT Staff Report 5611-18 be received;
THAT the Region be requested to amend the Region's Land Acquisition Reserve Fund Policy to increase the base percentage that the Region provides towards conservation land acquisition from 40% to 60% of the total value of the land being acquired, with the flexibility for additional support where appropriate;
THAT the Region be requested to apply an economic adjustment to the annual contribution to the LARF that would commensurate with the consumer price index or similar inflationary index to ensure the Fund reflects to changing cost of land acquisition and conservation authority projects: and
THAT a copy of this Report be circulated to the Conservation Authorities within Durham Region.

Councillor Joe Neal requested a recorded vote.

MEMBER	YEA	NAY	CONFLICT	ABSENT
J. Aker	X			
D. Barton				X
S. Collier	X			
J. Drumm				X
A. Foster	X			
D. Gleed	X			
R. Hooper	X			
D. Mitchell				X
Joe Neal	X			
John Neal		X		
D. Pickles	X			
N. Pidwerbecki	X			
T. Rowell				X
E. Roy				X
TOTAL	8	1		5

CARRIED

Joe Neal left the meeting at 6:06pm.

Cont'd

NEW AND UNFINISHED BUSINESS

Res. #87 Moved by John Neal
Seconded by J. Aker

THAT the Unfinished Business be received.
CARRIED

Councillor's Collier, Gleed and Pidwerbecki thanked staff for their hard work and dedication during their term with the CLOCA Board.

Vice Chair Foster thanked members for their service.

C. Darling welcomed outgoing members to the January 15, 2019 Annual Meeting for a presentation to J. Drumm for his 41 years of service.

ADJOURNMENT

Res. #88 Moved by J. Aker
Seconded by N. Pidwerbecki

THAT the meeting adjourn.
CARRIED

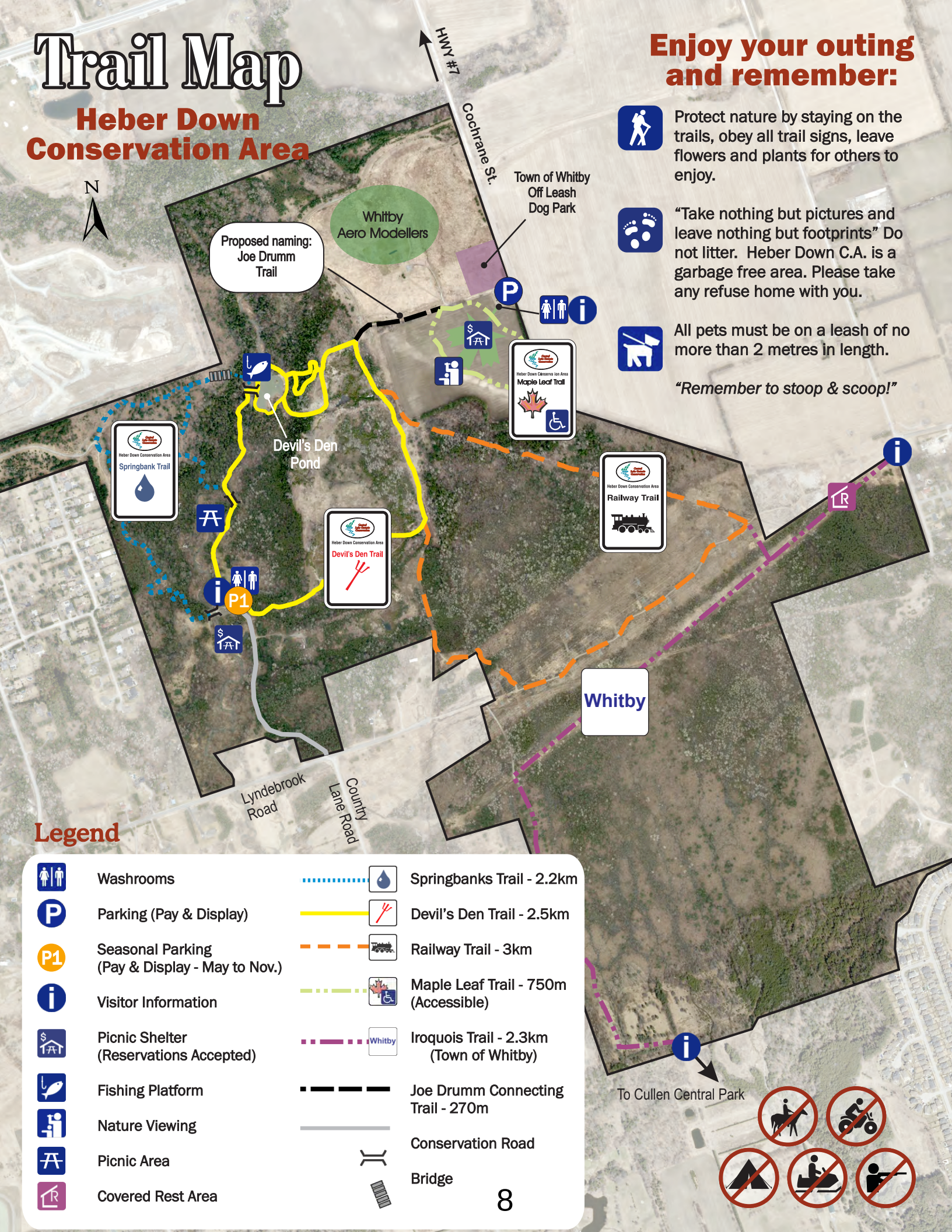
The meeting adjourned at 6:25 p.m.

A. FOSTER, VICE CHAIR

C. DARLING. CHIEF ADMINISTRATIVE OFFICER

Trail Map

Heber Down Conservation Area



Enjoy your outing and remember:

Protect nature by staying on the trails, obey all trail signs, leave flowers and plants for others to enjoy.

"Take nothing but pictures and leave nothing but footprints" Do not litter. Heber Down C.A. is a garbage free area. Please take any refuse home with you.

All pets must be on a leash of no more than 2 metres in length.

"Remember to stoop & scoop!"

Legend

- Washrooms
- Parking (Pay & Display)
- Seasonal Parking (Pay & Display - May to Nov.)
- Visitor Information
- Picnic Shelter (Reservations Accepted)
- Fishing Platform
- Nature Viewing
- Picnic Area
- Covered Rest Area
- Springbanks Trail - 2.2km
- Devil's Den Trail - 2.5km
- Railway Trail - 3km
- Maple Leaf Trail - 750m (Accessible)
- Iroquois Trail - 2.3km (Town of Whitby)
- Joe Drumm Connecting Trail - 270m
- Conservation Road
- Bridge

CLOCA
-01- 02 2019
ABDA1-27
RECEIVED

December 20, 2018

Mr. Chris Darling
Chief Administrative Officer
Central Lake Ontario Conservation Authority
100 Whiting Avenue
Oshawa, ON L1H 3T3

The Regional Municipality of Durham

Corporate Services Department
Legislative Services

605 Rossland Rd. E.
Level 1
PO Box 623
Whitby, ON L1N 6A3
Canada

905-668-7711
1-800-372-1102
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durham.ca

Don Beaton, BCom, M.P.A.
Commissioner of Corporate Services

Dear Mr. Darling:

RE: Appointments to the Central Lake Ontario Conservation Authority
Our File: C14

Please be advised that at the Regional Council meeting held on December 19, 2018, the following individuals were appointed to the Central Lake Ontario Conservation Authority:

Regional Councillor S. Lee, Town of Ajax
Local Councillor R. Hooper, Municipality of Clarington
Local Councillor J. Jones, Municipality of Clarington
Local Councillor C. Traill, Municipality of Clarington
Regional Councillor B. Chapman, City of Oshawa
Regional Councillor T-D Marimpietri, City of Oshawa
Regional Councillor John Neal, City of Oshawa
Regional Councillor B. Nicholson, City of Oshawa
Regional Councillor D. Pickles, City of Pickering
Local Councillor I. McDougall, Township of Scugog
Mayor D. Barton, Township of Uxbridge

The following Regional Councillors from the Town of Whitby be appointed to the Central Lake Ontario Conservation Authority for a rotating one year term as follows:

Term	Appointments
January 1 – December 31, 2019	Councillor Mitchell Councillor Leahy Councillor Yamada Councillor Mulcahy
January 1 – December 31, 2020	Councillor Mitchell Councillor Leahy Councillor Roy Councillor Mulcahy

Term	Appointments
January 1 – December 31, 2021	Councillor Mitchell Councillor Yamada Councillor Roy Councillor Mulcahy
January 1 – November 14, 2022	Councillor Mitchell Councillor Leahy Councillor Yamada Councillor Roy

Should you require further information in this regard, please do not hesitate to contact the Legislative Services Division at (905) 668-7711.

Ralph Walton,
Regional Clerk/Director of Legislative Services

RW/tf

c: N. Cooper, Clerk, Town of Ajax
A. Greentree, Clerk, Municipality of Clarington
A. Brouwer, Clerk, City of Oshawa
S. Cassel, Clerk, City of Pickering
J.P. Newman, Clerk, Township of Scugog
D. Leroux, Clerk, Township of Uxbridge
C. Harris, Clerk, Town of Whitby

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019

FILE: RPRG3974

APPROVED BY C.A.O. CJ

S.R.: 5614-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Chris Jones, Director, Planning & Regulation

SUBJECT: **Permits Issued for Development, Interference with Wetlands and Alteration to Shorelines and Watercourses – November 1 to December 31, 2018**

Attached are Development, Interference with Wetlands and Alterations to Shorelines and Watercourses applications, pursuant to Ontario Regulation 42/06, as approved by staff and presented for the members' information.

RECOMMENDATION:
THAT Staff Report #5614-19 be received for information.

CJ/ms
Attach

s:\reports\2019\sr5614_19.docx

Permits Issued 11/1/2018 to 12/31/2018

	Municipality	Owner / Applicant	Street / Lot / Con	Permit No.	Description
1	CLARINGTON DARLINGTON	PROPERTY OWNER	115 CEDAR CREST BEACH ROAD / LOT 12 / CON BFC	C18-254-RFH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH THE RENOVATION OF THE INTERIOR OF AN EXISTING DWELLING, MINOR ADDITION, NEW ROOF AND DECK.
2	CLARINGTON DARLINGTON	THE REGIONAL MUNICIPALITY OF DURHAM	1998 REGIONAL ROAD 57 / LOT 15 / CON 02	C18-271-GBFH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH REGRADING PORTIONS OF PARKING AREA, UPGRADES TO STORM SEWER SYSTEM.
3	CLARINGTON DARLINGTON	KOBES NURSERIES INC	6397 REGIONAL ROAD # 57 / LOT 17 / CON 06	C18-272-G	DEVELOPMENT ACTIVITIES ASSOCIATED WITH IMPORTATION OF TOPSOIL TO REPLENISH EXISTING TREE NURSERY, MAXIMUM DEPTH OF TOPSOIL NOT TO EXCEED 1FT OR .3 OF A METRE .
4	CLARINGTON DARLINGTON	2605794 ONTARIO INC.	3179 TOOLEY ROAD / LOT 33 / CON 03	C18-274-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF A SINGLE FAMILY DWELLING .
5	CLARINGTON DARLINGTON	PROPERTY OWNER	WILMOT CREEK ON THE LAKE / LOT 33 / CON 01	C18-281-GBS	DEVELOPMENT ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF TWO STONE BERMS (155 M LONG AND 240 M LONG) TO BE PLACED ON THE BEACH AT THE TOE OF THE EXISTING BLUFF .
6	CLARINGTON DARLINGTON	PROPERTY OWNER	90 MILLSTREAM LANE / LOT 18 / CON 05	C18-282-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF A NEW HOUSE AND SEPTIC SYSTEM AND ASSOCIATED LOT GRADING.
7	CLARINGTON DARLINGTON	1728589 ONTARIO INC./CANDEVCON LIMITED	AVONDALE DRIVE AND TRULLS ROAD / LOT 30 / CON 02	C18-283-W	TREE TOPPING ON ENTIRETY OF SITE IN ADVANCE OF FUTURE DEVELOPMENT WORKS. NO GRUBBING, GRADING OR OTHER DISTURBANCE OF SOILS.
8	CLARINGTON DARLINGTON	PROPERTY OWNER	4620 TRULLS ROAD / LOT 31 / CON 04	C18-287-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION OF A GARAGE ONTO AN EXISTING DWELLING .
9	OSHAWA	2285136 ONTARIO LIMITED /MMM GROUP LIMITED	WINCHESTER ROAD/SIMCOE STREET NORTH / LOT 11 / CON 05	O17-124-GFHAW AMENDED	DEVELOPMENT ACTIVITIES ASSOCIATED WITH SITE PREPERATION, FILLING, EROSION AND SEDIMENT CONTROL FOR A COMMERCIAL DEVELOPMENT.
10	OSHAWA	2285136 ONTARIO LIMITED/MMM GROUP LIMITED	WINCHESTER ROAD/SIMCOE STREET NORTH / LOT 11 / CON 05	O18-251-GA	DEVELOPMENT ACTIVITIES ASSOCIATED WITH REMOVAL OF CONTAMINATED SOIL, ROUGH GRADING AND STABLIZING THE SITE .
11	OSHAWA	ROGERS COMMUNICATION CANADA INC.	393-461 GRANDVIEW STREET S / LOT 02 / CON 01	O18-267-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH DIRECTIONAL BORE, HYDRO VAC EXCAVATION AND INSTALL CONDUIT .
12	OSHAWA	UOIT	SIMCOE STREET NORTH / LOT 13 / CON 05	O18-279-GH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH TEMPORARY STOCKPILE OF CLEAN FILL MATERIALS, TO BE REMOVED ONCE BACKFILL OF NEW CONSTRUCTION IS COMPLETE .
13	OSHAWA	PROPERTY OWNER	901 REGENT DRIVE / LOT 04 / CON 02	O18-289-R	DEVELOPMENT ACTIVITIES ASSOCIATED WITH THE DEMOLISHING AND REMOVAL OF A GARAGE.
14	OSHAWA	TRANSCANADA PIPELINES LTD.	LOT 09 / CON 05	O18-291-GBF	DEVELOPMENT ACTIVITIES ASSOCIATED WITH BOREHOLE INVESTIGATIONS TO SUPPORT PLANNING FOR A PIPELINE REPLACEMENT PROJECT TO TAKE PLACE IN 2019. PART OF TRANSCANADA'S ONGOING PIPELINE INTEGRITY PROGRAM .
15	WHITBY	ENBRIDGE GAS DISTRIBUTION INC.	TWIN STREAMS ROAD/ LOT 33 / CON 03	W18-266-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH GAS PIPELINE INSTALLATION.
16	WHITBY	ROGERS COMMUNICATION CANADA INC.	LOT 23 / CON 03	W18-268-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH DIRECTIONAL BORE AND INSTALL CONDUIT .
17	WHITBY	THICKSON'S WOODS LAND TRUST	CRYSTAL BEACH ROAD / LOT 20 / CON BFC	W18-270-FH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH PLACEMENT OF LARGE BOULDERS ON THE SHORELINE OF LAKE ONTARIO FOR EROSION ABATEMENT.
18	WHITBY	PEGGY CHIU ARCHITECT INC.	2 MONTEREY COURT / LOT 24 / CON 08	W18-277-GBH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH CONSTRUCTION OF A NEW 1 1/2 STOREY DWELLING WITH GARAGE AND WALK-IN BASEMENT, SEPTIC SYSTEM AND GRADING .
19	WHITBY	THE CORPORATION OF THE TOWN OF WHITBY	301 WATSON STREET WEST / LOT 27 / CON BFC	W18-280-GB	DEVELOPMENT ACTIVITIES ASSOCIATED WITH THE REPAIRING OF A TIMBER RETAINING WALL AT MARINA BOAT RAMP .
20	WHITBY	ENBRIDGE GAS DISTRIBUTION INC.	MYRTLE ROAD WEST / LOT 21 / CON 09	W18-288-GH	DEVELOPMENT ACTIVITIES ASSOCIATED WITH PROPOSED GAS MAIN BEING INSTALLED.

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019
FILE: PGDP25
S.R.: 5616-19

APPROVED BY C.A.O.

MEMO TO: Chair and Members, CLOCA Board of Directors

FROM: Chris Jones, Director, Planning and Regulation

SUBJECT: **CLOCA Comments on Proposed Amendments to the Planning Act (Bill 66)**

The purpose of this report is to introduce recently proposed amendments to the *Planning Act* contained in Bill 66 and to seek Board of Directors' endorsement of draft comments on the Bill in relation to CLOCA's policy and regulatory interests and related recommendations.

Background

On December 6, 2018 the Minister of Economic Development, Job Creation and Trade introduced Bill 66, *Restoring Ontario's Competiveness Act, 2018*. The Bill contains amendments to various Acts administered by 12 ministries. This report focuses exclusively on the amendments to the *Planning Act* proposed in Schedule 10 of the Bill (reproduced as Attachment No. 1 to this Report).

A new Section 34.1 of the *Planning Act* is proposed, which would give new by-law making powers to lower-tier municipalities. Subject to approval by the Minister of Municipal Affairs and Housing, municipalities would be able to pass an "Open-for-business planning by-law." These new Section 34.1 by-laws would override existing land use policy and controls contained in the *Planning Act* and other legislation including Provincial Policy Statements, Provincial Plans, Drinking Water Source Protection Plans, Official Plans, Zoning by-laws and Site Plan Control. Section 34.1 by-laws would be similar to a site-specific zoning by-law in that they would regulate land use and the erection, location or use of buildings or structures for a specific development site and could impose certain conditions to approval. Passage of such a by-law may be subject to satisfaction of criteria that may be prescribed by the Minister of Municipal Affairs and Housing.

While the proposed amendment to the *Planning Act* is silent on the specific purpose and types of development that could be approved under the Section 34.1 process, it is understood from government news releases and consultation materials that the intent of Section 34.1 would be to provide a development approval mechanism to quickly respond and expedite emerging 'major' business investments. Subject to specific provincial criteria and approval, municipalities would have the option to use the process to attract major employers seeking development sites.

Regulations setting out the specific criteria to be considered by the Minister have not been published, but it is understood from the consultation materials that the criteria could include confirmation that the benefitting proposal is for a "new major employment use" and evidence that a minimum job creation threshold would be met. It is suggested that the job creation thresholds could be 50 jobs for municipalities with a population of less than 250,000 and 100 jobs for municipalities with a population of more than 250,000 people. Other criteria would include the need to identify the specific land uses, buildings or structures that would be subject to approval and details regarding how notice is to be given by the municipality to the Minister.

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Environmental Bill of Rights Consultation
The proposed Bill 66 amendments to the *Planning Act* and concepts for an implementing regulation have been posted to the Environmental Registry for a comment period ending on January 20th. Conservation Ontario is co-ordinating a response on behalf of all 36 conservation authorities in addition to the individual submissions made by individual conservation authorities.

Analysis: Proposed Amendments are Too Broad, Undermine Land Use Planning, Alternatives Recommended
Following a review of the proposed amendment and in considering the land use context in the CLOCA Watershed and CLOCA's land use planning and regulatory interests, staff have identified the following issues with the proposed Section 34.1 by-law process:

1. Scope of Amendment is Too Broad
   As currently drafted, a Section 34.1 by-law could be enacted anywhere in a municipality without regard for any existing land uses, environmental hazards, features, constraints or established land use planning. The only scoping or conditions would be established by the Minister of Municipal Affairs and Housing. However, there is no requirement that the minister provide any scoping or conditions. Neither the minister nor the municipality is required to conduct any consultation to determine what might be appropriate scoping or limitations to a Section 34.1 by-law prior to enactment. The stated intent of a Section 34.1 by-law is for 'major' employment investments, which it is understood would be any investment that could provide 50 or more jobs in the Durham Region context, however there are no provisions in the draft legislation that Section 34.1 by-laws would be limited to employment related development in the future. If Schedule 10 of Bill 66 is to be enacted, amendments are required to address the purpose and scope of Section 34.1 by-laws directly in the *Planning Act*.

   Further, Subsection 34.1 (6) of the proposed amendment would exempt a Section 34.1 by-law from every fundamental land use planning requirement that would otherwise be applicable. The following table summarizes the critical land use planning requirements related to CLOCA's regulatory and policy interests that are proposed for exemption under Subsection 34.1 (6), as currently drafted:

Exempted Planning Requirement	Purpose	Relevance to CLOCA
Subsection 3 (5) of the *Planning Act*	Requires land use and development decisions to be consistent with the Provincial Policy Statement and to conform to provincial land use plans.	This section is the keystone to Ontario's policy-led land use planning system and ensures that land use decisions are made in the public interest; specifically this section requires that public health and safety is protected, that resources are managed and used wisely and that communities are built in a manner that is economically, socially and environmentally strong and healthy.
Section 24 of the *Planning Act*	Requires public works (i.e. roads and servicing infrastructure) and the enactment of by-laws to be undertaken in accordance with a municipal Official Plan.	This section gives legal effect to municipal Official Plans and ensures that infrastructure priorities and decisions are made in conformity with land use planning. Official Plans have been created in the CLOCA watershed to focus growth into Settlement Areas, which furthers the protection of our environmental and agricultural land base and watersheds.

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Exempted Planning Requirement	Purpose	Relevance to CLOCA
Subsections 34 (10.0.0.1) to (34) of the *Planning Act*	Provides for due process including pre-application consultation, public meetings, open houses, notice, appeal rights, conditions, written and oral submissions, and dispute resolution in relation to the enactment and amendment of zoning by-laws.	As a public commenting body with responsibility for the provincial interest in relation to protecting people and property from flooding and erosion natural hazards, CLOCA relies upon these provisions of the *Planning Act* to provide the necessary policy and technical input into the passage of zoning by-laws and to have appeal rights, as necessary.
Section 36 of the *Planning Act*	Provides for the use of holding provisions in zoning by-laws to ensure that certain matters are addressed prior to the lifting of a holding symbol in a zoning by-law.	Holding by-laws are often used to ensure that technical matters related to CLOCA's roles such as stormwater management and natural hazards are addressed prior to the zoning coming into force.
Section 39 of the *Clean Water Act, 2006*	Gives legal effect to Drinking Water Source Protection plans. Requires that planning and development decisions conform with significant drinking water threat policies and designated Great Lakes policies. Requires that planning and development decisions have regard to other relevant policies in a Drinking Water Source Protection Plan.	CLOCA is a drinking water Source Protection Authority under this Act. The Credit Valley, Toronto and Region and Central Lake Ontario (CTC) Source Protection Plan has Significant Drinking Water Threat policies that apply to land use decisions. For example the CTC Source Protection Plan has polices related to Hazardous Waste Management, Septic Systems, Stormwater Management Facilities, Sanitary Sewers, Storage of Sewage, Industrial Effluent Discharges, Application of Road Salt, Water Takings and Groundwater Infiltration Protection that involve land use and development decisions.
Section 20 of the *Great Lakes Protection Act, 2015*	Ensures that planning and development decisions conform with Great Lakes protection initiatives.	There are no active Great Lakes initiatives in the CLOCA watershed under this Act. However it is desirable that future shoreline management projects be protected, for example.
Section 7 of the *Greenbelt Act, 2005*	Gives legal effect to the Greenbelt Plan. Requires planning and development decisions made under the *Planning Act* to conform to the Greenbelt Plan.	The Greenbelt Plan establishes a protected countryside across approximately 53% of the CLOCA watershed area – primarily in headwater regions of the watersheds. All major environmentally sensitive areas in the protected countryside have been included in a regional scale Greenbelt Natural Heritage System. The agricultural land base is protected and all conflicting land uses, including major employment uses, are directed to Rural Settlements or to Urban Settlement Areas. The plan provides a fixed and permanent urban boundary.

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Exempted Planning Requirement	Purpose	Relevance to CLOCA
Section 7 of the *Oak Ridges Moraine Conservation Act, 2001*	Gives legal effect to the Oak Ridges Moraine Conservation Plan. Requires planning and development decisions made under the *Planning Act* to conform to the Oak Ridges Moraine Conservation Plan.	The Oak Ridges Moraine Conservation Plan provides permanent land use designations in order to protect the ecological and hydrological integrity of the Oak Ridges Moraine. This plan protects the headwaters of the major watersheds within CLOCA's jurisdiction. Development is directed to Settlement Areas in order to protect agricultural lands and natural heritage systems.
Subsection 14 (1) of the *Places to Grow Act, 2005*	Gives legal effect to the Growth Plan. Requires planning and development decisions made under the *Planning Act* to conform to the Growth Plan for the Greater Golden Horseshoe.	This plan provides for where development should take place in rural and urban Settlement Areas that are property serviced. The Growth Plan also provides for economic development and competitiveness in employment planning including an employment target for Durham Region of 430,000 jobs by 2041. The Growth Plan further guides how the land base and supporting infrastructure for these jobs should be identified and protected while protecting watersheds and the broader environment.
Any prescribed provision.	Subsection 34.1 (6) gives the Minister of Municipal Affairs and Housing the broad regulation making ability to make a regulation identifying any other provision in provincial law and exempt Section 34.1 by-laws from it.	If enacted, the Minister could exercise this power at any time, further enhancing the extremely broad scope of the exemptions for Section 34.1 by-laws to any fundamental land use planning requirements that exist in provincial law, which could also apply to Section 28 permits under the *Conservation Authorities Act*.

It is understood that the minister could establish conditions to the approval of a Section 34.1 by-law that might re-establish some of the policy direction contained in the fundamental planning requirements set out in the table above. However, that would be undertaken at the complete discretion of the minister in the absence of any legislated obligation on the minister to consult the public or agencies with technical and site-specific knowledge such as conservation authorities.

Section 34.1, as currently drafted, automatically exempts critical public health and safety provisions related to drinking water source protection, land use policies that direct new development away from flooding and erosion natural hazards, including areas that would be unsafe for people in the event of a natural disaster and basic environmental protections for natural heritage including wetlands, woodlands, valleylands and watercourses. The section is too broad, provides the minister with too much unchecked discretion, and should be re-drafted to require the minister to apply all relevant health and safety and environmental protection policies, as a condition to any approval of a Section 34.1 by-law. Finally, if the proposed section is to be enacted, its use should be limited to lands that are currently within an urban or rural Settlement Area in order to maintain the integrity of land use planning in the Province of Ontario.

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2. The Amendment Undermines Land Use Planning

Land use planning involves balancing often competing social, economic and environmental needs and desires in order to provide for sustainable prosperity. Our society and economy cannot reach their potential in the face of a degraded and declining environment. Locally, Durham Region has made long-term strategic investments in sound land use planning dating to the adoption of the first Regional Official Plan in 1976 and even prior. We have a sophisticated policy-led land use planning system, worthy of an advanced nation, which has evolved over time to recognize the need to balance social, economic and environmental imperatives.

At the broadest level in the CLOCA watershed, the Greenbelt Plan protects nearly 53% of the watershed land base as a protected countryside that supports the agricultural land base, the agricultural economy, rural settlements and the supporting natural heritage and water resource systems necessary to support and secure our economic future in a sustaining environment. The Growth Plan calls for ambitious population and employment growth to be focused and accommodated on the rest of the watershed landscape up to 2042.

The Regional Official Plan defines our urban structure with a firm Urban Boundary to focus growth in Regional Centres, Corridors, Living Areas and Employment Areas and allows the rational planning of supporting infrastructure. Local municipal official plans provide all of the detailed designations and policy necessary to provide healthy liveable communities. The proposed amendment undermines all of this prior work by treating existing land use planning as an obstacle that may be overridden in pursuit of certain prioritized investments.

As currently set out, it is not clear that once Section 34.1 by-laws are enacted, that employment gains will be guaranteed. The proposed by-laws are not structured to require an employment agreement as an explicit condition of approval. Further, the proposed concept may serve as an incentive for multiple competing municipalities in Ontario to offer up lands that are not intended for employment uses leading to a competitive incentive to erode land use planning across multiple jurisdictions. Both municipalities and investors require the certainty provided by a stable land use system that is informed by sound environmental planning principles, where, at a minimum, employment lands will not be encumbered by unsafe natural hazards, environmental features or within vulnerable areas associated with our drinking water sources.

Investors and participants in the land development process, such as CLOCA, also require due process in order to ensure that critical issues, such as the presence of flood plains, are raised during the approval sequence. The proposed Section 34.1 does not provide for pre-application consultation, notice, review and appeal processes, which deprives all parties other than the owner, municipality and Minister with any due process.

3. Support for Economic Development Alternatives

CLOCA Planning and Regulation staff currently take an active role in supporting and prioritizing employment related land use planning applications. In 2018, CLOCA staff held a focused working meeting with Town of Whitby Economic Development staff to review all of the vacant employment lands in the town that have CLOCA regulatory and policy interests in order to raise awareness of any potential issues in a proactive manner and to build contacts with economic development staff. Also in 2018,

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CLOCA Planning and Regulation staff participated in the Clarington Board of Trade and Office of Economic Development's *Invest Clarington* event including a tour of employment lands in the municipality and strengthened our contacts with economic development staff. CLOCA is a member of the Oshawa Chamber of Commerce and participates in Chamber Events. Every year, CLOCA staff facilitate free pre-application consultation meetings with various potential investors or developers of employment lands with a view to explaining the development and permit process in a manner that seeks solutions and facilitates understanding.

As an alternative to the Section 34.1 by-law, several other steps could be undertaken that would maintain the integrity of the land use planning system, protect public health and safety and natural environment, while promoting development and redevelopment of employment lands. Options include greater provincial support for implementing the employment related policies of the Growth Plan, provincial infrastructure finding for servicing of employment lands, proactive release of Ministry of Transportation owned lands within Settlement Areas along the 412/407/418 highway corridors, provincial infrastructure investments such as the GO Train Lakeshore East Line extension to Bowmanville and support of municipal employment zoning by-law updates.

Finally, the *Planning Act* already contains a focused instrument, which is used in rare circumstances to secure large-scale employment investments: the Minister's Zoning Order. This power is enabled by Clause 47 (1) (a) of the *Planning Act* and has been used to site a Canadian Tire Distribution Centre in Caledon Ontario and the Toyota Automobile Plant in Woodstock Ontario, for example.

Recommended Amendments to Address Identified Issues

Attachment No. 2 to this report contains staff's recommended amendments to the Bill. This report along with the proposed amendments are recommended for endorsement as CLOCA's submission to Conservation Ontario and directly to the province. The staff recommended amendments would continue to enable the concept of an Open-for-business planning by-law, as proposed, but would add critical provisions:

- to ensure that Section 34.1 by-laws deliver the promised employment gains;
- to maintain the integrity of the planning system and protect agricultural lands and environmental areas by directing uses to settlement areas;
- to confirm that the by-law power is only to be used for employment uses;
- to provide for consultation by the province with public bodies that have relevant technical expertise, such as conservation authorities prior to granting approval; and,
- to ensure that the province is responsible for ensuring that its approval criteria uphold environmental protections related to public health and safety, the environment and drinking water sources.

The proposed changes also seek to ensure that the implementing regulations provide for a streamlined consultation due process.

<u>RECOMMENDATION</u>

THAT the CLOCA Board of Directors calls for Schedule 10 of Bill 66 to be amended to protect public health and safety and the integrity of the land use planning system;

THAT the Commentary in Staff Report 5616-19 and the proposed amendments in Attachment No. 2 be endorsed and submitted to the Province of Ontario and Conservation Ontario as CLOCA's comments regarding Schedule 10 of Bill 66; and,

THAT Staff Report 5616-19 be circulated to Watershed Municipalities and adjacent Conservation Authorities for their information.

CJ/ms
Attach. No. 1: Text of Schedule 10, Bill 66
Attach. No. 2: Text of Proposed Amendments to Schedule 10, Bill 66 for the Province of Ontario Environmental Bill of Rights Conservation Ontario

Legislative Assembly of Ontario
Assemblée législative de l'Ontario

1ST SESSION, 42ND LEGISLATURE, ONTARIO
67 ELIZABETH II, 2018

Bill 66

An Act to restore Ontario's competitiveness by amending or repealing certain Acts

The Hon. T. Smith
Minister of Economic Development, Job Creation and Trade

Government Bill

1st Reading	December 6, 2018
2nd Reading	
3rd Reading	
Royal Assent	

SCHEDULE 10
MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING

PLANNING ACT

1 The *Planning Act* is amended by adding the following section:

Open-for-business planning by-law

34.1 (1) A local municipality may pass a by-law to which this section applies (hereinafter referred to as an open-for-business planning by-law) that,

(a) involves the exercise of the municipality's powers under section 34; and

(b) may impose one or more of the conditions specified in subsection (8) on the use of land or the erection, location or use of buildings or structures.

Conditions

(2) A local municipality shall not pass an open-for-business planning by-law unless the following conditions are satisfied:

1. The municipality has received approval in writing by the Minister to pass an open-for-business planning by-law.
2. The prescribed criteria, if any, have been met.

Request by municipality

(3) The approval by the Minister referred to in paragraph 1 of subsection (2) must have been requested by the municipality by resolution, and the request must have been accompanied by the prescribed information.

Approval subject to conditions

(4) The approval by the Minister referred to in paragraph 1 of subsection (2) is subject to such conditions as the Minister may provide.

Purposes of open-for-business planning by-law

(5) An open-for-business planning by-law shall not authorize the use of land, buildings or structures except for a prescribed purpose.

Non-application of listed provisions

(6) The following provisions do not apply to an open-for-business planning by-law:

1. Subsection 3 (5).
2. Section 24.
3. Subsections 34 (10.0.0.1) to (34).
4. Section 36.
5. Section 37.
6. Section 39 of the *Clean Water Act, 2006*.
7. Section 20 of the *Great Lakes Protection Act, 2015*.
8. Section 7 of the *Greenbelt Act, 2005*.
9. Section 6 of the *Lake Simcoe Protection Act, 2008*.
10. Subsection 31.1 (4) of the *Metrolinx Act, 2006*.
11. Section 7 of the *Oak Ridges Moraine Conservation Act, 2001*.
12. Section 13 of the *Ontario Planning and Development Act, 1994*.
13. Subsection 14 (1) of the *Places to Grow Act, 2005*.
14. Section 12 of the *Resource Recovery and Circular Economy Act, 2016*.
15. Any prescribed provision.

Application of site plan control

(7) Section 41 of this Act and section 114 of the *City of Toronto Act, 2006* do not apply in respect of land that is subject to an open-for-business planning by-law. However, those sections do apply if the by-law has been amended, other than in circumstances where the amendment relates only to a condition imposed in accordance with subsection (8).

Conditions that may be imposed

(8) One or more of the following conditions may be imposed in accordance with clause (1) (b):

1. A requirement that any use of land or the erection, location or use of buildings or structures be undertaken in accordance with,
    i. plans showing the location of all buildings and structures to be erected and showing the location of all facilities and works to be provided in conjunction therewith and of all facilities and works as may be required by a condition imposed under paragraph 2, including facilities designed to have regard for accessibility for persons with disabilities, and
    ii. drawings showing plan, elevation and cross-section views for any building to be erected, which drawings are sufficient to display,
        A. the massing and conceptual design of the proposed building,
        B. the relationship of the proposed building to adjacent buildings, streets and exterior areas to which members of the public have access,
        C. the provision of interior walkways, stairs, elevators and escalators to which members of the public have access from streets, open spaces and interior walkways in adjacent buildings, and
        D. facilities designed to have regard for accessibility for persons with disabilities.
2. Any condition that can be imposed by a municipality under subsection 41 (7).
3. Any condition that can be imposed by an upper-tier municipality under subsection 41 (8).
4. Any requirement that is reasonable for and related to the appropriate use of the land and that the municipality considers necessary for the protection of public health and safety.
5. A requirement that the owner of the land to which the by-law applies enter into one or more agreements with the municipality respecting one or more conditions imposed under this subsection.

Same

(9) The following matters are not subject to a condition imposed under paragraph 1 of subsection (8) with respect to a building:

1. The colour, texture and type of materials, window detail, construction details, architectural detail and interior design.
2. The layout of interior areas, excluding interior walkways, stairs, elevators and escalators referred to in sub-subparagraph 1 ii C of subsection (8).
3. The manner of construction and construction standards.

Same

(10) If an agreement is entered into in accordance with a requirement imposed under paragraph 5 of subsection (8),

(a) the agreement may be registered against the land to which it applies; and

(b) the municipality may enforce the agreement against the owner and, subject to the *Registry Act* and the *Land Titles Act*, any and all subsequent owners of the land.

Notice

(11) No notice or hearing is required prior to the passing of an open-for-business planning by-law, but the municipality shall give notice of the by-law,

(a) within three days of the passing thereof to the Minister in the prescribed manner; and

(b) within 30 days of the passing thereof to any persons or public bodies the municipality considers proper in such manner as the municipality considers proper.

Coming into force of by-law

(12) An open-for-business planning by-law comes into force on,

(a) the 20th day after it is passed, even if that day is a holiday; or

(b) such later day as may be specified by the Minister, if the Minister notifies the municipality of that day in writing before the day on which the by-law would otherwise come into force.

Minister may modify, revoke

(13) The Minister may by order modify or revoke an open-for-business planning by-law at any time before it comes into force.

Non-application of *Legislation Act, 2006*, Part III to order

(14) Part III of the *Legislation Act, 2006* does not apply to an order made under subsection (13).

Order provided to municipality

(15) If the Minister makes an order under subsection (13), the Minister shall provide a copy of the order to the municipality.

Deeming rule for modified by-law

(16) If the Minister makes an order modifying an open-for-business planning by-law under subsection (13), the by-law is deemed to have been passed by the municipality with the modifications specified in the order.

Deeming rule for revoked by-law

(17) If the Minister makes an order revoking an open-for-business planning by-law under subsection (13), the by-law is deemed never to have been passed by the municipality.

Amendment and revocation

(18) An open-for-business planning by-law may be amended or revoked by a by-law passed by the local municipality in accordance with section 34. However, any provision of the by-law that imposes a condition in accordance with subsection (8) may be amended or revoked by a by-law passed by the local municipality if the municipality has given notice, in such manner as the municipality considers proper, to the owner of the land to which the open-for-business planning by-law applies.

Conflict

(19) In the event of a conflict between an open-for-business planning by-law and a by-law passed under section 34 or 38, or under a predecessor of either of those sections, the by-law that was passed later prevails to the extent of the conflict, but in all other respects the other by-law remains in effect.

2 Subsection 77 (3) of the Act is amended by striking out "34, 36" and substituting "34, 34.1, 36".

Commencement

3 This Schedule comes into force on a day to be named by proclamation of the Lieutenant Governor.

Attachment 2

Central Lake Ontario Conservation Authority Recommended Amendments to:

Bill 66

SCHEDULE 10

MINISTRY OF MUNICIPAL AFFAIRS AND HOUSING

PLANNING ACT

1 The *Planning Act* is amended by adding the following section:

Open-for-business planning by-law

34.1 (1) A local municipality may pass a by-law to which this section applies (hereinafter referred to as an open-for-business planning by-law) that,

(a) involves the exercise of the municipality's powers under section 34; ~~and~~

(b) may impose one or more of the conditions specified in subsection (8) on the use of land or the erection, location or use of buildings or structures~~.~~; and

(c) is approved subject to the execution of an Employment Agreement that permits the use of land on condition that minimum prescribed employment thresholds are achieved and maintained.

Conditions

(2) A local municipality shall not pass an open-for-business planning by-law unless the following conditions are satisfied:

1. The municipality has received approval in writing by the Minister to pass an open-for-business planning by-law.

2. The prescribed criteria~~, if any,~~ have been met.

3. The lands to which the by-law would apply are located within an area of settlement.

Request by municipality

(3) The approval by the Minister referred to in paragraph 1 of subsection (2) must have been requested by the municipality by resolution, and the request must have been accompanied by the prescribed consultation activity and any other prescribed information.

Approval subject to conditions

(4) The approval by the Minister referred to in paragraph 1 of subsection (2) is subject to such conditions as the Minister may provide following a period of consultation by the Minister with prescribed public bodies.

Purposes of open-for-business planning by-law

(5) An open-for-business planning by-law shall not authorize the use of land, buildings or structures except for ~~a prescribed purpose~~ an area of employment use as defined in subsection 1 (5) of this Act.

~~Non-application~~ Application of listed provisions

(6) The following provisions ~~do not~~ apply to an open-for-business planning by-law:

1. Subsection 3 (5).
2. Section 24.
3. ~~Subsections 34 (10.0.0.1) to (34)~~.
4. Section 36.
5. Section 37.
6. Section 39 of the *Clean Water Act, 2006*.
7. Section 20 of the *Great Lakes Protection Act, 2015*.
8. Section 7 of the *Greenbelt Act, 2005*.
9. Section 6 of the *Lake Simcoe Protection Act, 2008*.
10. Subsection 31.1 (4) of the *Metrolinx Act, 2006*.
11. Section 7 of the *Oak Ridges Moraine Conservation Act, 2001*.
12. Section 13 of the *Ontario Planning and Development Act, 1994*.
13. Subsection 14 (1) of the *Places to Grow Act, 2005*.
14. Section 12 of the *Resource Recovery and Circular Economy Act, 2016*.
15. Any prescribed provision.

Application of site plan control

(7) Section 41 of this Act and section 114 of the *City of Toronto Act, 2006* do not apply in respect of land that is subject to an open-for-business planning by-law. However, those sections do apply if the by-law has been amended, other than in circumstances where the amendment relates only to a condition imposed in accordance with subsection (8).

Conditions that may be imposed

(8) One or more of the following conditions may be imposed in accordance with clause (1) (b):

1. A requirement that any use of land or the erection, location or use of buildings or structures be undertaken in accordance with,

i. plans showing the location of all buildings and structures to be erected and showing the location of all facilities and works to be provided in conjunction therewith and of all facilities and works as may be required by a condition imposed under paragraph 2, including facilities designed to have regard for accessibility for persons with disabilities, and

ii. drawings showing plan, elevation and cross-section views for any building to be erected, which drawings are sufficient to display,

A. the massing and conceptual design of the proposed building,

B. the relationship of the proposed building to adjacent buildings, streets and exterior areas to which members of the public have access,

C. the provision of interior walkways, stairs, elevators and escalators to which members of the public have access from streets, open spaces and interior walkways in adjacent buildings, and

D. facilities designed to have regard for accessibility for persons with disabilities.

2. Any condition that can be imposed by a municipality under subsection 41 (7).

3. Any condition that can be imposed by an upper-tier municipality under subsection 41 (8).

4. Any requirement that is reasonable for and related to the appropriate use of the land and that the municipality considers necessary for the protection of public health and safety.

5. A requirement that the owner of the land to which the by-law applies enter into one or more agreements with the municipality respecting one or more conditions imposed under this subsection.

Same

(9) The following matters are not subject to a condition imposed under paragraph 1 of subsection (8) with respect to a building:

1. The colour, texture and type of materials, window detail, construction details, architectural detail and interior design.

2. The layout of interior areas, excluding interior walkways, stairs, elevators and escalators referred to in sub-subparagraph 1 ii C of subsection (8).

3. The manner of construction and construction standards.

Same

(10) If an agreement is entered into in accordance with a requirement imposed under paragraph 5 of subsection (8),

(a) the agreement may be registered against the land to which it applies; and

(b) the municipality may enforce the agreement against the owner and, subject to the *Registry Act* and the *Land Titles Act*, any and all subsequent owners of the land.

Notice

(11) ~~No~~ 30 days notice ~~or~~ and a hearing is required prior to the passing of an open-for-business planning by-law, ~~but~~ and the municipality shall give notice of the by-law,

(a) within three days of the passing thereof to the Minister in the prescribed manner; and

(b) within 30 days of the passing thereof to any persons or public bodies the municipality considers proper in such manner as the municipality considers proper.

Coming into force of by-law

(12) An open-for-business planning by-law comes into force on,

(a) the 20th day after it is passed, even if that day is a holiday; or

(b) such later day as may be specified by the Minister, if the Minister notifies the municipality of that day in writing before the day on which the by-law would otherwise come into force.

Minister may modify, revoke

(13) The Minister may by order modify or revoke an open-for-business planning by-law at any time before it comes into force.

Non-application of Legislation Act, 2006, Part III to order

(14) Part III of the *Legislation Act, 2006* does not apply to an order made under subsection (13).

Order provided to municipality

(15) If the Minister makes an order under subsection (13), the Minister shall provide a copy of the order to the municipality.

Deeming rule for modified by-law

(16) If the Minister makes an order modifying an open-for-business planning by-law under subsection (13), the by-law is deemed to have been passed by the municipality with the modifications specified in the order.

Deeming rule for revoked by-law

(17) If the Minister makes an order revoking an open-for-business planning by-law under subsection (13), the by-law is deemed never to have been passed by the municipality.

Amendment and revocation

(18) An open-for-business planning by-law may be amended or revoked by a by-law passed by the local municipality in accordance with section 34. However, any provision of the by-law that imposes a condition in accordance with subsection (8) may be amended or revoked by a by-law passed by the local municipality if the municipality has given notice, in such manner as the municipality considers proper, to the owner of the land to which the open-for-business planning by-law applies.

Conflict

(19) In the event of a conflict between an open-for-business planning by-law and a by-law passed under section 34 or 38, or under a predecessor of either of those sections, the by-law that was passed later prevails to the extent of the conflict, but in all other respects the other by-law remains in effect.

2 Subsection 77 (3) of the Act is amended by striking out "34, 36" and substituting "34, 34.1, 36".

Commencement

3 This Schedule comes into force on a day to be named by proclamation of the Lieutenant Governor.

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019

FILE: ABDA4 **APPROVED BY C.A.O.**

S.R.: 5621-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Patricia Lowe, Director – Community Engagement

SUBJECT: 2018 Year in Review

In celebration of our collective accomplishments over the past year, we will present a final draft of the 2018 Year in Review to Board members at the January 15th meeting. The report showcases the programs, services and projects delivered by the Central Lake Ontario Conservation Authority.

It is requested that comments and recommendations from the Board Members on the final draft, be provided in writing to staff by 4:30 pm, Friday January 18th, 2019. At that time we will make any of the necessary changes and prepare the final document for print, distribution and posting on our website at www.cloca.com.

Printed copies are distributed at public events and sent to the councils of member municipalities, stakeholders, partners, conservation authorities within the Greater Toronto Area and Conservation Ontario.

RECOMMENDATIONS:

THAT Staff Report #5621-19 received for information; and,
THAT comments and recommendations be received from the Board of Directors by 4:30 p.m. Friday, January 18, 2019. At that time, staff will make the necessary edits and prepare for printing, distribution and posting on the website.

PL/ms

Attachment - 2018 Draft Year in Review (will be available at Jan.15/19 Board Meeting)

REPORT

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2018
FILE: ACAA12
S.R.: 5620-19

APPROVED BY C.A.O. CD

TO: Chair and Members, CLOCA Board of Directors

FROM: Heather Brooks, Director natural Heritage & Watershed Planning

SUBJECT: **Preserving and Protecting our Environment for Future Generations: A Made–in-Ontario Environment Plan – CLOCA Comments**

The "Preserving and Protecting our Environment for Future Generations: A Made-in-Ontario Environment Plan" hereafter referred to as the "Plan" was posted for review and comment on the Environmental Registry of Ontario on November 29, 2018. The comment period ends on January 28, 2019. This Staff Report focuses on the important role of CLOCA and Conservation Authorities in the implementation and achievement of the Plans' principles. The Plan identifies 4 environment priorities, all of which reflect core components of CAs mandate. CLOCA Staff have prepared detailed comments addressing specific Actions contained within the Plan. These comments are contained in Attachment 1 to this report and will be submitted to Conservation Ontario for consideration in the preparation of consolidated comments to be submitted to the Province. A brief summary of these comments are provided in this report.
Through this plan, the Province has committed to protecting air, land and water as well as build resilience to the impacts of climate change. There is a heavy reliance on the public and partners to help achieve the goals of this plan. Conservation Authorities are identified as an important partner in protecting people and property from flooding and other natural hazards, protecting water quality and quantity including protecting our Great Lakes, conserving natural resources and protecting ecologically important natural areas.

The following identifies the 3 key principles of the Plan. Within CLOCA's jurisdiction, the Authority, being the local expert, can support the Province in achieving these principles.

- **Clear Rules and Strong Enforcement:** The Province is committed to holding polluters accountable through stronger enforcement. CAs possess enforcement capabilities and with proclamation of "Part VII Enforcement and Offences" of the Conservation Authorities Act, CAs could support the Province in this regard.
- **Trust and Transparency:** The Province is committed to providing information and tools to better understand the environmental challenges we will be facing over the coming years. CLOCA's watershed monitoring programs provide up-to-date information and real-time monitoring which we share with our partners, stakeholders and residents through a range of tools and programs, including on-line and web-based options. The data CLOCA collects adds to an improved understanding of watershed conditions and positively contributes to our programs and actions which continue to protect, restore and enhance watershed resiliency. CLOCA's monitoring information directly informs many of our corporate programs including; plan and permit review, identification of natural hazards, assessment and mitigation of natural hazards, watershed planning, conservation area planning and management, climate change mitigation and adaptation, natural heritage systems planning including restoration, enhancement and protection, education, stewardship and outreach programs.
- **Resilient Communities and Local Solutions:** The Province acknowledges that unique solutions are required to address regional variability and local issues. CLOCA provides local expertise enabling the Authority to understand and predict watershed conditions and impacts brought about by the many challenges we face within our watershed including growth, rapid land use changes, climate change, invasive species, etc.

Cont'd

The Plan identifies 4 environmental priorities as follows:

- **Protecting our Air, Lakes & Rivers**: These are identified as critical systems requiring protection;
- **Addressing Climate Change**: Identify means to mitigate climate change and improve the resilience of our communities to reduce the impacts of climate change;
- **Reducing Litter and Waste in our Communities & Keeping our Land & Soil Clean**: Improve management and enforcement efforts in these areas as a means to protecting air, land and water quality;
- **Conserving Land and Greenspace**: Protect and enhance natural areas, support conservation efforts, conserve species at risk, develop adaptation strategies, promote the importance of healthy natural spaces for future generations and recognition of the importance of natural areas in reducing impacts of climate change.

CLOCA, and CAs in general are key partners in delivering on these environmental priorities and these efforts come to light in many of the comments provided in Attachment 1 to this report. As the local experts and front line workers, CLOCA is connected with our community and watershed providing scientific expertise and data which further informs many of our programs including the sharing of knowledge and information with stakeholders, municipalities, consultants, education community, volunteers and the public.

The Plan is committed to protecting our water resources acknowledging that 1/5th of the world's fresh water is located in Ontario and there are specific Actions focused on site specific issues such as Lake Simcoe, Lake of the Woods, and the St. Clair River. CLOCA recommends that more emphasis be placed on the protection, restoration and enhancement of the Great Lakes contributing watersheds. This includes recognition of the fact that Ontario's water resources are important not just for human use, but for sustaining natural systems which support critical habitat, biodiversity, and healthy watersheds.

The Province has committed to improving municipal wastewater and stormwater management and financing in an effort to improve investment and support new technologies. In addition to the recommendations to provide guidance and leadership with respect to stormwater management and maintenance, it is recommended the repair of combined stormwater/sewer connections as an action that will improve water quality, drinking water and reduce impacts of climate change on residents and property be prioritized.

The climate change section of the Plan is focused on actions which reduce greenhouse gas emissions. It is recommended that a strong recognition of the importance of our natural systems in improving community resilience to climate change be included in the climate change section of the Plan. The Province has identified the creation of the Ontario Carbon Trust and even maybe the use of Green Bonds and it is recommended that a portion of the revenue generated be committed to protecting and improving natural areas as a key component in climate change resiliency.

The Plan recognizes that protecting our natural areas is a shared responsibility. Continued endorsement of the work of CAs in identifying, protecting and enhancing natural areas is fundamental in securing ecosystem resilience within the Province. The role of CAs in protecting public and property from natural hazards is recognized. Provincial support of CA efforts to continue to undertake this work is important. The significant contribution that CLOCA provides to our municipal partners in protecting the public from natural hazards and in protecting natural areas as a key component of a healthy watershed and community supports a strong and prudent planning process which precludes land use conflicts.

Strong enforcement and tougher penalties are a significant component of this Plan, requiring the dedication of resources to effectively implement. CLOCA recommends that this strong approach is balanced with incentives.

Cont'd

Conclusion

The Province is applauded for creating an environmental plan which recognizes the inherent connections between environmental well-being and climate change. This is the first step in ensuring that climate change is a fundamental consideration when protecting, restoring, monitoring and enhancing ecological features and functions and in securing clean air, water and land for future generations.

CLOCA's corporate vision is healthy watersheds for today and tomorrow. CLOCA strives to achieve this vision through engagement, science and conservation. As the local expert and leader with respect to watershed science within CLOCA's jurisdiction, CLOCA is uniquely positioned to support implementation of the Province's Made-in-Ontario Environmental Plan.

RECOMMENDATION:

THAT Staff Report #5620-10 be received;

THAT CLOCA's detailed comments on the Plan's Actions be endorsed and sent to Conservation Ontario for consideration in the submission of consolidated comments to the Province; and,

THAT Staff Report #5620-19 be distributed to Durham Region and the local municipalities.

HB/ms
Attach. - CLOCA Comments

Preserving and Protecting our Environment for Future Generations

A Made-in-Ontario Environment Plan

CLOCA Comments – January 2019

Only those Actions which CLOCA felt necessary to comment upon are included in this Table.

Section	Comments
1. Our Province Today	
Doing our Part	CA's are an important partner in supporting sustainable and healthy watersheds and as the local experts, front line workers and first responders, we are connected with our communities and watersheds. CAs provide significant scientific expertise which is shared with the province, agencies, municipalities, residents, education community and volunteers. In these and other roles, CAs can significantly increase the Province's capacity to implement the Plan.
Guiding Principles	The Plan acknowledges that we ALL benefit from environmental well-being and that as such, we all have a role to play in maintaining and improving our environment. CAs are an important partner in implementing this Plan can support fulfilling the guiding principles identified in the Plan as follows: **Clear Rules and Strong Enforcement:** CAs possess enforcement capabilities and with proclamation of "Part VII Enforcement and Offences" of the Conservation Authorities Act, CAs could support the Province in this regard. **Trust and Transparency:** CA's watershed monitoring programs provide up-to-date information which we share with our partners, stakeholders and residents through a range of tools and programs, including on-line and web-based options. The data CAs collect adds to an improved understanding of watershed conditions and positively contributes to our programs and actions which continue to protect, restore and enhance watershed resiliency. CAs monitoring information directly informs many of our corporate programs including; plan and permit review, identification of natural hazards, assessment and mitigation of natural hazards, watershed planning, conservation area planning and management, climate change mitigation and adaptation, natural heritage systems planning including restoration, enhancement and protection, education, stewardship and outreach programs. **Resilient Communities and Local Solutions:** CAs provides local expertise enabling the Authority to understand and predict watershed conditions and impacts brought about by the many challenges we face within our watershed including growth, rapid land use changes, climate change, invasive species, etc.
2. Protecting our Air, Lakes and Rivers	
Clean Air	
Clean Water	
Action: Continue work to restore and protect our Great Lakes	This Action is focused on the lakes, the immediate coastline and invasive species. The quality of our Great Lakes are influenced by the contributing watersheds and the quality/quantity of water that flows from these watersheds directly into these Lakes. Conservation Authorities are the "keepers" of our watersheds, and we are intimately

Section	Comments
	aware of the condition of these watersheds, the condition of which is reflected in the quality/quantity of water courses. Upstream land use changes, land management practices, growth, urban development, and climate change all place stressors on the health of the watershed and CA's monitor and respond to these conditions in an effort to improve the condition of water flowing into the Great Lakes. This Action would benefit with recognition of this fact and offer programs, including stewardship funding which support the protection, restoration and enhancement of the Great Lake's contributing watersheds.
Action: Continue to protect and identify vulnerable waterways and inland waters	It is noted that Ontario has 1/5th of the world's fresh water. It is incumbent upon all of us to protect this valuable resource. While a specific action item has been identified for Lake Simcoe, this action could be, and should be, expanded to be implemented throughout Ontario in order to ensure that we are taking measures to protect our globally valuable freshwater resource. Environmental impacts to water quality are caused by many different nutrients, pollutants, contaminants and sediments in addition to other stressors such as land use and climate change. Salt is just one element which impacts water quality. While a focus on reducing the impact of salt on our watercourses is a good start, this singular focus may result in a failure to notice changes in other contaminants which have detrimental impacts on water quality. It is better to be inclusive when protecting our water quality.
Action: Ensure sustainable water use and water security for future generations	Ensuring Ontario's drinking water systems are protected for future generations is vital to the continued success of Ontario, warranting the need for continued long term provincial funding for the Source Water Protection Program, including funding to support the successful implementation, monitoring, review and amendment of source water protection plans. It is recommended that the provisions of the Clean Water Act that ensure source protection policy prevails in case of a conflict between land use planning and source protection should not be removed in Schedule 10 of Bill 66. The steps identified in this Action are focused on the anthropogenic uses of water and not on the environmental importance of a sustainable water system. An important tool to ensuring water security for future generations is to protect our natural features, functions and areas, including groundwater resources. This is referenced in "Conserving Land and Greenspace", but a more holistic approach to securing sustainable water resources in "Protecting our Air, Lakes and Rivers" is recommended.
Action: Help people conserve water and save money	CAs are actively promoting water conservation through our various programs and can support the Province in implementing this Action.
Action: Improve municipal wastewater and stormwater management and reporting	We are encouraged by the identification of the need to update policies and financing to improve investment in SWM management, including supporting new and innovative technologies and practices. With provincial leadership and guidance, significant accomplishments can be achieved throughout Ontario which will further the adoption of LIDs as a fundamental component in stormwater design and management. Updating and releasing the performance criteria for stormwater facilities will advance successes

Section	Comments
	in improving SWM management, design and operations, which will in effect improve water quality and aquatic habitat in receiving watercourses. The Province is recommended to prioritize and offer funding which supports the repair of combined stormwater/sewer connections as an action that will positively improve water quality, drinking water, and reduce impacts of climate change on residents and property.
3. Addressing Climate Change	
Building Resilience: Helping Families and Communities Prepare	
Action: Improve our understanding of how climate change will impact Ontario	Recommend that the Province undertake regional impact assessments rather than a provincial impact assessment to identify how climate change will impact residents as this would reflect regional variations and the experiences that can be anticipated within different areas of the Province. It is also recommended that in addition to the assessments proposed for the transportation, agriculture, energy and water sectors, impact and vulnerability assessments for the natural environment, including biodiversity and groundwater resources be conducted. CAs can offer valuable information and insight in this regard. With funding support from the Province, CAs can offer significant support in undertaking regional impact assessments.
Action: Help Ontarians understand the impacts of climate change	This Action focuses on disseminating information about climate change and its impacts including working with experts to identify and create adaptation solutions and support incorporation of climate change science into everyday decisions. This is an effective approach to gain broad support and adoption amongst Ontario residents. Programs which support incorporation of climate change adaptation techniques for home improvement/restoration work should be included and credit for undertaking these types of improvements considered. This can include incorporation of pervious materials when undertaking outdoor improvements to a person's property or ensuring plumbing fixtures are connected to sanitary connections rather than to stormwater systems.
Action: Update government policies and build partnerships to improve local climate resilience	A number of actions are identified in this section including modernizing the building code, review of disaster recovery assistance programs, examine tax policy options to support adoption of climate adaptation measures to protect property, update planning policies to support climate resilience, support back up energy supplies for essential services such as hospitals, improve winter roads, support security of agriculture and food sectors. It is recommended that there be a program and funding to support the repair/retrofit of existing SWM ponds, and on-going management and maintenance of SWM facilities (including LIDS). Significant reductions in natural hazard risks can be achieved through climate change adaptation measures, particularly those risks associated with flooding. Funding to support this work will be fiscally prudent and would minimize serious treats to public safety, communities and vital infrastructure. While the Conserving Land and Greenspace section acknowledges the importance of natural areas with respect to climate change adaptation, it is not identified within the Climate Change section of the Plan. It is recommended that a strong recognition of the

Section	Comments
	importance of our natural systems in improving community resilience to climate change be included in the climate change section of the Plan. The addition of an Action which recognizes the importance of improving partnerships and developing policy supportive of protecting, restoring, and enhancing natural areas as an effective approach to lessening the impacts of climate change is recommended. Healthy natural areas, including wetlands, watercourses and riparian areas possess greater capacity to adapt to climate change impacts. CAs currently have the legislative ability to regulate the natural hazards function of wetlands but not the authority to deal with activities that interfere with the biological health of wetlands. Providing CAs with clear authority to regulate all activities that interfere with biological health as well as natural hazards function in wetlands will significantly improve the capacity of wetlands to reduce impacts associated with climate change. It is recommended that the Province proclaim Section 40 (2) of the Conservation Authorities Act to establish standards and requirements for Conservation Authorities to mitigate the impacts of climate change and provide for adaptation to a changing climate, including through increasing resiliency. CLOCA is currently working with Durham Region and local municipalities in the integration of climate change within municipal and CA policies and plans utilizing the report prepared by Ontario Climate Consortium Secretariat in June 2018 titled "Integrating Climate Change Considerations into Plans and Policies in Durham Region". This work will integrate climate change into local policies and plans.
Continuing to do our Share: Achieving the Paris Agreement Target	
Make Polluters Accountable	
Action: Implement emission performance standards for large emitters	Reference is made in this Action to the possible adoption of offset credits and/or payment in lieu of compliance. It is recommended that opportunities to protect/restore/enhance natural areas be considered as a means of implementing these offset credits or use of payments in lieu of compliance. CAs have the expertise to support these types of efforts.
Activate the Private Sector	
Action: Launch an emission reduction fund – The Ontario Carbon Trust – and a reverse auction to encourage private investment in clean technology solutions	The Ontario Carbon Trust is focused on re-investing in commercially viable opportunities. A minimum 20% of the Ontario Carbon Trust should be dedicated to improving the resilience of natural areas as an effective and long term climate change adaptation tool. CAs have the expertise to support the implementation of these types of efforts.
Action: Encourage private investments in clean technologies and green infrastructure	This Action is focused on Provincial investment in businesses and jobs supporting clean technology. In addition to this, the Province should promote and support the use of green infrastructure. The Environment Plan should recognize the important benefits of green infrastructure and the diverse nature of green infrastructure, recognizing that green infrastructure includes the natural capital, semi-natural areas, and vegetative technologies that are designed and/or managed to deliver a wide range of

Section	Comments
	infrastructure functions. It includes everything from tree-lined streets, urban parks and gardens, to green roofs, urban agriculture, bioswales, and permeable pavement. Green infrastructure performs several functions in the same spatial area. In contrast, most grey infrastructure (eg. roads, pipes) usually has only a single purpose and benefit. Green infrastructure investments have a high return over time, provide job opportunities, and can be a cost-effective complement (or alternative) to grey infrastructure. It is recommended that a greater portion of the revenue generated by Green Bonds be used to directly improve resiliency of natural areas. CAs have the expertise to support the implementation of these types of efforts.
Use Energy and Resources Wisely	
Action: Increase access to clean and affordable energy for families	The Province is focusing on increasing the amount of ethanol in gasoline as a means to reduce GHG emissions. While this will reduce GHG emissions for each individual vehicle, the amount of GHG emissions generated by planting, growing, processing corn and shipping corn/ethanol far outweighs any gains garnered by reduced GHG emissions generated by vehicles. This component of the Action needs to be reconsidered.
Doing Our Part: Government Leadership	
Action: Make climate change a cross-government priority	This Action does not consider the value of crown lands and the continued protection of these lands as an important priority in the Environmental Plan and climate change resiliency. This oversight should be addressed in the Plan.
Action: Empower effective local leadership on climate change	CLOCA, in partnership with the Region of Durham has established the Natural Environment Climate Change Collaborative. All the CAs and municipalities within Durham Region are members of the Collaborative. The Collaborative shares our collective knowledge, experiences and understanding of climate change adaptation science and practice, advancing practices, projects and programs that support resiliency of the natural environment as a mechanism to improve community and watershed resiliency to climate change.
Action: Support green infrastructure projects	This Action is solely focused on increasing the number of hybrid and electric vehicles in the Provincial fleet. The Province should support and promote the investment and use of green infrastructure broadly throughout our communities and should also consider the value of this type of infrastructure in reducing/replacing those costs associated with the use, maintenance and replacement value of traditional grey infrastructure.
4. Reducing Litter and Waste in Our Communities & Keeping Our Land and Soil Clean	
Reduce Litter and Waste	
Action: Reduce litter in our neighbourhoods and parks	CAs are significant landowners of natural areas and greenspaces and should be identified as important partners in implementation of this Action.
Clean Soil	
Action: Make it easier and safer to reuse excess soil	CAs play an important role in the management and reuse of excess soil, particularly with respect to enforcement. It is recommended that Part VII Enforcement and Offences of the Conservation Authorities Act be proclaimed to support implementation of this Action.

Section	Comments
Action: Improve management of hauled sewage	Protecting water resources is an important component in managing hauled sewage. Recommend consult with CAs in the development of management approaches and best management practices when locating receiving sites and in the spreading of hauled sewage.
5. Conserving Land and Greenspace	
Action area: Improve the resilience of natural ecosystems	CAs work effectively in conserving and restoring natural ecosystems. As natural resource managers, CAs effectively protect and enhance natural resources within their respective watersheds. Continued endorsement of the work of CAs in identifying, protecting and enhancing natural areas is fundamental in securing ecosystem resilience in Ontario. CLOCA protects over 2700 ha of ecologically significant land through land ownership. Land securement is guided by CLOCA's Land Acquisition Strategy which identifies the protection of additional lands of high natural heritage value in an effort to maintain and improve community and watershed health. CLOCA successfully partners with our municipalities and with environmental organizations such as Ducks Unlimited Canada and Nature Conservancy of Canada in securing environmentally significant lands. Provincial funding support is important in the ability to leverage additional support from other sources. Continued support of CAs and other organizations in the long term protection, management and securement of natural areas is needed. CAs have vital knowledge and experience in managing their watersheds including monitoring, assessing and managing impacts from watershed stressors like invasive species, climate change and land use. This work informs CA programs, projects and actions that support and improve the resilience of our watersheds. Recognition of the important contribution of CAs in this regard is recommended.
Action area: Support conservation and environmental planning	The role of CAs in protecting public and property from natural hazards and protecting important natural areas through strong science, good policy, stewardship and partnerships is recognized. Provincial support of continued CA efforts to undertake this work is important. CLOCA will continue to undertake programs, projects and actions that protect us from flooding and other hazards in a proactive manner and will continue to support protection of environment features and functions throughout our watersheds through our many programs including plan and permit review, watershed planning, conservation areas management/planning, and stewardship and outreach. The work of CAs help municipalities identify natural areas early in the process, supporting a strong and prudent planning process and precluding land use conflicts.
Action area: Promote parks and increase recreational opportunities	CLOCA's landholdings are enjoyed by many and provide a unique experience not matched by existing municipal parks and open space. The number of visitors to CLOCA's conservation areas continues to grow significantly and this places stresses on the ecological value of our land holdings and on the infrastructure and management of these areas. Recognition that protecting these areas is a shared responsibility is important. Tools and programs that support responsible funding of the management and continued protection of our ecologically significant lands is needed.
Action area: Sustainable Forest Management	This Action is solely focused on the relationship of climate change and forestry, specifically regarding greenhouse gas emission and carbon storage. Forests have an important role in climate change resilience that goes far beyond measuring greenhouse

Section	Comments
	gas emissions and carbon storage. This Action needs to address the value of forest management beyond carbon storage and GHG emissions. It should also address the importance of forests ecologically in protecting water resources, habitat, and biodiversity.
Action area: Protect species at risk and respond to invasive species	It is important that the Province continue to protect species at risk and to support on-going management and awareness of invasive species. The work of CAs is invaluable in the early detection of invasive species and this effort should be recognized and supported. CAs also support the species at risk program providing local expertise, liaison services, and knowledge which further advances and informs this program.
6. Next Steps	
Implementing Our Plan	
Next Steps: Continue to consult with the public and engage with Indigenous communities	This Action references key initiatives that the Province is/will be engaging stakeholders in the development of new approaches for environmental and climate leadership. The Plan does not clearly identify which Actions are these key initiatives. CAs should be considered an important stakeholder in these discussions.
Next Steps: Begin implementing priority initiatives	This Action states that there are a number of priority initiatives, implementation of which is already underway or will begin shortly. It is not clearly identified in the Plan which Actions are priority initiatives. CAs should be considered an important partner in implementation of these initiatives.
General Comments	Strong enforcement and tougher penalties are a significant component of this Plan requiring resources and support to effectively implement. It is recommended that this strong approach is balanced with positive enforcement including recognition of good-will, incentives, inducements and support. It is recommended that key stakeholders, including CAs, be consulted in the development and implementation of the Plan. The Province should be applauded for preparing a comprehensive Plan which integrates climate change and the environment. A statement that supports the comprehensive nature of the Plan would benefit the implementation, ensuring that components of the Plan are not read/implemented in isolation.

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 7, 2019

FILE: PSSG4177, PSSG212

APPROVED BY C.A.O. CD

S.R.: 5619-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Perry Sisson, Director of Engineering and Field Operations

SUBJECT: **Westside Marsh Overflow Channel Monitoring and Maintenance Plan**

Purpose

This report provides information for the Westside Marsh Overflow Channel and provides a proposed Monitoring and Maintenance Plan that has been prepared by staff of CLOCA and St Marys Cement, for consideration of the Board.

Background

The Westside Marsh is located within the Port Darlington Community of the Municipality of Clarington, and is a coastal wetland that receives drainage from the Westside Creek watershed, and outlets to Lake Ontario. The floodplain associated with the Westside Creek and Westside Marsh extends over Cedar Crest Beach Road and the adjacent homes, and is identified as a significant flood damage centre in the Watershed Flood-Risk Assessment (CLOCA 2017).

In 1998, an agreement was completed that established details for the removal of a portion of the Westside Marsh to allow for aggregate extraction by the land owner, Blue Circle Canada Inc. (commonly known as St Marys Cement). CLOCA participated in the establishment of the agreement, and identified the need to ensure flooding of the Cedar Crest Beach area would not be negatively impacted by the removal of a portion of the wetland, and the flood storage it provided. A report on Hydrotechnical Analysis of Modifications to Westside Creek and Marsh Associated with Future Operations of Blue Circle Cement (Marshall Macklin Monaghan, April 1998) was produced. This Hydrotechnical Analysis Report recognized the relationship between the inflow of water from the Westside Creek, the volume of flood storage in the Marsh, the outflow of water through the barrier beach, and the associated flood water elevation within the wetland.

The Hydrotechnical Analysis Report proposed the preservation of the natural outlet, the primary channel that releases water from the Marsh, and the creation of a secondary emergency overflow channel to maintain the existing flooding conditions of the Marsh, both of which run from the Marsh to Lake Ontario. The intention behind the secondary channel was to provide additional outlet capacity to compensate for the reduction in Marsh floodwater storage, and maintain the existing flooding conditions between Westside Creek inflow to the Marsh and the flood elevation within the wetland.

The Principles of Understanding Between Blue Circle Canada Inc. and the Municipality of Clarington on the Implementation of the Recommendations of the Waterfront Regeneration Trust Report on Westside Marsh outlines the arrangements for the diversion of the Westside Creek, the Westside Marsh (the "Marsh") and extraction limits, and the Marsh emergency overflow channel.

Cont'd

The Principles also included a Maintenance and Monitoring Agreement for the various works including the emergency overflow channel. The Agreement describes the roles of the Municipality of Clarington, the Central Lake Ontario Conservation Authority ("CLOCA") and Blue Circle Canada Inc. to "… keep the work in good and substantial state of repair…", but is not explicit in the requirements on monitoring and maintenance for the emergency overflow channel.

During the spring of 2017, Lake Ontario water levels rose to unprecedented levels. CLOCA issued flood warnings and on multiple occasions, the Municipality of Clarington responded to flooding on Cedar Crest Beach Road. Southerly winds created wave and surge conditions that brought lake water into the residential lots and caused flooded basements/crawl spaces. On other occasions, significant rainfall in the Westside Creek watershed flowed into the already flooded Westside Marsh, and water began to flood Cedar Crest Beach Road and adjacent lots. Residents expressed concern regarding the build-up of beach material at the mouth of the overflow channel outlet to Lake Ontario, as well as vegetation in the overflow channel obstructing flood flow. In response, CLOCA and St Marys Cement collaborated to provide the attached Maintenance and Monitoring Plan to provide clear direction for management of the emergency overflow channel for all parties.

Impact to CLOCA Business Function
The Maintenance and Monitoring Plan provides clear direction for both CLOCA and St Marys Cement. CLOCA has committed to an annual inspection of the overflow channel, and preparation of an inspection record. The site work, reporting, and follow-up communications may require one to two days of staff time annually. CLOCA staff have been informally inspecting the overflow channel during flood alert periods in past years, and the proposed formal monitoring and reporting is not a significant increase in staff time and cost.

St Marys Cement has also committed to providing a water level monitoring station for the Westside Marsh to provide improved flood warning abilities for this flood damage centre. The station will be located on CLOCA property and will be operated by CLOCA. St Marys Cement will reimburse CLOCA for annual operating and maintenance costs related to the station. The station will be incorporated into CLOCA's automated gauging network and data management system, and will not pose a significant increase in staff resources.

RECOMMENDATION:
THAT Staff Report #5619-19 be received for information; and,
THAT the Westside Marsh Emergency Overflow Channel Monitoring and Maintenance Plan be approved.

PS/ms
Attach. 1 - Figure 1
Attach. 2 - Westside Marsh Emergency Overflow Channel Monitoring and Maintenance Plan

Figure 1: Westside Marsh, Overflow Channel, and Floodplain

Central Lake Ontario Conservation

This map is prepared for use in conjunction with the Hydrologic & Hydraulic modeling for Westside Creek Documentation, 2013.

Floodplain modelling prepared by Engineering Department, CLOCA, using HEC-GeoRAS v10.0, 2013. Input parameters were extracted from base mapping with the use of HEC-Geo RAS.

Base mapping compiled from First Base Solutions Digital Ortho Mapping & DEM Mapping derived from aerial photography (Spring 2010), carried out by Geomatics and Information Technology, CLOCA.

WESTSIDE CREEK
FLOODPLAIN MAPPING

- Regulatory Floodplain
- Drainage
- Study Limit
- Contour
- Cross Section
- 3800 49.90 Station Number and Flood Elevation
- Railway
- Spill Location

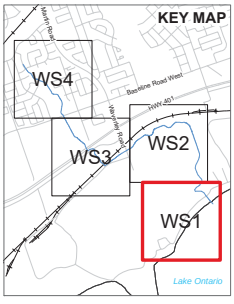
1:2,000

50 25 0 50 100 150 200 250 300

Metres

N

KEY MAP



REVISIONS AND UPDATES

NO.	DATE	REVISION

MAP NUMBER
WS1

March 2013

Westside Marsh Emergency Overflow Channel
Monitoring and Maintenance Plan
(the "Plan")

1) Background

The Principles of Understanding Between Blue Circle Canada Inc. and the Municipality of Clarington on the Implementation of the Recommendations of the Waterfront Regeneration Trust Report on Westside Marsh outlines the arrangements for the diversion of the Westside Creek, the Westside Marsh (the "Marsh") and extraction limits, and the Marsh emergency overflow channel. Schedule "A" from the Principles is provided for reference. The Principles also included a Maintenance and Monitoring Agreement for the various works including the emergency overflow channel. The Agreement describes the roles of the Municipality of Clarington, the Central Lake Ontario Conservation Authority ("CLOCA") and Blue Circle Canada Inc. to "…keep the work in good and substantial state of repair…", but is not explicit in the requirements on monitoring and maintenance for the emergency overflow channel. The following Plan is intended to provide additional detail to enable monitoring and maintenance work specific to the emergency overflow channel, and to address issues that have arisen because of the current unprecedented high Lake Ontario (the "Lake") water levels. Blue Circle Canada Inc. is now St. Marys Cement Inc. (Canada), and will be referenced as "St. Marys" in this Plan.

2) Westside Marsh and Lake Ontario

The Westside Marsh is a 45 hectare barrier beach coastal wetland. Common to Lake Ontario coastal wetlands, a barrier beach will build up during periods of Lake wave activity, isolating in-land wetlands that drain into the Lake. Although the wetland water level will generally follow the Lake levels, the barrier beach allows the wetland water levels to increase as stream flow drains into them and are then unable to flow out of the built-up beach to the Lake. At some point, natural processes will result in the build-up of water in these wetlands exerting sufficient force on the barrier beach to breach the beach, and the wetlands will drain back down to the Lake water elevation. This process is a natural phenomenon and is important to maintain the health of the wetlands, including the Westside Marsh.

3) Emergency Overflow Channel Function and Features

The licensed aggregate extraction by St. Marys has resulted in the approved removal of a significant portion of the Westside Marsh wetland. During the planning and engineering of the wetland removal, a Report on Hydrotechnical Analysis of Modifications to West Side Creek and Marsh Associated with Future Operations of Blue Circle Cement (Marshall Macklin Monaghan, April 1998) was produced, referred to in this Plan as the "Hydrotechnical Analysis Report". This Hydrotechnical Analysis Report recognized the relationship between the inflow of water from the Westside Creek, the volume of flood storage in the Marsh, the outflow of water through the barrier beach, and the associated flood water elevation within the wetland.

In 1998, it was recognised that the planned expansion of the aggregate extraction area and reduction of the marsh flood storage volume could, if not properly engineered, increase the outflow from the Marsh, with impacts on the then-existing flooding conditions at Cedar Crest Beach Road. Cedar Crest Beach Road has historically and is currently located in an area mapped by CLOCA as a flood plain. As such, there has always been a risk of flooding from both the Westside Creek to the north and Lake Ontario to the south. The CLOCA Flood Risk Assessment report (CLOCA 2017) identified this community as continuing to have both high vulnerability to flooding and high potential frequency of flooding.

The Hydrotechnical Analysis Report proposed the preservation of the natural outlet, the primary channel that releases water from the Marsh, and the creation of a secondary emergency overflow channel to maintain the existing flooding conditions of the Marsh, both of which run from the Marsh to Lake Ontario. The intention behind the secondary channel was to provide additional outlet capacity to compensate for the reduction in Marsh floodwater storage, and maintain the existing flooding conditions between Westside Creek inflow to the Marsh and the flood elevation within the wetland. It was never intended to bring the natural flooding to an end and prevent flooding from occurring thereafter; the intention was simply to substantially maintain the existing flooding conditions. The two outlets from the Marsh can be described as follows:

a. The primary outflow channel, on the east side of the Marsh, is owned by the Municipality of Clarington. It is a natural outlet and the main conduit for water to flow to Lake Ontario from the Westside Marsh. The mouth of the primary channel at Lake Ontario is a barrier beach outlet, in that wave activity of Lake Ontario deposits sand and cobble at the mouth of the channel, often blocking the outflow of water from the Marsh. At intervals, the accumulation of water in the Marsh exerts sufficient force on the barrier beach to breach the beach, so the Marsh drains back down to the Lake water elevation; and

b. The secondary emergency overflow channel, which is the subject of this Plan, most of which would be (and is) owned by St. Marys. St. Mary was to (and does) maintain the portion of the channel it owns under CLOCA's direction. All references herein to St. Marys' obligations with respect to the secondary emergency overflow channel only relate to that portion of that channel owned by St. Marys. This secondary channel is engineered to become operational (i.e. contain water flow) when the amount of water in the Marsh exceeds the ability of the primary channel to drain into Lake Ontario, which can occur when there are flooding conditions. Generally the secondary emergency overflow channel is dry. The Hydrotechnical Analysis Report provided the design for the emergency overflow channel, described as a trapezoidal channel running about 300 metres north of the Lake Ontario shoreline with a 12 meter wide bottom width. The emergency overflow channel was also designed to have vegetation appropriate to stabilize the channel side slopes, and vegetation in the channel bottom. At the north limit of the overflow channel, a rock weir (design elevation 75.68 metres) establishes the elevation at which water will spill into the channel. The rock weir is located on property owned by CLOCA and does not form part of the portion of the emergency overflow channel owned by St. Marys and to which St. Marys has obligations hereunder. The Hydrotechnical Analysis Report and detailed design of the

emergency overflow channel was approved by multiple agencies including CLOCA, Ontario Ministry of Natural Resources and the federal Department of Fisheries and Oceans. The emergency overflow channel was constructed in accordance with the approved designs under the direction of St. Marys, and remains in its ownership. The attached sketch shows the emergency overflow channel in relationship to the Westside Marsh and Lake Ontario, and the ownership of the various parcels.

4) Lake Ontario Shoreline and Record Lake Levels

During the spring of 2017, Lake Ontario water levels rose to unprecedented levels. On May 29th, the Lake Ontario water level was reported as 75.88 metres above sea level. The International Lake Ontario - St. Lawrence River Board (ILOSLRB) reported that "months of high precipitation produced the highest recorded waters level on Lake Ontario since reliable records began in 1918." (ILOSLRB, May 26, 2017) This level exceeds the historical maximum recorded Lake Ontario water level by about 15 centimetres. On multiple occasions, the Municipality of Clarington responded to flooding concerns of residents on Cedar Crest Beach Road. Southerly winds created wave and surge conditions that brought Lake water into the residential lots and caused flooded basements/crawl spaces. On other occasions, significant rainfall in the Westside Creek watershed flowed into the already flooded Westside Marsh, and water began to flood Cedar Crest Beach Road and adjacent lots.

These unprecedented Lake levels impacted the ability of the Marsh water to break through the barrier beach. Due to the high water levels of the Lake, the difference in water levels between the north and south sides was not enough to breach the barrier that was built-up on the beach. The Cedar Crest Beach Road area has always been susceptible to flooding during the high Lake level period due to its location and elevation, and is classified as a flood damage centre by CLOCA. Efforts to minimize flooding during the unprecedented Lake levels included breaking the barrier beach at the mouth of the primary channel to maximize outflow from the Marsh. Similarly, beach build-up at the mouth of the emergency overflow channel was cleared on several occasions to maximize the outflow.

Concern has also been expressed by residents in the Cedar Crest Beach Road community, regarding the build-up of beach material at the mouths of both the primary and secondary channels, and the extent of vegetation within the emergency overflow channel that may restrict the flow of water to the Lake.

This Plan is provided to address these concerns that have arisen during the period of record high Lake Ontario levels, and to provide clear direction for management of the emergency overflow channel for all parties.

5) Annual Monitoring

The Principles provide for the ability of CLOCA to inspect the emergency overflow channel. CLOCA will contact St. Marys prior to entering the emergency overflow channel. Inspections will occur annually, as required, or on a complaint basis. During the site investigation, the following items will be documented:

- Any indications of slope failure

- Accumulation of sediment or other blockages in the channel or culverts
- Vegetation conditions
    - Adequate cover for erosion protection
    - Excessive or over-mature vegetation presenting an obstruction of flow
- Accumulation of beach debris
- Any conditions that raise a concern with the function of the channel

After assessment of the monitoring results, CLOCA staff will recommend maintenance works, as necessary to address identified issues. The recommendations will also include reasonable timelines for recommended actions. The monitoring results and recommendations for the emergency overflow channel will be provided to St. Marys, and St. Marys will make reasonable commercial efforts to complete the actions within the specified time frame and will keep CLOCA informed of any delays.

6) Maintenance

Maintenance of the emergency overflow channel is the responsibility of St Marys. CLOCA is responsible for directing St. Marys as to what maintenance is required and when the maintenance should be carried out. It is not anticipated that maintenance will be regularly required in the channel, although during extreme conditions (i.e. extreme Lake levels), greater maintenance may be requested.

CLOCA may request St. Marys conduct maintenance to address the results of its investigations (see Section 5). For clarity, maintenance related to vegetation conditions may include removal of shrub vegetation after a period of years, to prevent large diameter vegetation from becoming established. Soft vegetation (cattails, and small diameter shrubs) are not considered to be a significant obstruction to flood flow, and were intended to be present to provide soil stability, and fish and wildlife habitats.

Maintenance works must also consider approvals, associated timing windows, and impacts such as migratory birds nesting, fish habitats, and species at risk. These approvals may limit the time of year available for non-emergency maintenance works. Prior to commencement of maintenance works, erosion and sediment controls shall be proposed to the satisfaction of CLOCA, and shall be implemented at the start of works, remain in good repair during the works, and removed at the completion of works. All disturbed areas will be stabilized to the satisfaction of CLOCA at the conclusion of the work.

The accumulation of debris at the Lake Ontario beach may not be an obstruction in years with normal Lake levels.

7) Flood Conditions

CLOCA issues messages when watershed conditions and weather forecasts indicate the potential for a flood event, and issues Flood Safety Bulletins, Flood Watches, and Flood Warnings. CLOCA will include St. Marys on its circulation list for these messages.

For the purpose of the following, the parties note as follows:

- The elevation of Cedar Crest Beach Road is, on average, 76 m, but as low as 75.8 m in certain places.
- The design elevation of the weir is 75.68 m.

The actual elevation of the weir appears to be closer to 75.48 m, based on a recent survey. St. Marys has installed a water level gauging system with remote communication abilities (the "remote system") in the west portion of the Marsh, owned by CLOCA, that is close to the northern portion of the emergency overflow channel. St. Marys has donated the remote system to CLOCA, and will reimburse CLOCA annually for operating and maintenance costs. CLOCA will seek approval from St. Marys before spending any amount that would result in more than $10,000 in the aggregate being spent on operating and/or maintenance of the remote system in one calendar year. St. Marys, CLOCA, and a staff member at the Town of Clarington will all receive email alerts from the remote system when the water elevation at the location of the remote system in the Marsh reaches a certain elevation, to be determined periodically by CLOCA (the "preset elevation") as a warning of high Marsh water levels. This remote system will be twinned with a manual staff gauge closer to Cedar Crest Beach Road (the "northerly staff gauge"), located in the Marsh (which will act as back-up for the remote system). A second manual staff gauge (the "southerly staff gauge") will be installed by St. Marys in the southern portion of the emergency overflow channel, close to the barrier beach by the Lake, to measure the height of any built-up barrier.

St. Marys will install the two manual staff gauges when conditions permit, at precise locations and depths to be determined by CLOCA, and will survey them once they have been installed. After the survey has been completed, a sketch showing the locations of the remote system and the two staff gauges will be appended hereto. St. Marys shall be responsible for commercially reasonable general upkeep of the southerly staff gauge and CLOCA shall be responsible for commercially reasonable general upkeep of the remote system and the northerly staff gauge.

The primary outflow for the Marsh will also be assessed by CLOCA during period of high water and flood concern. The primary channel will be open, or be in the process of being opened, (either naturally or manually) during events where the overflow channel is activated. St Marys has no responsibility for the primary outflow channel.

The following considerations shall guide CLOCA's decision as to whether or not to ask St. Marys to manually open the emergency overflow channel in the event of flooding conditions at Cedar Crest Beach Road:

a. Water levels in the Marsh
    i. Preset elevation is reached and remote system sends email to St. Marys, CLOCA, and the Town of Clarington; and levels continue to increase
    ii. Weather forecast of significant rainfall
b. Beach barrier of the emergency overflow channel poses an impediment to flow in the overflow channel (ie: barrier approaching elevation of the weir level, from a review by St. Marys of the southerly staff gauge, at CLOCA's request;

c. relevant water and land elevation levels (for example, there could be a situation where the lake elevation is higher than the build-up); and
d. Timing (for example, if there are flood conditions but there is no rain or no flow from the Marsh and the barrier can be built up again in hours by wave action, then there is little value in breaking the barrier until the appropriate time).

CLOCA will keep St. Marys apprised of the relevant activities of which it is aware in the area during the time in which flooding conditions exist for the Cedar Crest Beach Road area.

Unless works are permitted to be completed on a flood emergency basis without liability accruing to the party completing or directing the works, approval agencies will be contacted for approval prior to work on the beach.

8) General

a. Notwithstanding anything to the contrary, whenever any party in this Plan is required to: (i) do any act; (ii) formulate an opinion; (iii) incur any cost, fee, charge or other expense or make any other payment for which the other party may be wholly or partially responsible; (iv) be satisfied with respect to any matter; (v) make any estimate; or (vi) make any determination or judgment, then the same shall be made on a reasonable basis. For clarity, notwithstanding the foregoing, the exercise of discretion may be made on an unfettered basis and without applying a reasonableness standard.

b. Each of the parties will, in discharging its obligations under this Plan, comply with all provisions of laws, statutes, ordinances, regulations, by-laws, directions, orders, rules, requirements, policies and enforceable guidelines, judge made laws or common law and any order of a court or all federal, provincial, municipal and other governmental authorities, departments, boards and agencies having jurisdiction (the "**Law**"), and neither party shall ask the other party to act except in compliance with the Law. In the event either party asks the other party to act in a manner that is not in compliance with the Law, the party so requested need not comply with the request.

Ownership Sketch

REPORT

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019
FILE: AFNA38
S.R.: 5618-19

APPROVED BY C.A.O.

TO: Chair and Members, CLOCA Board of Directors

FROM: Rose Catulli, Director of Corporate Services

SUBJECT: BDO Canada Audit of Financial Statements for the Year Ended December 31, 2018

The attached audit plan letter (Attachment 1) from the audit firm of BDO Canada LLP is being sent to the Board in advance of the annual audit. Having gone through a number of significant reporting requirements in prior audit years, staff does not anticipate any change in format for the 2018 financial statements. The planning letter provides the Board of Directors an opportunity to provide information about anything that may affect the audit especially as it relates to risk in the organization or suspected or alleged fraud.

Attached is a BDO publication (Attachment 2) regarding new/revised auditor reporting standards that become effective for audits of financial statements for periods on or after December 15, 2018. The format of the 2018 auditor's report will differ from prior years as shown in the attachment, *Navigating the Auditor Reporting Journey*.

RECOMMENDATION:

THAT the letter from Nigel A.C. Allen, BDO Dunwoody Canada LLP be received;
THAT the attached BDO publication, Navigating the Auditor Reporting Journey, be received for information; and,
THAT Nigel A.C. Allen be advised that the Board of Directors is not aware of any matters related to increased risk, fraud or errors on behalf of management processes.

RC/ms
Attach. 1 – Audit Plan Letter
Attach. 2 – Navigating the Auditor Reporting Journey

Central Lake Ontario Conservation Authority

Planning Report to the Board of Directors

December 4, 2018

Tel: 905-576-3430
Fax: 905-436-9138
www.bdo.ca

Oshawa Executive Centre
419 King Street West
Suite 502
Oshawa, Ontario, L1J 2K5

December 4, 2018

Members of the Board of Directors
Central Lake Ontario Conservation Authority
100 Whiting Avenue
Oshawa, Ontario
L1H 3T3

Dear Board of Director Members:

We are pleased to present our audit plan for the audit of the financial statements of Central Lake Ontario Conservation Authority (the "Authority") for the year ending December 31, 2018.

Our report is designed to highlight and explain key issues which we believe to be relevant to the audit including audit risks, the nature, extent and timing of our audit work and the terms of our engagement. The audit planning report forms a significant part of our overall communication strategy with the Board of Directors and is designed to promote effective two-way communication throughout the audit process. It is important that we maintain effective two-way communication with the Board of Directors throughout the entire audit process so that we may both share timely information. The audit process will conclude with a Board of Directors meeting and the preparation of our final report to the Board of Directors.

This report has been prepared solely for the use of the Board of Directors and should not be distributed without our prior consent. Consequently, we accept no responsibility to a third party that uses this communication.

The Board of Directors plays an important part in the audit planning process and we are available to meet with you to discuss our audit plan as well as any other matters that you consider appropriate.

Yours truly,

Nigel A.C. Allen, CPA, CA
Partner through a corporation
BDO Canada LLP
Chartered Professional Accountants, Licensed Public Accountants

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TERMS OF REFERENCE

Our overall responsibility is to form and express an opinion on the financial statements. These financial statements are prepared by management, with oversight by those charged with governance. The audit of the financial statements does not relieve management or those charged with governance of their responsibilities. The scope of our work, as confirmed in our engagement letter, is set out below.

ENGAGEMENT OBJECTIVES

- Form and express an audit opinion on the financial statements.
- Present significant findings to the Board of Directors including key audit and accounting issues, any significant deficiencies in internal control and any other significant matters arising from our work.
- Provide timely and constructive management letter. This will include deficiencies in internal control identified during our audit.
- Consult regarding accounting, excise tax and other reporting matters as requested throughout the year.
- Prepare applicable information returns for the year ending December 31, 2018.
- Work with management towards the timely issuance of financial statements, and information returns.

INDEPENDENCE

At the core of the provision of external audit services is the concept of independence. Canadian generally accepted auditing standards require us to communicate to the Board of Directors at least annually, all relationships between BDO Canada LLP and its related entities and Central Lake Ontario Conservation Authority and its related entities, that, in our professional judgment, may reasonably be thought to bear on our independence for the forthcoming audit of the Authority. Please refer to Appendix A.

RESPONSIBILITIES

It is important for the Board of Directors to understand the responsibilities that rest with the Authority and its management, those that rest with the external auditor and the responsibilities of those charged with governance. BDO's responsibilities are outlined within the engagement letter. The oversight and financial reporting responsibilities of management and the Board of Directors are summarized below.

MANAGEMENT'S RESPONSIBILITIES

- Maintain adequate accounting records and maintain an appropriate system of internal control for the Authority.
- Select and consistently apply appropriate accounting policies.
- Prepare the annual financial statements.
- Safeguard the Authority's assets and take reasonable steps for the prevention and detection of fraud and other irregularities.
- Make available to us, as and when required, all of the Authority's accounting records and related financial information.

BOARD OF DIRECTORS' RESPONSIBILITIES

- Oversee the work of the external auditor engaged for the purpose of issuing an independent auditor's report.
- Facilitate the resolution of disagreements (if any) between management and the external auditor regarding financial reporting matters.
- Pre-approve all non-audit services to be provided to the Authority by the external auditor.
- Review the financial statements and Annual Report before the Authority publicly discloses this information.

AUDIT STRATEGY

Our overall audit strategy involves extensive partner and manager involvement in all aspects of the planning and execution of the audit and is based on our overall understanding of the Authority.

We will perform a risk based audit which allows us to focus our audit effort on higher risk areas and other areas of concern for management and the Board of Directors.

To assess risk accurately, we need to gain a detailed understanding of the Authority's business and the environment it operates in. This allows us to identify, assess and respond to the risks of material misstatement.

To identify, assess and respond to risk, we obtain an understanding of the system of internal control in place in order to consider the adequacy of these controls as a basis for the preparation of the financial statements, to determine whether adequate accounting records have been maintained and to assess the adequacy of these controls and records as a basis upon which to design and undertake our audit testing.

Based on our risk assessment, we design an appropriate audit strategy to obtain sufficient assurance to enable us to report on the financial statements.

We choose audit procedures that we believe are the most effective and efficient to reduce audit risk to an acceptable low level. The procedures are a combination of testing the operating effectiveness of internal controls, substantive analytical procedures and other tests of detailed transactions.

Having planned our audit, we will perform audit procedures, maintaining an appropriate degree of professional skepticism, in order to collect evidence to support our audit opinion.

MATERIALITY

Misstatements, including omitted financial statement disclosures, are considered to be material if they, individually or in aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

Judgments about materiality are made in light of surrounding circumstances and include an assessment of both quantitative and qualitative factors and can be affected by the size or nature of a misstatement, or a combination of both.

We have concluded that a materiality level based on 2% of expenses is appropriate for the purposes of planning the audit. We have set preliminary materiality at $125,000 for the Authority. Our materiality calculation is based on the Authority's preliminary results. In the event that actual results vary significantly from those used to calculate preliminary materiality, we will communicate these changes to the Board as part of our year end communication.

We will communicate all corrected and uncorrected misstatements identified during our audit to the Board of Directors, other than those which we determine to be "clearly trivial". Misstatements are considered to be clearly trivial for purposes of the audit when they are inconsequential both individually and in aggregate.

We encourage management to correct any misstatements identified throughout the audit process.

RISKS AND PLANNED AUDIT RESPONSES

Based on our knowledge of the Authority's business, our past experience, and knowledge gained from management and the Board, we have identified the following significant risks; those risks of material misstatement that, in our judgment, require special consideration.

Significant risks arise mainly because of the complexity of the accounting rules, the extent of estimation and judgment involved in the valuation of these financial statement areas, and the existence of new accounting pronouncements that affect them. We request your input on the following significant risks and whether there are any other areas of concern that the Board has identified. We have also provided a brief summary of how we plan to audit these significant risks.

Revenue Recognition

Significant Risk	Proposed Audit Approach
There is an inherent risk on the completeness of revenue.	• For each revenue stream, tests are performed on a sample of source documents to trace to the final general ledger. • Analytical procedures are performed to compare each revenue stream against budget and investigate significant variances from expectations.

Risk of Management Override

Significant Risk	Proposed Audit Approach
Management is in a unique position to perpetrate fraud because of management's ability to directly or indirectly manipulate accounting records and prepare fraudulent financial statements by overriding controls that otherwise appear to be operating effectively.	• Our planned audit procedures test the appropriateness of journal entries recorded in the general ledger and other adjustments made in the preparation of the financial statements. • We will also obtain an understanding of the business rationale for significant transactions that we become aware of that are outside the normal course of operations for the Authority, or that otherwise appear to be unusual given our understanding of the Authority and its environment. We will review accounting estimates for biases and evaluate whether the circumstances producing the bias, if any, represented a risk of material misstatement due to fraud.

OTHER AREAS OF AUDIT INTEREST

In addition to the significant risks noted above, we have also noted certain areas which are of interest to us or the Board and will be considered in the planning of our audit approach and procedures.

Area of Interest	Approach
Capital Asset Completeness Capital assets are recorded in a database that is not integrated with the accounting system.	Our planned audit procedures include testing a sample of capital asset additions and ensuring that the accounting records reconcile with the database.
Employee Future Benefits Liability Changes in the assumptions used in the calculation could lead to a material change in the liability.	Our planned audit procedures include the audit of the assumptions used in the employee future benefits liability calculation. This includes communication with the actuary used by the Authority and reviewing backup for inflation and discount rates used.

RELIANCE ON AN EXPERT

In order for us to perform adequate audit procedures on certain financial statement areas, we will be relying on the work of, and the report prepared by, Mondelis Actuarial Services Corp. Canadian generally accepted auditing standards require us to communicate with the expert. We propose to discuss the following with Mondelis Actuarial Services Corp.:

- The objective and nature of our audit engagement and how we intend to use the expert's findings and report.
- Our assessment of the significance and risk aspects of the engagement that will affect the expert's work.
- The requirement to advise us if they have any relationship with the Authority which could impair their judgment or objectivity in the conduct of their engagement.
- The nature, timing and extent of the expert's work and our planned review of it, possibly including review of their working papers.
- Confirmation that the assumptions used in their calculations are consistent with those used in the prior periods and with industry standards.
- Their obligation to advise BDO Canada LLP of any matters up to the estimated audit report date that may affect their calculations and their report.

We ask that the appropriate level of management review the data provided to Mondelis Actuarial Services Corp. and that they also review the assumptions used and results reported by the expert for reasonableness.

AUDIT TEAM

In order to ensure effective communication between the Board and BDO Canada LLP, we briefly outline below the key members of our audit team and the role they will play:

Name	Role	Phone number	Email address
Nigel Allen, CPA, CA	Partner	(905) 576 3430 ext 5215	Nallen@bdo.ca
Heather Allison, CPA, CA	Senior Manager	(905) 576 3430 ext 5173	Hallison@bdo.ca
Taylor O'Connor, CPA, CA	Senior Accountant	(905) 576 3430 ext 5218	Toconnor@bdo.ca

TIMING OF THE AUDIT

We anticipate the following schedule for the conduct of the audit:

Audit tasks and deliverables	Dates
Interim audit planning fieldwork	November 5, 2018
Interim testing	November 5-6, 2018
Year-end audit fieldwork – tentative start date	March 18, 2019
Review of draft financial statements with Board	To be determined
Finalization of financial statements	To be determined
Release of financial statements and letters	To be determined

As part of the year-end Board meeting, we will provide the Board with a copy of our draft audit opinion, discuss our findings, including significant estimates utilized by management, accounting policies, financial statement disclosures and significant transactions completed during the year. We will also report any significant internal control deficiencies identified during our audit and reconfirm our independence.

FRAUD DISCUSSION

Canadian generally accepted auditing standards require us to communicate with the Board of Directors regarding fraud risk on an annual basis. We have prepared the following comments to facilitate this communication and ask that you contact us if you have any knowledge regarding actual, suspected or alleged fraud affecting the organization.

Required Discussion	BDO Response	Question to Board of Directors
Details of existing oversight processes with regards to fraud.	Through our planning process, and based on prior years' audits, we have developed an understanding of your oversight processes including: • Discussions at Board of Directors meetings and our review of minutes of those meetings; • Review of related party transactions; and • Consideration of tone at the top	Are there any new processes or changes in existing processes relating to fraud that we should be aware of?
Knowledge of actual, suspected or alleged fraud.	Currently, we are not aware of any fraud.	Are you aware of any instances of actual, suspected or alleged fraud affecting the Authority?

AUDITORS' RESPONSIBILITIES FOR DETECTING FRAUD

We are responsible for planning and performing the audit to obtain reasonable assurance that the financial statements are free of material misstatements, whether caused by error or fraud, by:

- Identifying and assessing the risks of material misstatement due to fraud;
- Obtaining sufficient and appropriate audit evidence regarding the assessed risks of material misstatement due to fraud, through designing and implementing appropriate responses; and
- Responding appropriately to fraud or suspected fraud identified during the audit.

The likelihood of not detecting a material misstatement resulting from fraud is higher than the likelihood of not detecting a material misstatement resulting from error because fraud may involve collusion as well as sophisticated and carefully organized schemes designed to conceal it.

During the audit, we will perform risk assessment procedures and related activities to obtain an understanding of the entity and its environment, including the entity's internal control, to obtain information for use in identifying the risks of material misstatement due to fraud and will make inquiries of management regarding:

- Management's assessment of the risk that the financial statements may be materially misstated due to fraud, including the nature, extent and frequency of such assessments;
- Management's process for identifying and responding to the risks of fraud in the entity, including any specific risks of fraud that management has identified or that have been brought to its attention, or classes of transactions, account balances, or disclosures for which a risk of fraud is likely to exist;
- Management's communication, if any, to those charged with governance regarding its processes for identifying and responding to the risks of fraud in the entity; and
- Management's communication, if any, to employees regarding its view on business practices and ethical behaviour.

In response to our risk assessment and our inquiries of management, we will perform procedures to address the assessed risks, which may include:

- Inquire of management, the Board of Directors, and others related to any knowledge of fraud, suspected fraud or alleged fraud;
- Perform disaggregated analytical procedures and consider unusual or unexpected relationships identified in the planning of our audit;
- Incorporate an element of unpredictability in the selection of the nature, timing and extent of our audit procedures; and
- Perform additional required procedures to address the risk of management's override of controls including;
    - Testing internal controls designed to prevent and detect fraud;
    - Testing the appropriateness of a sample of adjusting journal entries and other adjustments for evidence of the possibility of material misstatement due to fraud;
    - Reviewing accounting estimates for biases that could result in material misstatements due to fraud, including a retrospective review of significant prior years' estimates; and
    - Evaluating the business rational for significant unusual transactions.

BDO RESOURCES

BDO is one of Canada's largest accounting services firms providing assurance and accounting, taxation, financial advisory, risk advisory, financial recovery and consulting services to a variety of publicly traded and privately held companies.

BDO serves its clients through over 125 offices across Canada. As a member firm of BDO International Limited, BDO serves its multinational clients through a global network of over 1,400 offices in more than 100 countries. Commitment to knowledge and best practice sharing ensures that expertise is easily shared across our global network and common methodologies and information technology ensures efficient and effective service delivery to our clients.

ACCOUNTING STANDARDS

BDO National is pleased to provide a series of publications relevant to public sector entities. Each publication provides a high level overview of different PSAB standards. These publications can be found on the bdo.ca website under Home/Services/Assurance & Accounting/A&A Knowledge Centre/PSAS.

APPENDIX A
Independence Letter

December 4, 2018

Members of the Board of Directors
Central Lake Ontario Conservation Authority
100 Whiting Avenue
Oshawa, Ontario
L1H 3T3

Dear Board of Directors Members:

We have been engaged to audit the financial statements of Central Lake Ontario Conservation Authority (the "Authority) for the year ending December 31, 2018.

Canadian generally accepted auditing standards (GAAS) require that we communicate at least annually with you regarding all relationships between the Authority and our Firm that, in our professional judgment, may reasonably be thought to bear on our independence.

In determining which relationships to report, we have considered the applicable legislation and relevant rules of professional conduct and related interpretations prescribed by the appropriate provincial institute/ordre covering such matters as:

- Holding a financial interest, either directly or indirectly in a client;
- Holding a position, either directly or indirectly, that gives the right or responsibility to exert significant influence over the financial or accounting policies of a client;
- Personal or business relationships of immediate family, close relatives, partners or retired partners, either directly or indirectly, with a client;
- Economic dependence on a client; and
- Provision of services in addition to the audit engagement.

We have prepared the following comments to facilitate our discussion with you regarding independence matters arising since April 17, 2018, the date of our last letter.

We are not aware of any relationships between the Authority and us that, in our professional judgment, may reasonably be thought to bear on our independence to date.

We hereby confirm that we are independent with respect to the Authority within the meaning of the Rules of Professional Conduct of the Chartered Professional Accountants of Ontario as of December 4, 2018.

This letter is intended solely for the use of the Board of Directors, Management and others within the Authority and should not be used for any other purposes.

Yours truly,

Nigel A.C. Allen, CPA, CA
Partner through a corporation
BDO Canada LLP
Chartered Professional Accountants, Licensed Public Accountants

Navigating the Auditor Reporting Journey

Navigating the Auditor Reporting Journey

As Canada continues its commitment to adopting international standards on auditing, of particular significance are new and revised auditor reporting standards that become effective for audits of financial statements for periods ending on or after December 15, 2018. In this publication, we outline how the upcoming changes to auditor reporting can improve the information provided as part of your audit. In whatever enterprise you operate—from start-up to multi-national corporation, whether private, public, or not-for-profit—and whether you fulfil the role of "management" or "those charged with governance", auditor reporting changes will affect the style, format and content of the auditor's report. This will provide more transparency over the audit process. Click on each icon below to learn more.

Click on each icon below to learn more.

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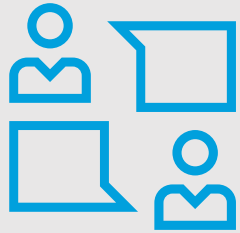

The Path Ahead

Establishing the main changes to the new approach to auditor reporting.

Headline Changes

The recently revised Canadian Auditing Standards (CASs) issued by Canada's Auditing and Assurance Standards Board (AASB) are the beginning of a new era in auditor reporting. The new standards were designed for the unique aspects of the Canadian environment, and with the ultimate objective of providing you and other stakeholders with more useful information—by focusing on the key output from the audit process—the auditor's report.

Headline changes, which will help improve the communicative value of the auditor's report, include:

- Placing the **opinion section** at the beginning of the report.
- Revised format and structure of the **auditor's report**.
- Enhanced reporting on **going concern** matters—including a separate section when there is a material uncertainty relating to going concern.
- Emphasizing the **nature of the audit** and the role and responsibilities of your **auditors**.
- Including an explicit statement about your auditor's **independence** in accordance with relevant ethical standards.
- Emphasizing the importance of the annual report (or similar document) and your auditor's work performed on such **other information**.
- Providing enhanced descriptions about the responsibilities of **management**, and **those charged with governance** where applicable.
- Voluntary reporting of key audit matters.
- For listed entities, disclosure of the name of your **engagement partner**

Why Change Now?

For stakeholders, investors and other users of the financial statements, the planned changes to the auditor's report represent an opportunity to increase confidence in the audit process and the financial statements.

Potential benefits

- Increased transparency of the audit process.
- Improved clarity of communications between auditors and investors as well as those charged with governance.
- A greater focus by management and those charged with governance on the other information provided in the annual report (or similar document) alongside the financial statements.
- Enhanced quality and value of the audit through more focused professional skepticism.

While the CASs are prescriptive about the layout of the new auditor's report, these reforms have been designed to move auditors away from providing a "boilerplate" approach to auditor reporting, and have instead encouraged a drive towards greater transparency, specificity and relevance in terms of how the auditor's views are presented. The demands of stakeholders, investors and other users of the financial statements with respect to the format, layout and level of detail in auditor reports may ultimately lead to more innovation in terms of how information is presented by audit firms.

At BDO we support this new approach to auditor reporting in order to highlight the value associated with an audit and recognize the importance of working closely with our clients during this period of change.

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Your Personal Journey

Explaining how the new approach to auditor reporting could benefit you and your business.

How will the immediate changes to auditor reporting help you?

If you are managing the entity:

Area of auditor reporting	Potential benefits for management
Going concern	Your auditor's report will now include a more detailed description of your responsibilities relating to going concern, which will help provide transparency about the extent of your role in comparison to auditors and those charged with governance.
Other information	The new requirements relating to other information will provide greater clarity about the documents (such as the annual report) included within the scope of "other information." Auditors will be available to identify the information that comprises the annual report (or similar document) and discuss when they can obtain this information to perform their audit procedures on a timely basis.

If you are one of the individuals charged with governance of an entity:

Area of auditor reporting	Potential benefits for management
Auditor independence	Of revlevance to your role of monitoring the work and independence of the external auditor, you will see an affirmative statement in the new auditor's report about the auditor's independence and fufilment of relevant ethical responsibilities. If your role includes determining annually or regularly whether your auditor is independent in line with relevant codes and local laws and regulations, this change may provide further opportunities to monitor, assess and (where relevant) pre-approve: • Non-audit services provided by your entity's auditors. • Independence of your auditor when nominating auditors for appointment or re-appointment.
Going concern	Changes to the report now clarify management's responsibilities for going concern, and provide a greater transparency in relation to: • Management's assessment about the entity's ability to continue as a going concern. This is not a new responsibility, but there is increased focus on this in the revised CASs, which means that auditors will certainly be looking at this more closely and provide greater insight into this area. • The qualitative nature of going concern disclosures provided by management in the financial statements (particularly when "close call" situations exist in the entity).

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Navigating Your New Auditor's Report

Highlighting the key changes in the format of your auditor's report.

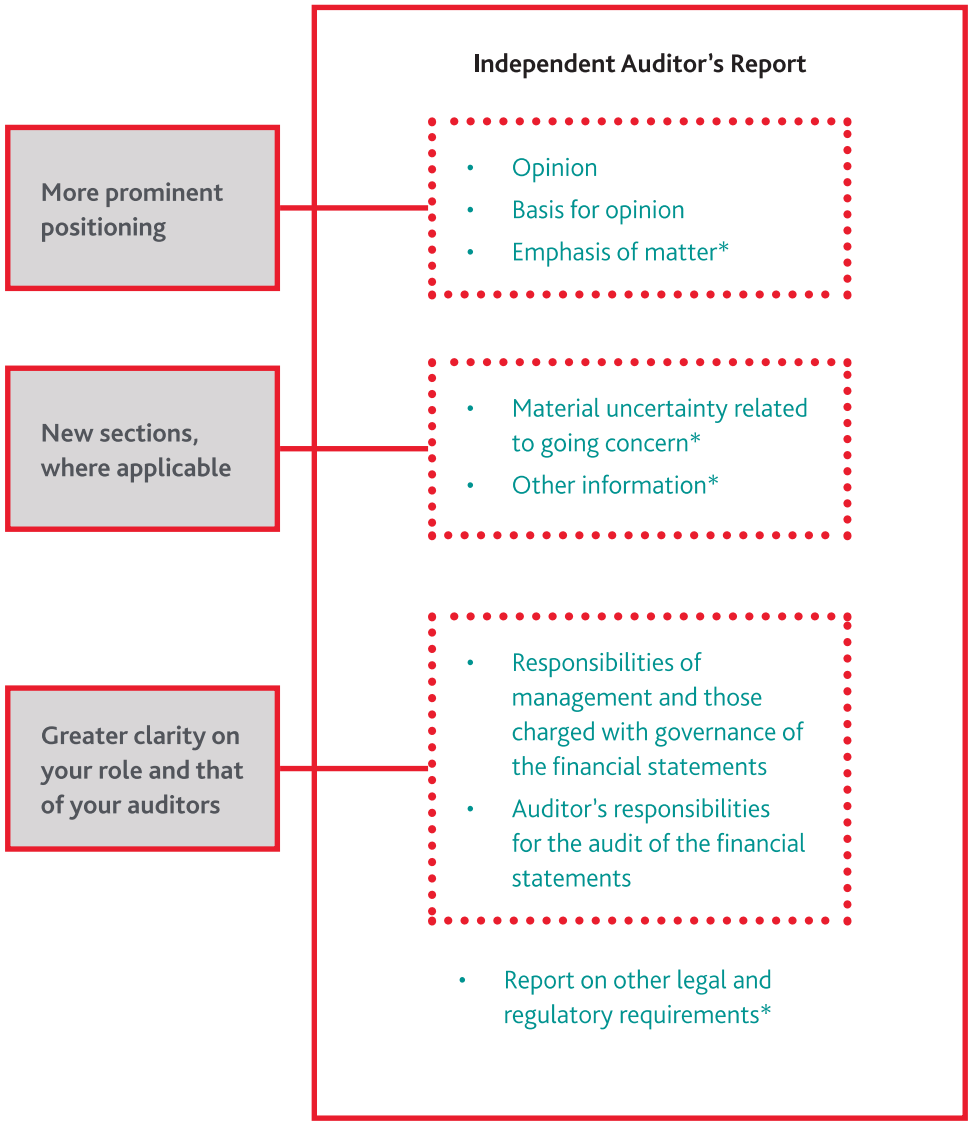
Auditor's Report Structure

One of the key changes in the new auditor reporting approach is the layout of the auditor's report, and more prominent positioning of the opinion and basis of opinion sections.

To help support consistency, yet allow for specificity, auditor's reports will generally have the layout shown here. Items marked with * are only included where applicable.

The revised CASs have a direct impact on how the auditor's report will be presented, but were also designed to enable greater innovation (for example, allowing some of the content to be displayed online).

The Appendix at the end of this publication provides an illustrative example of the new auditor's report.



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A Few Words About Key Audit Matters

An overview of the optional reporting of Key Audit Matters in the auditor's report.

The definition of a Key Audit Matter is:

Those matters that, in the auditor's professional judgment, were of most significance in the audit of the financial statements of the current period. KAMs are selected from matters communicated with those charged with governance.

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What is required?

The requirements relating to KAMs are set out under CAS 701, Communicating Key Audit Matters in the Independent Auditor's Report, which is also effective for audits of financial statements for periods ending on or after December 15, 2018. Essentially, unless specifically required by law or regulation, the reporting of KAM is optional. This differs from the international standard whereby KAM are required to be disclosed for all listed entities. Currently, Canadian standards do not contain a KAM reporting requirement, but allow for the KAM reporting when:

- The auditor decides to communicate KAM in the auditor's report, or
- The auditor is required by law or regulation to communicate KAM in the auditor's report.

Your BDO Advisor will keep you apprised of ongoing developments in this area of reporting.

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Keep The Dialogue Going

Emphasizing the importance of early and ongoing communication.

The new auditor's report represents one of the biggest changes in reporting and communication in many years. There will be an increase in work effort, especially in the first year of implementation. New requirements, such as those pertaining to going concern and other information will necessitate additional time and involvement by experienced engagement team members.

As with most changes, you don't want to be surprised. With the new auditor reporting changes becoming effective for financial statement periods ending on or after December 15, 2018, it is important to plan ahead. Our approach is to provide transparency, clarity and confidence during this period of change. Early engagement will lead to successful implementation of these new auditor reporting requirements.

Please contact your BDO Advisor should you have questions or require further information.

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The example below assumes the case of a listed entity for which consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRSs), and for which a comparative financial statement reporting approach is being used (that is, a two-year opinion). Depending on the nature of your entity, the report will be adapted as required, however the changes reflected apply equally in most circumstances unless otherwise noted.

INDEPENDENT AUDITOR'S REPORT

To the Shareholders of ABC Company [or Other Appropriate Addressee]

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of ABC Company (the Company), which comprise the consolidated statement of financial position as at December 31, 20X1 and December 31, 20X0. The audit also includes consolidated statements of comprehensive income, changes in equity and of cash flows for the years then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as at December 31, 20X1 and December 31, 20X0, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs).

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with the ethical requirements relevant to the audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Material Uncertainty Related to Going Concern [When applicable]

We draw attention to Note X in the consolidated financial statements, which indicates that the Company incurred a net loss of $X during the year ended December 31, 20X1 and, as of that date, the Company's current liabilities exceeded its total assets by $X. As stated in Note X, these events or conditions, along with other matters as set forth in Note X, indicate that a material uncertainty exists that may cast significant doubt on the Company's ability to continue as a going concern. Our opinion is not modified in respect of this matter.

Other Information [When applicable]

Management is responsible for the other information. The other information comprises the [information included in the X report, but does not include the consolidated financial statements and our auditor's report thereon.]

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the financial statements in accordance with IFRSs and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities with the Group to express an opinion on the consolidated financial statements. We are responsible for the direction supervision and performance of the group audit. We remain solely responsible for our audit opinion. *[Applicable in the case of a group audit]*

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards. *[Listed entities only]*

Report on Other Legal and Regulatory Requirements

[The form and content of this section of the auditor's report would vary depending on the nature of the auditor's other reporting responsibilities prescribed by local law, regulation or national auditing standards.]

The engagement partner on the audit resulting in this independent auditor's report is [name]. *[Listed entities only]*

[Signature in the name of the audit firm, the personal name of the auditor, or both, as appropriate for the particular jurisdiction]

[Auditor Address]

[Date]

REPORT

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019

FILE: ABDA3

APPROVED BY C.A.O. CD

S.R.: 5613-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Chris Darling, Chief Administrative Officer

SUBJECT: **Common Membership – Different Boards**

We currently have three boards that require the officers and members to be established in common – Central Lake Ontario Conservation Authority (CLOCA), Central Lake Ontario Conservation Fund (CLOCF) and Central Lake Ontario Source Protection Authority (CLOSPA).

The Conservation Authorities Act requires the Chair and Vice Chair of CLOCA be elected annually from the members appointed by the Region of Durham. To deal with the CLOCF and the CLOSPA respective requirements, it is recommended the following motion be adopted at the CLOCA annual meeting following its election of officers.

RECOMMENDATION:

THAT the Chair, Vice Chair and members of the Central Lake Ontario Conservation Authority for 2019 be the Chair, Vice Chair and members of the Central Lake Ontario Conservation Fund for 2019 and the Chair, Vice Chair and members of the Central Lake Ontario Source Protection Authority for 2019.

CD/ms

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019

FILE: ASSA5

APPROVED BY C.A.O. CD

S.R.: 5615-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Chris Darling, Chief Administrative Officer

SUBJECT: **Status Report of Implementation of CLOCA Strategic Plan 2016-2020**

CLOCA's Strategic Plan 2016-2020 was approved at the January 19, 2016 Authority Board meeting. The Strategic Plan established a new vision and mission for CLOCA:

Vision: Healthy watershed for today and tomorrow.

Mission: Advancing watershed health through engagement, science and conservation.

In addition, the following five goals were identified representing priorities over the five-year period:

1. Communicate, Educate & Inspire
2. Leaders in Integrated Watershed Management
3. Operate Responsibly & Sustainably
4. Collaborate & Partner
5. Advance Watershed Science and Knowledge

Forty-five actions were identified to help achieve our vision. On June 21, 2016, the Authority Board received a report outlining 113 detailed tasks to be undertaken to implement the identified actions over the five-year period. Attachment 1 to this report outlines the goals, actions and the status of specific tasks. The Strategic Plan is now in its fourth year and many of the listed tasks have been completed. Approximately half of the tasks are long-term programs and identified as ongoing. Significant processes has been made on all ongoing tasks.

Implementation of the Strategic Plan is summarized as follows:

- All seven tasks with a 2016 completion date have been completed.
- Twenty-three of the twenty-six tasks with a 2017 completion date have been completed. The three tasks not yet completed have been deferred pending the completion of prerequisite work. Task 10g (develop and implement environmental restoration program) is on hold pending the approval of funding for a Restoration Program. Task 17a (preparation of green infrastructure guidance document) and task 38b (adopt environmental compensation protocol) have been on hold pending anticipated provincial guidance/policy documents, which will inform the preparation of CLOCA's documents. Staff continue to work on these tasks and anticipate bringing recommendation reports on these items in 2019.
- Fifteen of the nineteen tasks with a 2018 completion date have been completed. Task 5e (update of Planning and Regulation Policy Document) has made some progress. There has been many recent internal and external work that will inform the update. Task 10h (update of stormwater management guideline) has been deferred pending the release of anticipated provincial guidelines. Task 16a (MOU with municipal partners) has been initiated but not yet completed due to other priority actions. Task 37 (evaluation of restoration efforts) has been deferred pending the approval of funding for a Restoration Program.

Cont'd

- Fifty-one tasks are listed as ongoing. These ongoing tasks will continue throughout the term of the Strategic Plan and are critical in meeting the identified goals and objectives. Advancements have been made in all ongoing tasks.

Priority Strategic Plan Tasks for 2019 include continuing to make advancement with the ongoing tasks as well as the following project tasks:

- Review education curriculum and teachers survey to improve program delivery - Task 4a
- Update of Planning and Regulation Policy Document - Task 5e
- Update Lake Ontario Shoreline Management Plan - Task 7d
- Enhance Restoration and Stewardship Program - Task 9b & 10f
- Develop and implement Environmental Restoration Prioritization Program - Task 10g
- Update of Stormwater Management Guideline - Task 10h
- Complete a Conservation Lands Management Strategy - Task 13 & 14b
- Establish Plan Review MOUs with municipal partners - Task 16a
- Prepare Green Infrastructure Guideline - Task 17a
- Develop a program to evaluate restoration efforts - Task 37
- Adopt Environmental Compensation Protocol -Task 38b

Overall, significant progress has been made since the adoption of the Strategic Plan with the majority of tasks completed. Considerable effort continues on the fifty-one tasks listed as ongoing. Dedicated staff have worked diligently towards achieving the goals of the Strategic Plan and have exemplified our core values of conservation, innovation, excellence, collaboration and leadership. Obtaining required funding and dedicating staff resources towards the 2019 project tasks will be critical in achieving these tasks given emerging and ongoing priority projects. Updates on the status of the Strategic Plan tasks will continue to be presented to the Board in January of each year

RECOMMENDATION:
THAT Staff Report #5615-19 be received for information.

ATTACH.
CD/ms

Attachment 1

	Strategic Actions	Tasks	Completion Date	Lead	Progress	Notes
GOAL 1: Communicate, Educate & Inspire **Objective: Get the Word Out**						
1	Develop strategic marketing/advertising initiatives to improve the visibility of CLOCA and public understanding and awareness of CLOCA's programs and services including: o Communicating key messages about the value for service that CLOCA offers and our accomplishments; o Improving the use of social media to build a broader base of support and to reach a diverse audience; o Co-marketing with other watershed partners; o Showcasing our programs, projects, practices and results to foster innovation across our watershed	a. Develop corporate presentation template and deliver presentations to stakeholders promoting awareness of CLOCA.	Ongoing	Community Engagement	**Ongoing**	2018: approximately 50 presentations to various community and stakeholder groups with an estimated audience of over 30,000 people. 2017: Presentation template prepared.
		b. Create news releases for ongoing programs, events and projects.	2017	Community Engagement	**Complete** ✓	Regular e-newsletter (Watershed Chronicle) prepared and issued quarterly.
		c. Celebrate 60th Annual Board of Directors Meeting - invite watershed stakeholders - presentation on accomplishments and Guest Speaker.	2017	Community Engagement	**Complete** ✓	60th Annual Board Meeting held in January 2017 with guests and key note speaker.
		d. Celebrate 60th Anniversary of CLOCA.	2018	Community Engagement	**Complete** ✓	A series of celebration events occurred throughout 2018.
		e. Build required resources to facilitate enhanced use of social media.	2018	Community Engagement	**Complete** ✓	Completed updates to our website with social media enhancements and open data portal.
		f. Pursue new opportunities for co-marketing and joint messages.	2018	Community Engagement	**Complete** ✓	Participated in a number of co-marketing and joint messages with Conservation Ontario and other stakeholders related to climate change, flood management and amended CA Act.
2	Recognize and celebrate environmental achievements of volunteers, partners and their milestones and successes.	Continue to host recognitions events for project partners and nominate partners for awards.	Ongoing	Community Engagement	**Ongoing**	Annual recognition for the Maple Syrup Festival and Watershed Festival partners

Objective: Take Action						
3	Assess community-based needs and identify opportunities for expanded conservation education and programming to meet the needs of an evolving, diverse and dynamic watershed community.	Assess how changing watershed demographics impact education and program needs	2017	Community Engagement	**Complete** ✓	Assessment completed by staff. Staff will prepare a report to the Board in early 2019 outlining conclusions and recommendations for education program enhancements.
4	Continue to offer innovative educational programs to inform and raise awareness of the value of a healthy watershed by: o Collaborating with schools, teachers and School Boards to identify and act on opportunities to integrate watershed-based education into a variety of curricula; o Supporting new innovative hands-on environmental learning experiences and providing tools for children, youth, adults, families and seniors of all abilities, to encourage informed decision making and behavior.	a. Review current curriculum objectives and survey participating teachers and program partners for input to improve program delivery	2019	Community Engagement	**Good Progress**	Educators accessing our programs have been surveyed in the 2017/2018 school year. Results of survey and staff recommendations to be presented to Board early 2019.
		b. Review potential to partner with other events/ festivals delivered in our watershed for delivery of healthy watershed program	2017	Community Engagement	**Complete** ✓	New Event Partners include: UOIT - Science Rendezvous, Environmental Education Terry Fox PS Environmental Fair, Farm Connections using AR Sandbox Duck Day Wetland Fair Whitby Doors Open, Turtle Conservation Workshop, Phragmites Workshop and Well Workshop
GOAL 2: Leaders in Integrated Watershed Management **Objective: Keep it Safe**						
5	Continue to ensure that municipal planning decisions and CLOCA permit approvals keep people, property and public infrastructure safe from natural hazards;	a. Ensure timely responses for Plan Review and Regulation	Ongoing	Plan/Regs	**Ongoing**	Established a target of 85% of Planning Act circulations commented on within 30 days of CLOCA receipt with regular monitoring of implementation through departmental meetings. Expedited External Review Voluntary Option established in 2018.
		b. Provide proactive and detailed input early in planning and regulation processes	Ongoing	Plan/Regs	**Ongoing**	Tracking efforts for number of pre-application consultation meetings attended and number of counter walk-ins per month with regular monitoring of implementation through departmental meetings.

		c. Ensure municipal planning documents contain effective hazard management policies	Ongoing	Plan/Regs	**Ongoing**	Completed comprehensive review of comprehensive Oshawa OPA including new hazard mapping. Made progress on review of Pickering, Whitby and Clarington Official Plan Reviews in relation to hazard policy and mapping.
		d. Maintain accurate and up to date hazard mapping	Ongoing	Plan/Regs	**Ongoing**	Brought forward comprehensive O.Reg. 42/06 mapping update to Board of Directors in 2016 working with staff in Engineering and Field Operations and Corporate Services departments. Next update scheduled for 2019.
		e. Update/simplify Planning and Regulation Policy and Procedural Document	2018	Plan/Regs	**Some Progress**	Excess Soil Policy Management Framework and regulations will be used as background information for the update. In addition, proposed amendments to the Conservation Authorities Act and recent updates to municipal Official Plans will also be used as key guidance documents to the update.
6	Enhance flood forecasting warning and protection tools.	a. Pursue funding opportunities to adopt a flood forecast model that allows for modelling of predicted storm forecasts including radar forecasts and improve database of gauge information and user accessibility	Ongoing	Eng. Field Ops.	**Ongoing**	Advancement made in improving gauging network and web access to precipitation data.
		b. Purchase survey grade gps equipment to enhance positional and elevation information	2017	Eng. Field Ops.	**Complete** ✓	Equipment purchased.
		c. Calibrate flow gauges to allow for more confident flood predictive models	2018	Eng. Field Ops.	**Complete** ✓	Stream flow gauges calibrated. Will continue with ongoing efforts to improve stream gauges by modernizing equipment.

7	In partnership with municipalities, commit to prioritizing, managing and reducing risk associated with natural hazards.	a. Promote opportunities to reduce natural hazards through infrastructure review and approvals	Ongoing	Plan/Regs	**Ongoing**	Several efforts in 2018 related to infrastructure such as roads and culverts.
		b. Develop system of updating floodplain mapping as needed in association with Official Plan amendments and updates	2017	Eng. Field Ops.	**Complete** ✓	Worked with municipal staff to confirm the need for improved floodplain maps to inform Official Plan land use.
		c. Complete a CLOCA wide Flood Risk Assessment to identify and prioritize flood damage center risk	2017	Eng. Field Ops.	**Complete** ✓	Watershed Flood-Risk Assessment endorsed by the Board on April 25, 2017.
		d. Update Lake Ontario shoreline management plan	2019	Eng. Field Ops.	**Some Progress**	Funding has been secured, consultant retained and work has started.
	Enhance the enjoyment and safety of conservation areas by improving enforcement, land management and public use infrastructure.	Establish and implement Board approved policy addressing minimum and preferred level of care for public areas monitoring and enforcement	2016	Eng. Field Ops.	**Complete** ✓	Conservation Areas Inspection Policy endorsed by the Board on Oct. 18, 2016.
Objective:	**Make it Better**					
9	Work with watershed partners to further implement science-based watershed plans and related management plans to protect, restore and enhance watershed health.	a. Continue to request and obtain municipal compliance through adoption of WSP recommendations into municipal documents, policies, zoning, guidance, etc.	Ongoing	Plan/Regs	**Ongoing**	Achieved significant progress in incorporation of Watershed Plan recommendations and mapping in the Whitby, Oshawa and Clarington Official Plan updates.
		b. Enhance Restoration & Stewardship services program with a focus on implementation of WSP and CA management plan recommendations and actions.	2019	Natural Heritage/ Watershed Planning	**Some Progress**	Rational prepared and budget proposal has been submitted to the Region to secure required staff resource.
		c. Continue to participate (lead or supporting role) in stakeholder projects to improve WSH health.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Many projects underway including tree planting, coastal wetland restoration, CA pit rehab.

		d. Continue to support development of subwatershed plans.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Participated in 2 subwatershed plans - City of Oshawa on Columbus Subwatershed plan and work continues, Robinson/Tooley subwatershed study initiated by Clarington
		e. As required by Provincial Plans, ensure that Watershed Plans are completed and updated.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	5 Watershed Plans completed (2012-2013) and updates n each of the 5 are underway.
10	Continue to develop new plans and initiatives to protect surface and groundwater quality and quantity.	a. Complete and implement riparian restoration action plan.	2017	Natural Heritage/ Watershed Planning	**Complete** ✓	Riparian AP approved by Board at Nov. 2017 meeting Regular reporting on % of watershed with adequate riparian corridors.
		b. Continue to promote wetland protection and restoration.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Numerous projects underway. Coastal wetland projects continue. NH staff participating in provincial Wetland Strategy.
		c. Secure municipal adoption of Ecologically Sensitive Groundwater Recharge Areas in municipal policy, guidelines and zoning.	Ongoing	Plan/Regs	**Ongoing**	Progress made in Oshawa's Official Plan Review. Dialogue has commenced with our watershed municipalities in their planned Official Plan conformity updates to implement the CTC Source Water Protection Plan(including Highly Vulnerable Aquifer and Significant Groundwater Recharge Area, and Intake Protection Zone mapping).
		d. Further develop CLOCA's benthic program.	2017	Natural Heritage/ Watershed Planning	**Complete** ✓	Addressed through CLOCA Integrated Monitoring Program.

		e. Implement CA Management Plan Restoration Actions.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Continue with tree planting at CA's, Canada 150 Project at Heber Down, Pit Rehab Plan underway – with restoration work to be initiated in late 2018
		f. Develop Stewardship Program to protect GW Q & Q focused on low impact development implementation and retrofits.	2019	Natural Heritage/ Watershed Planning	**Some Progress**	Rational prepared and budget proposal submitted to the Region includes to secure required staff resource.
		g. Develop & implement Restoration Prioritization Program.	2017	Natural Heritage/ Watershed Planning	**Good Progress**	To be completed following approval of Stewardship/Restoration Program funding.
		h. Develop updated stormwater and hydrogeological guidelines for development.	2018	Eng. Field Ops.	**Good Progress**	Project has been on hold pending release of anticipated provincial guidelines. Now unclear if provincial guidelines will be released. Staff will proceed with preparation of CLOCA guidelines for consideration by the Board in 2019.
11	Continue to implement a land protection and acquisition strategy to capitalize on assets, protect watershed health and improve public access.	a. Enhance efforts for land acquisition in and around all existing landholdings.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Ongoing discussions with landowners regarding potential acquisition. Preparing detailed acquisition plans for CAs
		b. Continue to work to seek partners to support implementation of the Lake Iroquois Beach Securement Strategy.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Continued efforts to establish funding needs.
		c. Continue to support public land acquisition through development approvals .	Ongoing	Plan/Regs	**Ongoing**	Significant achievement through CLOCA's plan review efforts in supporting municipal public land acquisition in urbanizing portions of the watershed in West Whitby

						(Heathwood Homes), Windfields in Oshawa (Tribute) and Courtice (Bonny Don) in Clarington.
12	Continue to monitor, manage and evaluate the health of our natural resources and implement management actions where and when necessary.	a. Continue to implement all annual monitoring programs including regular program evaluation & annual reporting.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Efforts continue to implement CLOCAs Integrated Monitoring Program.
		b. Identify and implement management actions arising from monitoring.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Focus has been on Coastal Wetlands Oshawa Second Marsh, McLaughlin Bay, Bowmanville, Lynde and Cranberry all receiving various amounts of management activity.
		c. Continue to support partnerships to impede the spread of invasive species.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Examples of support provided. Continued partnership discussions/workshops. Updated CLOCA Invasive Species Management Plan being prepared.
		d. Continue to implement invasive species management in CA's.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Continue efforts to removed garlic mustard at Purple Woods. Controlled 0.77ha of Phragmites at Heber Down CA and 1ac of Phragmites in Clarington. Mapped over 30ha of CA land for invasive species.
		e. Develop and adopt an integrated monitoring program for CLOCA.	2017	Natural Heritage/ Watershed Planning	**Complete** ✓	Integrated Monitoring Program adopted by Board in 2017.
13	Identify appropriate opportunities for enhanced use/revitalization/optimal use of CA owned facilities.	a. Undertake a conservation land management strategic planning program review, and user needs assessment/market analysis.	2019	Natural Heritage/ Watershed Planning	**Good Progress**	Project underway with community engagement occurring throughout 2018 and 2019.

		b. Updating existing CA management plans and continue to develop CA management plans for CA areas with strong public use.	2020	Natural Heritage/ Watershed Planning	No Progress	To be initiated following CA Master Plan project.
14	Continue to improve conservation areas by building capacity for land management and by investing in innovative public infrastructure as appropriate.	a. Enhance volunteer partnerships to help meet land management needs.	Ongoing	Community Engagement	**Ongoing**	Corporate partners include Ikea, TD Tree Days, RBC, CN Railway and Deloitte in Conservation Area tree plantings, trail and public use infrastructure projects.
		b. Undertake a conservation land management strategic planning program review, and user needs assessment/market analysis.	2019	Natural Heritage/ Watershed Planning	**Good Progress**	Project underway with community engagement occurring throughout 2018 and 2019.
		c. Updating existing CA management plans and continue to develop CA management plans for CA areas with strong public use.	2020	Natural Heritage/ Watershed Planning	No progress	To be initiated following CA Master Plan project.
		d. Continue to implement the recommendations identified in conservation area management plans and other conservation area management/planning documents.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Examples of implementation projects. Continue to work with partners in tree planting and trail restoration work at CA's and entrance improvements at Heber Down.
15	Develop a CLOCA Climate Change Adaptation and Mitigation Strategy.	a. Develop a CLOCA Climate Change Action Plan (CCAP).	2018	Natural Heritage/ Watershed Planning	**Complete** ✓	Did not receive funding from the Region. Alternatively, CLOCA will be making operating and purchasing decisions under the lens of reducing carbon emissions.
		b. Align CLOCA planning documents with CCAP.	2019	Plan/Regs	**Complete** ✓	CLOCA will be making operating and purchasing decisions under the lens of reducing carbon emissions.
		c. Begin implementing recommendations of CCAP.	2018	Natural Heritage/ Watershed Planning	**Complete** ✓	CLOCA will be making operating and purchasing decisions under the lens of reducing carbon emissions.
		d. Complete a hydrological assessment of climate change based on Environment Canada projections.	2016	Eng. Field Ops.	**Complete** ✓	Assessment complete. Climate change data is made available to consultants and used internally to review development proposals.

		e. Position CLOCA for carbon footprint offsets with Conservation Area projects.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Staff continue to be engaged with provincial and federal governments regarding possible offset opportunities.
Objective: Improve the Process						
16	Continue to innovate and improve effectiveness of the planning and permitting approvals process including: o Developing and implementing formal agreements with interested watershed municipalities to identify service level expectations and deliverables; and o Identifying and implementing opportunities to make the planning and permitting process more 'user friendly' and easier to navigate	a. Enter into new/updated Memoranda of Understanding on Planning and Regulation Services for all watershed municipalities.	2018	Plan/Regs	**Some Progress**	Efforts pending outcome of Provincial Plans Review, Excess Soil Management Policy Framework and Updates to Conservation Authorities Act of which active supporting work has been undertaken by CLOCA staff.
		b. Leverage Information Management System (IMS) to improve efficiency of permit administration.	Ongoing	Plan/Regs	**Ongoing**	Several refinements made to IMS: new Permit Forms to allow greater flexibility for staff to edit without administrative support, addition of list approved documents to permit template, ability to reassign tasks and standard internal circulation memos amongst other changes.
		c. Refine and innovate On-line mapping tool.	Ongoing	Plan/Regs	**Ongoing**	Updated boundary information from 2016 mapping update integrated into on-line mapping tool.
		d. Capitalize on CADIMS platform including electronic records storage.	Ongoing	Plan/Regs	**Ongoing**	Scanning of archived files and documents commenced in 2016.
		e. Investigate delegation of SWM approvals to CLOCA from MOEECC.	2017	Eng. Field Ops.	**Complete** ✓	Delegation is considered a low priority at this time within our watershed. Will continue to monitoring LSRCA pilot project.

17	Continue to develop best management practices as well as green building standards for new development and work with municipal partners to encourage implementation.	a. Prepare green infrastructure guidance document.	2017	Eng. Field Ops.	**Good Progress**	Project has been on hold pending release of anticipated provincial guidelines. Now unclear if provincial guidelines will be released. Staff will proceed with preparation of CLOCA guidelines for consideration by the Board in 2019. Staff continue to advance our understanding and application of green infrastructure.
		b. Promote application of innovative green infrastructure and Low Impact Development (LID) techniques through site by site and infrastructure, development review, planning policy and regulation.	Ongoing	Eng. Field Ops.	**Ongoing**	Staff continue to promote the application of LID through the review of development applications.
		c. Develop and promote database of completed green infrastructure projects and make publicly available	2017	Corporate Services	**Complete** ✓	Database completed - Green Infrastructure projects are being monitored and will results will be published in annual monitoring reports.
18	Collaborate with partners to monitor and find solutions to current and future issues affecting our watershed (eg management of excess soil).	a. Comment and participate in new Provincial Excess Soil Management Framework.	2018	Plan/Regs	**Complete** ✓	Staff have participated in each stage of the provincial process.
		b. Promote integrated and collaborative compliance and enforcement activities.	Ongoing	Plan/Regs	**Ongoing**	On-going communication with municipal engineering staff related to large fill issues including meetings with Whitby and Clarington staff. Undertook close collaboration with Township of Scugog and Whitby staff related to new proposed fill sites in the Townline Road area.
GOAL 3: Operate Responsibly & Sustainably **Objective: Be Financially Secure**						
19	Explore opportunities to maximize efficiency of service delivery.	a. Bench mark service delivery against other similar sized CAs and develop service delivery performance measures.	2017	CAO	**Complete** ✓	Service delivery performance measures incorporated into Strategic Plan Implementation Report for each ongoing tasks. In addition, as part of the amended CA Act, the Province has established a CA Service Delivery Review Committee, which will

						among other matters respond to this task.
		b. Monitor service delivery performance measures.	Ongoing	CAO	**Ongoing**	Delivery of Annual Strategic Plan Implementation Report Service delivery performance measures completed through staff performance review and strategic plan objectives.
20	Develop innovative revenue generation initiatives from both public and private sectors	Continue to seek public grant funding and form new private sector partnerships	Ongoing	CAO	**Ongoing**	CLOCA was successful in receiving a number of public grants in 2016 and 2017. New partnership with Durham Purchasing Co-operative Group and provincial public service procurement has resulted in lower costs for certain goods and supplies. New private sector partnerships established and several others are currently being considered.
21	Explore new business models to assist in funding costs associated with conservation area operations.	Work with the Region of Durham in partnership with Durham CAs to formulate a funding proposal and formula for CA land management costs	2016	Corporate Services	**Complete** ✓	Region of Durham approved a CA land management fund.
22	Maintain the fee schedule and rigorously secure payments in collaboration with municipal and key watershed partners.	Establish and maintain a fee schedule aimed at 100% cost recovery for corporate festivals (MSF, GWF)	Ongoing	Corporate Services	**Ongoing**	Completion of Annual Fee review Fees are reviewed and approved by the Board annually. Cost recovery continues to improve over time.
23	Explore opportunities to improve the effectiveness of the CLOC Fund to support fundraising and community engagement.	a. Consult with other CAs to identify successful models.	2018	CAO	**Complete** ✓	Discussions to date have focused on the merits of community citizen membership. Research indicates the value of community citizens Board of Directors of a Fund is mixed. The sole advantage appears to be in fund raising. However, staff resources to maintain citizen Fund Board of Directors is high. CLOCAs staffing is better directed to existing program and services.
		b. Investigate hosting annual fundraiser gala for CLOC fund.	2018	CAO	**Complete** ✓	Staff will be recommending a series of celebration events throughout 2018

						as opposed to a gala dinner. Staff will continue to investigate the feasibility of a new annual fundraiser event.
Objective: Be More Efficient and Effective						
24	Review decision-making policies and tools with a view to improve efficiency and effectiveness.	Ensure all Board approved corporate policy documents are reviewed at a minimum of 5 year intervals	Ongoing	CAO	**Ongoing**	New Board Administrative Policies and Meeting Procedures By-law approved in 2018.
25	Modernize data management and accessibility and get more products to the public via the CLOCA website.	a. Enhance Web accessibility for citizen engagement interactions Online analysis and data dissemination.	Ongoing	Corporate Services	**Ongoing**	Open Data Portal – January 2018 Continual effort to enhance software to make data more interactive. Volunteer Application Form enhanced and more accessible Turtles for Tomorrow Web Application provided members of the public an interactive turtle reporting application.
		b. Leverage monitoring data to provide user friendly maps and tools for the partners and public.	2016	Corporate Services	**Complete** ✓	Framework for CLOCA information portal is in place. Examples of user friendly mapping products include regulation limits, precipitation and groundwater data.
26	Work with municipal partners to strengthen collaboration and enhance the use of new technologies in development application and approvals processing.	Investigate the potential for providing access to partners for submitting, reviewing and providing access to the status of plan review and regulation requests.	2017	Plan/Regs	**Complete** ✓	Communicated in December 2016 to municipal staff that electronic copies of submissions are welcome along with paper copies. Advancement of new technologies is an on-going effort.
27	Continue to identify additional opportunities to share resources and services with watershed municipal partners and adjacent Conservation Authorities (CAs).	a. Identify resource and service gaps and consult with adjacent CAs regarding potential sharing of resources.	Ongoing	CAO	**Ongoing**	CLOCA shares forestry staff resources with GRCA. No other service gaps have been identified that could be addressed through sharing of resources with other CAs.
		b. Continue to promote and Shared Services Agreement for Application Development.	2017	Corporate Services	**Complete** ✓	Shared service IMS agreements are in place with 5 conservation authorities.
28	Establish a corporate culture, processes, policies and practices that support innovative thinking, staff recruitment	a. Develop a staff successional policy.	2016	CAO	**Complete** ✓	Board approved Successional Policy in June 2016.

	and retention, information and knowledge transfer, staff training, professional development and successional planning.	b. Enhance staff performance management reviews to reflect Strategic Plan Implementation.	2016	CAO	**Complete** ✓	Staff performance review forms have been refined to reflect Strategic Plan priorities.
		c. Develop corporate culture framework aimed at building an effective and healthy workplace.	2018	CAO	**Complete** ✓	Staff performance review forms reflect corporate values identified in Strategic Plan. Annual staff performance reviews will reinforce effective and healthy workplace.
		d. Advance Staff skills, knowledge & capacity through continuous education and skill improvement.	Ongoing	CAO	**Ongoing**	Revised staff performance review forms to address continuous improvements. Formed partnership with Region of Durham to access staff development training
GOAL 4: Collaborate & Partner **Objective: Strengthen Existing Partnerships**						
29	Strengthen existing partnerships with watershed stakeholders, industries and groups to support greater linkages with Conservation Authority (CA) lines of business.	a. Continue working with specific agencies to promote CLOCA projects and work.	Ongoing	Community Engagement	**Ongoing**	To date working with Fatal Light Awareness Program, Toronto Zoo, YMCA Summer Camp, DAAC, DEAC, Ducks Unlimited Canada, Ontario Turtle Conservation Centre, Speaking of Wildlife, Windreach Farm, Scugog Shores Museums, Oshawa Community Museum, Soper Creek Wildlife Rehabilitation, UOIT
		b. Message CLOCA's value to healthy living and community livelihood.	Ongoing	Community Engagement	**Ongoing**	Partnered with Conservation Ontario to deliver message through media. Increased community partnerships assisted in delivery of message.
30	Establish new approaches for meaningful engagement with municipal staff and elected officials.	a. Biannual present annual report to municipal councils.	Ongoing	CAO	**Ongoing**	Presentations delivered in 2016. Planned presentations for 2018
		b. Establish Annual meetings with municipal staff to discuss programs and services.	Ongoing	CAO	**Ongoing**	CLOCA staff continue to meet with municipal staff on a regular basis.

31	Complete a municipal staff training needs assessment and deliver technical workshops on a range of watershed-specific issues (e.g. LID, stormwater)	a. Review training needs and topics with municipal partners.	2017	Eng. Field Ops.	**Complete** ✓	Following meetings with municipal Staff, a framework for determining training needs has been developed.
		b. Develop CLOCA workshop series.	2017	Eng. Field Ops.	**Complete** ✓	Following meetings with municipal Staff, a framework for determining training needs has been developed. LID Workshop held in 2017 and 2018 with more planned.
32	Continue to partner with community-based and government organizations to enhance watershed health and function through research and support for restoration and stewardship initiatives.	a. Ensure ongoing engagement with partners in restoration projects.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Examples of engagements. Continue to reach out to partners for coastal wetland restoration – DUC, Muni (3), ENGO's (2), MTO, UOIT, Corporations (St. Mary's and contractors)
		b. Continue to study watershed water quality in partnership with municipalities and academic institutions.	Ongoing	Eng. Field Ops.	**Ongoing**	Continued partnership between UOIT/City of Oshawa/CLOCA for Oshawa Creek water quality monitoring.
Objective:	**Build New Alliances and Create Connections**					
33	Identify opportunities and secure resources to establish new non-traditional partnerships including partners who may have resources to share and a desire to optimize the use of these resources through collaboration.	a. Research potential for academic institutions to assist with research and short term projects.	2018	Community Engagement	**Complete** ✓	Staff have engaged academic institutions in a number of programs related to water quality, aquatic health and information sharing. Efforts to establish additional partnerships will continue.
		b. Research corporate involvement with lands management and development.	2018	CAO	**Complete** ✓	A number private corporations and companies were invited to participate in funding opportunities with no success. Efforts will continue.
34	Explore and identify opportunities for capacity building with partner agencies by considering reciprocal staff exchanges and secondments.	Initiate discussions with potential partners.	2017	CAO	**Complete** ✓	Discussions with potential partners did not identify any current opportunities. Internal process established to examine capacity building on an annual basis through staff performance reviews.

35	Identify opportunities to encourage more community involvement and to engage those who are not currently connected to the watershed by: o Enhancing our Volunteer Network Program to cultivate and expand the current base of stewards and watershed champions; o Consider the creation of a CLOCA Watershed Roundtable/ Advisory Panel with diverse stakeholders to provide advice and guidance on watershed-related issues; o Expanding community events and family-focused learning.	a. Continue to reach out to the watershed community to establish new partnerships.	2018	Community Engagement	**Complete** ✓	To date we are partnering with Ikea, Rogers Media, Autism Ontario, Toronto Zoo, Whitby Doors Open, Envirothon & Durham Counties Tourism. Staff continually seek new partnerships and alliances to advance watershed health.
		b. Research the merits of establishing citizen advisory committee for CLOCA and prepare a recommendation to the Board of Directors.	2017	CAO	**Complete** ✓	Discussions occurred with Durham Agricultural Advisory Committee regarding Agricultural involvement/engagement with CLOCA and the Board. There was no desire from DAAC to establish a formalized advisory Committee. Rather CLOCA agreed to engage DAAC on an as needed basis.
GOAL 5:	**Advance Watershed Science & Knowledge**					
Objective:	**Get the Answers**					
36	Support and enhance data collection, monitoring and research to fill current knowledge gaps, including gaps related to climate change.	a. Conduct gap analysis through integrated monitoring program development.	2016	Natural Heritage/ Watershed Planning	**Complete** ✓	Internal and external gap analysis complete.
		b. Implement measures to fill knowledge gaps.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Through integrated monitoring program, continue to identify and address gaps - having consideration for available funding.
		c. Conduct regular needs assessment and implementation of data management, modelling capacity, storage & equipment to ensure monitoring, assessment & reporting needs are fulfilled.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Development of Integrated Monitoring Plan will inform this action item. After 2017 field season can conduct needs assessment (adaptive management). Identified need for terrestrial database.
		d. Undertake continuous improvement and advancement of integrated monitoring programs.	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Annual review and reflection component in Integrated Monitoring Plan.

37	Support monitoring of mitigation and adaptation efforts to understand progress and share lessons learned.	Adopt a program to evaluate success of restoration efforts	2018	Natural Heritage/ Watershed Planning	**Some Progress**	To be completed following approval of funding for the Stewardship/restoration program.
38	Explore opportunities to understand the ecological value of our watershed's goods and services.	a. Complete Ecological Goods and Service Action Plan.	2017	Natural Heritage/ Watershed Planning	**Complete** ✓	Board report presented and endorsed in fall 2017.
		b. Adopt environmental compensation protocol.	2017	Natural Heritage/ Watershed Planning	**Good Progress**	On-hold. Anticipate future release of provincial and agency guidance documents.
39	Invest in information technologies, modelling and innovative tools to improve the science and understanding of the current and future state of natural resources within our watershed.	Leverage and transform existing monitoring reports into an interactive science discovery tool for partners and the public	2018	Corporate Services	**Complete** ✓	Watershed Story Map completed and available on website.
Objective: Share the Knowledge						
40	Explore opportunities to advance citizen science to undertake monitoring.	a. Conduct peer review of use of citizen science for informing agency level of knowledge.	2018	Natural Heritage/ Watershed Planning	**Complete** ✓	The work completed through the 2018 Bioblitz confirmed that a level of expertise is required to add value to scientific monitoring. CLOCA will pursue similar models in the future
		b. Undertake pilot program to test relevance of citizen knowledge.	2019	Natural Heritage/ Watershed Planning	**Complete** ✓	2018 Bioblitz took part in CLOCAs watershed and provided for an opportunity to peer review citizen science
		c. Look for opportunities to engage citizen opportunities to improve awareness and understanding of the work we do.	Ongoing	Community Engagement	**Ongoing**	A number of new partnerships have been established. Developed Augmented Reality Sandbox facilitating citizens understanding of watersheds, topographic maps, landforms and geology and hydrology. Citizen Bioblitz held in 2018.

41	Identify and share knowledge, data, science and practices that community partners can use in their efforts to protect and enhance the watershed and to inspire positive actions and outcomes.	Develop, implement and showcase pilot projects to foster innovation	ongoing	Community Engagement	**Ongoing**	Planning a bird migration mortality reduction program for our watershed in partnership with FLAP for new and existing construction with focus on residential and corporate implementation.
42	Increase knowledge of the Authority's data warehouse, tools and capacity and broaden access to data and information.	Develop mechanism to access information in support of other departments	2017	Corporate Services	**Complete** ✓	Geocortex Web Mapping in place. Metadata Application (Website and Database)-Launched January 2018 Open Data Portal and tools-Launched January 2018.
43	Make information available to the general public in a format that is easy to access and understand.	Enhance CLOCA Information Portal - Story Maps, Maps, Online Analysis and Reporting	2017	Corporate Services	**Complete** ✓	Geocortex Web Mapping in place. Continual advancements in user-friendly mapping products will be on-going.
44	Identify additional opportunities to share knowledge and information with partner organizations and adjacent CAs, including the use of citizen science and the application of new technologies.	a. Promote staff participation on Conservation Ontario's working groups, technical committee and networking groups	Ongoing	CAO	**Ongoing**	Internal process established to consider involvement through the annual staff performance review.
		b. Leverage Shared Services Agreement for Application to provide the mechanisms for sharing	2017	Corporate Services	**Complete** ✓	Shared service agreements are in place with 4 conservation authorities. We continue to enhance shared IT services.
45	Continue to use science to develop and implement watershed plans and related management plans.	a. Conduct regular review and evaluation of integrated monitoring program	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Completion of annual review Annual reflection and review component developed.
		b. Report on watershed health to inform watershed resiliency and cumulative effects	Ongoing	Natural Heritage/ Watershed Planning	**Ongoing**	Annual reports on Integrated Monitoring Program will be completed.

REPORT
CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: January 15, 2019

FILE: **PSSG4177, PSSG212**

APPROVED BY C.A.O. CD

S.R.: 5617-19

TO: Chair and Members, CLOCA Board of Directors

FROM: Chris Darling, Chief Administrative Officer

SUBJECT: **Port Darlington Shoreline Management Status Update and proposed Next Steps**

Purpose

This report provides a summary of the status of the work completed to date on the Port Darlington Shoreline Management Study and recommends timelines for next steps.

Background

At the September 19, 2017 Board Meeting, the Board received Staff Report #5538-17 describing the natural hazards impacting the Port Darlington Community and approved the following recommendation:

Res. #58/17, of September 19, 2017

"THAT staff take the necessary actions to complete the Port Darlington (West Shore) Damage Centre Study in consultation with the requested working committee as soon as practicable;
THAT the firm of Aqua Solutions be retained to complete the study work as per the previously approved Terms of Reference, amended to address issues associated with Climate Change, recent historic water levels, Sediment Transport, Current Provincial Policy Direction, Updated Mapping and further assessment of potential options to address risks associated with natural hazards;
THAT CLOCA staff be directed to report back to the Board of Directors with the completed study with options for implementation in conformity with the recommendations of the study and provincial Great Lakes shoreline natural hazard management policy;
THAT the Council of the Municipality of Clarington be so advised in response to Resolution C-203-17."
CARRIED

Attachment 1 is a copy of SR #5538-17 that describes in detail the context of the natural hazards within the Port Darlington area.

Summary of Work Completed

March 3, 2018: A Public Meeting was held to:

- introduce the 2018 Shoreline Study and the Consulting Team;
- share background information about the Shoreline Study, the process, timing and deliverables; and,
- allow participants to share concerns, ideas and solutions related to shoreline issues and to ask questions about the Shoreline Study.

Prior to the March Public Meeting, a newsletter was released that provided information and frequently ask questions and answers (Attachment 2). A survey was also posted on our website in order to obtain comments from the community.

Cont'd

October 2018: A second newsletter was issued that provided an update on the work completed as well as a summary of the comments and feedback received at the March 3, 2018 Public Meeting (Attachment 3).

December 1, 2018 A second Public Meeting was held to present the findings of the draft reports completed to date and to receive feedback.

December 14, 2018 Draft Reports for the Port Darlington Shoreline Management Study were posted on CLOCA's website with a request for public comments by January 18, 2019. The draft reports include:

- Draft Port Darlington Community Shoreline Management Plan: Report on Flooding - Nov. 2018, CLOCA
- Draft Port Darlington Shore Protection Concepts - Nov. 2018, Baird Engineering
    - Draft Proposed Port Darlington (West Shore) Shoreline Management Report – Dec. 14, 2018, Aqua Solutions 5 Inc.
    - Appendix B - Draft Port Darlington Community Shoreline Management Plan: Report on Flooding - Nov. 2018, CLOCA
    - Appendix E - Clarington Flood Response Plan
    - Appendix F - CLOCA Staff Report #5538-17

The recommendations of the draft Reports are summarized as follows:

- There are multiple natural hazards from Lake Ontario and river systems that vary in severity across the study area.
- Mitigation of Lake Ontario flooding is not feasible (some wave uprush protection may be possible).
- Four preliminary Lake Ontario Shoreline Erosion mitigation measures are identified with an opinion of probable costs ranging from 4 million to 16 million dollars.
- Riverine flood risk can be reduced for the more frequent events with raising West Beach Road and Cedar Crest Beach Road, however this will not mitigate major storm events and unsafe flood conditions will continue to exist.
- Voluntary acquisition of certain lands recommended based on risk to people.
- Development regulation proposed to maintain existing development but prevent additional development with some exceptions based on scale and risk.
- Private protection works to be permitted in appropriate areas.

A new online comment form was also posted on our website for the purpose of receiving feedback.

Next Steps

It is recommended that the following timeline be approved for the purpose of completing the Study authorized by the Board in September 2017:

January 18, 2019:	Deadline for comments on the draft reports
Early February 2019:	Consulting Team to Finalize Study Work based on feedback received and Execute Marsh Overflow Maintenance Plan Agreement
March 19, 2019:	Recommendations report presented to CLOCA Board including a summary of public input and implementation options
Spring 2019 and Beyond:	Recommendations report to Clarington Council and follow-up/implementation of decision from Board of Directors and Clarington Council

Cont'd

FILE: PSSG4177, PSSG212 January 15, 2019
S.R.: 5617-19

RECOMMENDATION:
THAT the timelines outlined in Staff Report #5617-19 for the completion of the Port Darlington Shoreline Management Plan be approved.

CD/ms
Attach. #1 SR #5538-17
#2 Newsletter – Information and FAQ
#3 Newsletter - Comments and Feedback

REPORT

CENTRAL LAKE ONTARIO CONSERVATION AUTHORITY

DATE: September 19, 2017

FILE: PSSG4177, PSSG212

APPROVED BY C.A.O.

S.R.: 5538-17

MEMO TO: Chair and Members, CLOCA Board of Directors

FROM: R. Perry Sisson, Director, Engineering and Field Operations
Chris Jones, Director, Planning and Regulation

SUBJECT: **Lake Ontario Shoreline Management at Port Darlington, Municipality of Clarington**

Purpose

This report describes matters related to Lake Ontario shoreline management and makes recommendations, specifically with respect to the Port Darlington area, in the context of the reimergence of shoreline management issues due to the historically high Lake Ontario water levels experienced this year, and associated resolutions taken by the Council of the Municipality of Clarington and issues raised by affected residents. The finalization of the *Port Darlington (West Shore) Damage Centre Study* is recommended in order to provide a science-based analysis upon which the consideration of further actions to address shoreline management issues in the Port Darlington area may be evaluated.

Background and Historical Context

Environmental Setting and Natural Hazards

The Port Darlington area that is the subject of this report is located along the north shore of Lake Ontario in the Municipality of Clarington. Both the Westside Creek watershed and Bowmanville Creek watersheds drain into Lake Ontario along this stretch of shoreline. The Westside Creek flows through the Westside Provincially Significant Coastal Wetland Complex (Westside Marsh) before passing through a barrier dynamic beach system and then to the lake. Similarly, the Bowmanville Creek flows through the Bowmanville Provincially Significant Coastal Wetland Complex and along a barrier dynamic beach before entering Lake Ontario via the Port Darlington harbour entrance. Portions of both barrier dynamic beaches and the Bowmanville Marsh are recognized as a provincially significant Area of Natural and Scientific Interest (ANSI). CLOCA's Bowmanville/Westside Conservation Area contains the majority of the coastal wetland areas. (Attachment No 1. to this report provides a context map for the area.)

This ecologically important landscape also contains several significant, overlapping and cumulative natural hazards to people and property endemic to the interface between riverine systems and Great Lake shorelines:

Flooding Hazards:

The *Watershed Flood-Risk Assessment* (CLOCA, 2017) evaluated 92 flood damage centers within the CLOCA watershed including the West Beach and Cedar Crest Beach communities within the Port Darlington area. The Flood-Risk Assessment evaluated each flood damage center based upon vulnerability to flood damage, likelihood of flood damage, social impacts, business disruption, and environmental impacts. Both of the Port Darlington communities have above average flood-risk scores and were ranked as 6th and 19th out of the 92 total damage centers in the CLOCA watershed. These communities are prone to flooding from both riverine and Lake Ontario sources.

- Riverine Flooding: Both the Westside Creek and Bowmanville Creek will inundate upstream valleylands, the coastal wetland areas, and the barrier dynamic beach areas in the event of a regulatory flood – and at more frequent and less severe flooding events as well. Depths of flooding at a regulatory storm, as mapped by CLOCA's engineered flood plain mapping, indicate that flood depths along the developed barrier dynamic beaches along Cedar Crest Beach Road and West Beach Road range from 0.7m to 1.5m.

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- Lake Ontario Flooding: Lands adjacent to Lake Ontario along the developed barrier dynamic beaches, and the coastal wetland further beyond inland, are vulnerable to inundation from Lake Ontario water levels. In addition, high water levels causing flood impact may be worsened along the shoreline due to Wind Setup (prevailing wind direction facing the shoreline that further elevates water levels) and Wave Uprush (wave action at the shoreline that also further elevates water levels). Lake Ontario flooding is based on the 100-year peak instantaneous water level plus and allowance for wave run-up. At Port Darlington, the 100-year flood limit value is 76.27 meters, International Great Lakes Datum. The developed barrier dynamic beaches along Cedar Crest Beach Road and West Beach Road are at elevations between 76 and 77 meters, resulting in flood depths of 0 to 0.3 meters.

Erosion Hazards:

- Dynamic Beach and Barrier Dynamic Beach Hazards: Dynamic beaches are beaches that are constantly changing due to wave and water level conditions. Long-term erosion of a beach occurs when the volume of beach sediment being supplied to the area is less than the volume of sediment being removed from the area. Beach shorelines can recede and accrete over the short-term due to changes in the wave climate and water levels. In these instances, beach material is temporarily eroded from the beach and deposited in the nearshore and will be returned to the beach over time. This dynamic aspect of beaches can be considered differently from the long-term erosional effects.

  Any development within the dynamic beach, including structures to protect buildings on or along the dynamic beach, will interfere with the natural ability of the beach to adjust to its natural processes. In the Port Darlington area there are two types of dynamic beaches: Barrier Dynamic Beach Systems and a Dynamic Beach backed by a Cliff or Bluff.

  The Barrier Dynamic Beaches are the most hazardous form of dynamic beach and are located along Cedar Crest Beach Road and West Beach Road. The spatial extent of the dynamic beach extends from the Lake Ontario bed landward to the toe of slope within the coastal wetland, meaning that all of the private residential lots on these two roads are completely within the dynamic beach hazard.

  Along Cove Road there are sections of dynamic beach, which are backed by a bluff and table lands further inland. In this area, the dynamic beach hazard ends at the toe of the bluff.

- Bluff Erosion: Portions of the Port Darlington area that contain bluffs are subject to the gradual erosion of the bluff slope due to the action of water over time. The extent of the erosion hazard is determined by calculating a stable slope allowance plus an average annual recession rate of the slope projected to allow for 100 years of future slope recession. Any development within this area is vulnerable to erosion hazards.

The physical features and processes described above are recurring and somewhat predictable in the Great Lake shoreline and riverine environments that exist in the Port Darlington area. Historic development patterns make these areas natural hazards that pose significant risk to human life and property.

Historic development patterns in Port Darlington

Subdivision of the original Township of Darlington survey lots for shoreline residential development in the Port Darlington area west of the harbour entrance began in the early 20th Century with the registration of Plan No. 106 in March 1917. Registered Plan 106 created 11 lots and a 'beach reserve' block along the shoreline at what is now the south side of Cove Road immediately west of West Beach Road. Subsequent plans of subdivision were registered in 1921, 1922, 1924, 1932, 1933 and 1962. The registration of these plans had the effect of creating a continuous band of residential lots along Lake Ontario between the Waverly Road allowance in the west to the Port Darlington harbour entrance in the east. It is understood that lots were initially developed as seasonal recreational dwellings. Over time, most lots have been redeveloped with larger dwellings, accessory structures and have become permanent residences.

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Of note is the fact that each plan of subdivision, with the critical exception of Registered Plan 318—which created the lots along the south side of Cedar Crest Beach Road in 1932—did not establish residential lot boundaries directly abutting the surveyed water's edge. These plans provided for open space blocks, beach blocks, or beach 'reserves' between the shoreline and the rear lot boundary thereby allowing some buffer against changes to Lake Ontario water elevation and beach configuration.

Over time, some owners have encroached upon the littoral zone associated with the Lake Ontario shoreline by acquiring the former beach reserve blocks by extending their lots to the water's edge (a process that uses a mid-19th Century Common Law precedent related to riparian rights outside of normal *Planning Act* controls for lot additions). This has had the effect of increasing the vulnerability of the lots to flooding and erosion hazards associated with the lake.

Currently, there are approximately 39 dwellings on Cedar Crest Road, each with shoreline protection works of some kind extending along the length of properties at the shoreline except for one parcel. There are 17 dwellings facing the shoreline on Cove Road, with two parcels having shoreline protection works. On West Beach Road there are approximately 22 dwellings facing Lake Ontario, none of which appear to have shoreline protection works.

In addition to shoreline residential development, significant industrial development has taken place in the Port Darlington area with the establishment and expansion of the St. Marys Cement facility (now operating as Votorantim Cimentos/St Marys Cement). Operations began in 1967-68 with lake filling for a docking facility taking place between 1974 and 1979 under approval by senior levels of government. Expansions to both the shoreline docking facility and the quarry took place in the 1990's following further approvals by senior levels of government. Related agreements to facilitate the retention of a portion of Westside Marsh and transfer were secured through an agreement known as the *Principles of Understanding Between Blue Circle Canada Inc. and the Municipality of Clarington on the Implementation of the Recommendations of the Waterfront Regeneration Trust Report on Westside Marsh*. This document outlined arrangements for the diversion of the Westside Creek, enlarged extraction limits within West Side Marsh and the establishment and operation of a Marsh Overflow Channel, which was designed and implemented to compensate for the reduction in marsh floodwater storage as a result of the expansion of the extraction area into the marsh. The development and enlargement of the docking facility has changed the configuration and location of the Lake Ontario shoreline, whereas the enlargement of the extraction area and overflow channel has changed the configuration and location of the regulatory storm flood plain associated with Westside Creek.

Previous Shoreline Studies

Numerous studies have been commissioned in the past to study the northern shoreline of Lake Ontario at various scales, including the Port Darlington area, by public sector bodies.

Royal Commission on the Future of the Toronto Waterfront

At the federal level, in 1988, The Honourable David Crombie was appointed to lead a Royal Commission on the Future of the Toronto Waterfront. He was appointed at the provincial level for the same purpose in 1989. The provincial appointment included a mandate "to inquire and recommend waterfront related initiatives to preserve and enhance the quality of the environment and the quality of life for people residing in the greater metropolitan area extending from the eastern boundary of the Region of Durham to the western boundary of the Region of Halton." The final report, entitled *Regeneration*, called for a Greater Toronto Area-wide shoreline regeneration agency and plan along with an ecosystem focus for land use planning across the region. The report also made specific recommendations related to each local geography along the northern Lake Ontario shoreline.

For Clarington, *Regeneration* recommended that the municipality update its Official Plan and comprehensively study the waterfront area to address shoreline development, as the municipal Official Plan at that time did not include policies

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or land use designations for the waterfront. With respect to CLOCA, the commission recommended "…CLOCA … continue to review relevant documents including official plans, secondary plans and other waterfront-specific plans to ensure they incorporate [an] ecosystem approach…and participate in preparing the proposed [Greater Toronto-wide] shoreline regeneration plan. With respect to St. Mary's Cement, the report noted the concerns of nearby residents to the development, including storm drainage as well as shoreline erosion. Finally, the report prescribed "constraints on certain development activities in order to ensure a healthy, resilient, productive shoreline with increased aesthetic, social and economic value to the community."

Lake Ontario Shoreline Management Plan (Sandwell Report)

CLOCA in partnership with the Ganaraska and Lower Trent Conservation Authorities commissioned a coastal engineering study to provide shoreline management direction for their respective reaches of Lake Ontario Shoreline. The consulting firm of Sandwell Swan Wooster Inc. was retained to prepare the *Lake Ontario Shoreline Management Plan*, which was completed in December of 1990 (Sandwell Report).

The Sandwell Report: inventoried existing structures on the shoreline; reviewed coastal processes on the shoreline; defined flood and erosion limits for the study area; identified concentrations of natural hazards in conflict with existing development in specific shoreline 'Damage Centres;' reviewed environmentally sensitive areas; shoreline protection concepts and land use considerations. The report made 11 specific conclusions and recommendations, which are reproduced as Attachment No. 2 to this report.

The Port Darlington area was identified in the Sandwell Report as a specific shoreline Damage Centre. The report made specific recommendations related to potential responses including construction of a dyke, beach widening and/or acquisition of the entire beach area. However, these 1990-era recommendations must be qualified in that they were made in the absence of the required local site-specific study and before the provincial Great Lakes shoreline natural hazard policy statements existed. Attachment No. 3 to this report reproduces the text in full.

CLOCA is currently working with the Ganaraska Region and Lower Trent Region Conservation Authorities on a National Disaster mitigation Program funding proposal to conduct an update to the Sandwell Report. See Staff Report #5536-17 in the agenda package for reporting related to this project.

Draft Port Darlington (West Shore) Damage Centre Study

In furtherance of the Sandwell Report analysis, and subsequent to the issuance of Great Lakes natural hazard policy direction issued under the *Planning Act*, in November of 2003 CLOCA commissioned the coastal engineering firm of Aqua Solutions to study the Port Darlington area shoreline damage centre. The aim of the study was to gain a more precise and specific understanding and spatial delineation of the various natural hazards present. The report was also intended to articulate the provincial Great Lakes natural hazard policy directions for dynamic beaches, shoreline flooding and erosion in the Port Darlington context to assist in the development and implementation of a practical approach for detailed CLOCA regulation policies for the area.

A draft report was completed in March of 2004, which was presented to the Board at its meeting of April 20, 2004 and received for information. The draft report reviewed and described each of the Great Lakes shoreline natural hazards present in the context of the *Provincial Policy Statement*, 1997 and made draft policy recommendations that were intended to be finalized and used to inform CLOCA's decision making on development proposals. However, the *Port Darlington (West Shore) Damage Centre Study* was never finalized and was never brought before the Board for adoption and subsequent implementation.

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Waterfront Regeneration Trust Report on Westside Marsh

At the request of the Municipality of Clarington and St. Marys Cement Corporation, with the support of the Port Darlington Community Association and CLOCA, the Waterfront Regeneration Trust helped find a resolution to St. Marys Cement's approved plans for the excavation of the entire Westside Marsh as a limestone quarry. The Waterfront Trust held a series of community meetings and subsequent working groups of stakeholders to explore options and hear expert information. After two years of work, the Waterfront Trust's plan, in summary, provided for:

- Protection of most of the Marsh and achievement of "no net loss" of overall habitat;
- Moving the CBM stone crushing plant away from residents;
- Creating 120 acres of open space dedicated to CLOCA out of lands previously zoned Industrial for the quarry and other industrial uses; and,
- Closing Waverley Road and providing another access to Cedar Crest Beach residents from Cove Road.

All parties involved in this compromise to save the most productive portion of the Westside Marsh and to reduce major irritants for area residents then worked for another two years to detail the implementation plans and obtain senior government approvals for construction. The solution was a great benefit to save a key natural heritage features that came at a significant expense to Clarington and St. Marys Cement.

Evolution of Great Lakes Shoreline Natural Hazard Policy and Regulation

Provincial Land Use Planning Policy

The Province of Ontario first issued Great Lakes shoreline natural hazard policy via the *Comprehensive Set of Policy Statements* in 1994, which took effect for the purpose of decision-making under the *Planning Act* in March 1995. These policies introduced a prohibition on development within the dynamic beach hazard, limited development within the shoreline flooding and erosion hazards and, with modifications, have been carried forward in the subsequent *Provincial Policy Statement* of 1996-7, 2005 and 2014.

The current *Provincial Policy Statement, 2014* establishes a strong obligation on development decision-makers for the protection of public health and safety with the following statements of provincial policy for Great Lakes shoreline natural hazards (emphasis added):

"Ontario's long-term prosperity, environmental health and social well-being **depend on reducing the potential for public cost or risk** to Ontario's residents **from natural or human-made hazards**.

Development shall be directed away from areas of natural or human-made hazards where there is an unacceptable risk to public health or safety or of property damage, and not create new or aggravate existing hazards.

Accordingly: development shall generally be directed to areas outside of: hazardous lands adjacent to the shorelines of the Great Lakes… which are impacted by flooding hazards, erosion hazards and/or dynamic beach hazards; hazardous lands adjacent to … stream … systems which are impacted by flooding hazards and/or erosion hazards…

Development and site alteration shall not be permitted within: the dynamic beach hazard; … **areas that would be rendered inaccessible to people and vehicles** during times of flooding hazards, erosion hazards and/or dynamic beach hazards, unless it has been demonstrated that the site has safe access appropriate for the nature of the development and the natural hazard; **and a floodway regardless of whether the area of inundation contains high points of land not subject to flooding**.

Planning authorities **shall consider the potential impacts of climate change that may increase the risk associated with natural hazards**."

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CLOCA Regulatory Authority

CLOCA's regulatory powers under Section 28 of the *Conservation Authorities Act* prior to 2006, as implemented through the former Ontario Regulation 145 were not specifically designed for the Great Lakes shoreline and were focused on flooding hazards associated with riverine systems (in this context flooding associated with the Westside Creek and Bowmanville Creek). Under the former Ontario Regulation 145, the tests for approval did not include dynamic beaches and were limited to "the control of flooding or pollution or the conservation of land."

In the spring of 2006 with the enactment of CLOCA's current regulation, Ontario Regulation 42/06, CLOCA's regulatory powers were enhanced to deal specifically with Great Lakes shoreline hazards and to more closely align with provincial natural hazard management imperatives established under the *Planning Act* and *Provincial Policy Statement*. Ontario Regulation 42/06 establishes a prohibition on development in the absence of a permit on all lands adjacent or close to the shoreline of Lake Ontario based on the shoreline hazard mapping prepared as part of the Sandwell Report. Presently, CLOCA has the ability to evaluate development proposals against the following expanded set of statutory tests: "the control of flooding, erosion, dynamic beaches, pollution or the conservation of land."

Previous CLOCA Permits

Many owners of shoreline properties in the Port Darlington area have previously obtained permits from CLOCA for development activities associated with structural improvements/enlargements to dwellings, replacement dwellings, and the construction of accessory buildings, such as garages and the establishment or repair of shoreline protection works. These permits have been approved by CLOCA's Board of Directors directly or through delegated staff authority within the context of municipal zoning that authorizes single detached dwellings and accessory structures on the lands. CLOCA's objectives in providing permit approvals have been to mitigate the risk to people and property to the extent possible given the hazardous context by ensuring that new construction is flood protected from both riverine and lake regulatory flood levels and by siting new construction away from the shoreline to the extent possible. Most permit approvals have included a requirement that owners agree to 'save harmless' CLOCA for the approval in recognition that permits did not eliminate risks to people and property from natural hazards, including the lack of safe access for the area.

CLOCA Planning and Regulation Policy

CLOCA obtained comprehensive board-endorsed policies for the review of development applications and permit applications in April of 2013 when the Board approved the *Policy and Procedural Document for Regulation and Plan Review* (PPD). The PPD consolidated previous CLOCA planning and permit review practices that had evolved over time into one document for the purpose of guiding CLOCA's review, commentary and advice on planning applications and environmental assessments. The PPD was also designed to provide policy directions for decision making for permit applications under the newly expanded regulatory authority provided by Ontario Regulation 42/06.

Chapter 4 of the PPD provides policy direction for Great Lakes shoreline hazards. Policy direction was incorporated into the PPD specifically for the Shoreline Flood Hazard, the Shoreline Erosion Hazard, the Dynamic Beach Hazard and Lake Ontario Shoreline Protection Works (such as seawalls and revetments) using policy guidelines for conservation authorities established by the provincial government and Conservation Ontario.

The policy direction established in the current PPD seeks to identify and manage risks in a pragmatic fashion, particularly where existing development is present. For example, minor additions to existing buildings/structures may be permitted in the Shoreline Erosion Hazard "if it has been demonstrated to the satisfaction of CLOCA that: there is no feasible alternative site outside of the erosion hazard" in addition to the application of several other criteria. With respect to dynamic beaches, the PPD provides that "new development" is only permitted in accordance with section 4.1.5 of the policy document, which only permits reconstruction of an existing building/structure within the shoreline dynamic beach hazard, subject to conditions that among other maters ensures that the reconstruction will result in a lower risk of hazards.

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For Great Lakes shoreline hazards, the PPD provides 'generic' policy direction for the entire Lake Ontario shoreline within CLOCA's jurisdiction and does not make specific geographic distinctions, such as for the Port Darlington area, where there are multiple overlapping natural hazards present with a long history and intensity of established development patterns.

Municipality of Clarington Planning and Regulation Policy

Both the Municipality of Clarington Official Plan and Comprehensive Zoning By-law are critical tools with respect to Great Lakes shoreline natural hazards and have been amended over time in this respect. The first zoning by-law for Darlington Township, approved in 1959 and the first zoning for Bowmanville, approved in 1957, zoned the waterfront lands in Agricultural/Rural zones. In addition to agricultural uses, single detached dwellings were permitted. In addition, the Darlington Township zoning by-law permitted seasonal cottages.
The first zoning bylaw enacted after amalgamation under Regional government was Comprehensive Zoning By-law 84-63, which was approved by Council on September 10, 1984.

During the preparation of the draft By-law, the majority of the shoreline was initially placed within an Environmental Protection or "EP" zoning classification, which is intended to avoid development. Within the Port Darlington area, both barrier dynamic beaches and residential lots along both Cedar Crest Road and West Beach Road were placed entirely within an EP classification. However, following objections of several landowners at that time, a new Residential Shoreline "RS" classification was created and the final By-law, as enacted, limited the "EP" area to a thin strip along the Lake Ontario Shoreline. This zoning classification, with some modification, continues to the present and is reproduced in Figure 1. Below:

Figure 1: Current By-law 84-63 Zoning Schedule for the west Port Darlington Area

By-law 84-63 provides that within the Residential Shoreline zone, permitted residential uses include a single detached dwelling, a seasonal dwelling and a home occupation use. Further, existing seasonal dwellings may be converted to a single detached dwelling with private servicing.

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Lake Ontario shoreline official plan policies and designations were first established with the Municipality of Clarington Official Plan in January of 1996. The official plan was prepared during the era of the provincial *Comprehensive Set of Policy Statements* and was consistent with provincial directions at that time by providing direction related to a "Regulatory Shoreline Area." Policy 4.6.6 provides that:

> "The Regulatory Shoreline Area is that area along the Lake Ontario Waterfront which is subject to dynamic beaches, flooding or erosion. The extent and exact location of the Regulatory Shoreline Area shall be identified in the implementing Zoning By-law in accordance with the detailed flood and erosion risk mapping of the relevant Conservation Authority."

Further policy direction is provided in subsequent sections of the 1996 plan. It is important to recognize that official plan policy requires implementation through zoning, particularly with prohibitive policies which seek to firmly restrict development such as the policy captioned above. In the absence of implementation, policy directions may have limited utility.

The recently adopted Clarington Official Plan (2016) continues the regulatory shoreline area policies of the Clarington Official Plan (1996) with some modification and conceptually maps the area on Schedule F to the plan. The current version of the policies are reproduced in Attachment No. 4 to this report.

Clarington Planning Services Department has initiated a Zoning By-law Review to update zoning regulations in conformity with the new official plan. Accurate and up to date hazard mapping will be required to support the municipality in this effort.

<u>Roles and Responsibilities in Lake Ontario Shoreline Management</u>

At the federal level:

- The Department of Fisheries and Oceans Canada administers the *Fisheries Act* (Canada). The *Fisheries Act* requires that projects near water avoid causing serious harm to fish unless authorized by the Minister of Fisheries and Oceans Canada. This applies to work being conducted in or near waterbodies that support fish that are part of or that support a commercial, recreational or Aboriginal fishery.
- The Department of Transport Canada administers the *Navigation Protection Act.* This Act, regulates interferences with the public right of navigation by regulating works and obstructions that risk interfering with navigation in navigable waters. The Act also prohibits the depositing or throwing of materials that risk impacting navigation in navigable waters and the dewatering of navigable waters.
- The Department of Public Safety Canada administers the National Disaster Mitigation Program. This program seeks to provide funding for significant, recurring flood risk and costs related to risk assessments, flood mapping, mitigation planning, and investments in non-structural and small-scale structural mitigation projects. Funding applications and allocations are routed through the provinces.

At the provincial level:

- The Ministry of Municipal Affairs (MMA) administers the *Planning Act,* which delegates authority for land use planning approvals and sets out in statute planning 'matters of provincial interest' and the associated statements of provincial policy, as currently articulated in the *Provincial Policy Statement,* 2014.
- MMA also conducts the initial screening for proposals under the National Disaster Mitigation Program. Of note is the Ontario requirement that project proposals under the program address the natural hazard polices in the *Provincial Policy Statement* and associated technical guidelines.
- The Ministry of Natural Resources and Forestry (MNRF) is responsible for the preparation of implementation guidelines and technical manuals to explain the content and intent of natural hazards policy.
- MNRF administers the *Public Lands Act,* which is the statute that manages crown land including the lakebed of Lake Ontario and the *Lakes and Rivers Improvement Act*, which regulates the deposition of any materials in a lake. Any works on or near crown land or deposition of materials (such as sand) in Lake Ontario may need permission from MNRF.

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- The Ministry of the Environment and Climate Change (MOECC) administers the *Environmental Assessment Act* including approving Class Environmental Assessment criteria and is the approval authority for environmental assessment studies.
- MOECC also administers the *Great Lakes Protection Act, 2015* and Plan including the funding for local great lakes cleanup and ecological restoration initiatives.

At the local level:

- The Region of Durham provides regional-scale land use planning for the Lake Ontario waterfront in the region and is involved in infrastructure and service delivery along the shoreline such as regional water supply plants, waste water treatment plants, public health monitoring and regional roads. In addition, the region has taken a lead role in local Climate Change mitigation and adaptation planning. The Region of Durham finances both the operational and capital budgets of CLOCA through the municipal levy process.
- Both the Municipality of Clarington and CLOCA share both policy development, regulation and implementation roles in a local and site specific context. The main tools at the municipal level are the Clarington Official Plan and implementing zoning by-law, the *Building Code Act, 1992*, and the various powers under the *Municipal Act, 2001*.
- As designated by the province through MMA and MNRF, CLOCA is the local agent for the interpretation and implementation of natural hazard policy and site-specific regulation of development through Ontario Regulation 42/06.
- Shoreline management planning is also undertaken collaboratively between the region, municipality and conservation authorities.

Capital projects and associated studies:

- The federal and provincial governments, Region of Durham, Municipality of Clarington and CLOCA all have the ability to undertake capital projects should decision-makers decide to plan and budget for such works.

Present Day Context

<u>2017 weather events and shoreline issues</u>

Lake level records dating back to 1860 demonstrate the variable nature of the Great Lakes. Of the two key factors influencing long-term and short-term changes in lake levels, natural factors influenced by climate change, such as rainfall, evaporation, wind, or storms cause the greater amounts of change, measured in terms of *metres of change*, than do human actions such as diversions and water control structures, which can be measured in terms of *centimetres of change*. In 1958 the construction of the Moses-Saunders dam was completed near Cornwall, providing a level of control for release rates from Lake Ontario to the St Lawrence River system. The release of water is regulated by the International Lake Ontario - St Lawrence River Board, under a plan that aims to limit the flooding and erosion impacts of high water levels and flow and protect against the shipping and recreational impacts of low water levels. The operation of the dam has been successful in moderating water levels in Lake Ontario, but does not provide full control against extreme conditions.

The most familiar change in relation to Great Lakes water levels are the seasonal 0.6 m to 1.1m fluctuations normally experienced during the year with highest water levels in June and lowest levels in December. In addition to these seasonal fluctuations are short periods of significantly higher lake level changes caused by winds or storm surges which blow over the lake surfaces pushing the water to the opposite side or end of the lake. More than 150 years of lake level records confirm that large, long-term lake level changes vary up to 30 years and are expected to vary to greater extremes as climate change produces more extreme weather patterns. Changes in lake levels are neither regular, readily predictable, immediate nor short in duration and are instead the direct influence of changes in climate and hydrological patterns across the Great Lakes Basin. Historical records further confirm that high lake levels, which

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normally last for months or even years, pose long-term threats to shoreline residents. These threats are often dramatically heightened when combined with wave impacts caused by storms. The previous period of heightened lake levels and associated shoreline resident impact lead to today's Great Lakes shoreline natural hazard policy directions.

Attachment 5, *Extreme Conditions and Challenges During High Water Levels on Lake Ontario and the St Lawrence River* (International Lake Ontario – St. Lawrence River Board) describes the conditions that led to the record high Lake Ontario water levels during spring/summer 2017.

CLOCA issued a *News Release* in April, identifying the potential for flooding and erosion of our shorelines with the unusually high Lake levels. CLOCA also issued a *Flood Watch* on May 1st, a *Flood Watch Update* on May 3rd, and a *Flood Warning* on May 5th, as Lake water levels, storm surge, waves, and significant precipitation all combined to cause flooding. Residents on Cedar Crest Beach Road experienced water flowing through their lots and flooding crawl spaces on several events. Southerly winds and waves brought Lake floodwater across the low lying lots and flowed into the West Side Marsh, while on other occasions, heavy rainfall resulted in floodwater flowing from the West Side Marsh across Cedar Crest Beach and into the residential lots. The initial events occurred in late April when the Lake Ontario water level reached 75.5 meters. The Lake reached an all-time historical high level of 75.88 meters in May, and continued to recede very slowly. The Lake level fell below 75.5 meters in August, but continues to be about 0.5 meters above average for this time of year.

Beyond the flooding of crawl spaces, the elevated Lake level also compromised the function of septic systems, and posed a risk to contamination of shallow wells. Roadways were also overtopped with flood water, making access and egress difficult.

Climate Change

The Durham community climate adaptation plan, *Towards Resilience*, was completed in 2016 concludes that our local climate in the 2040's will be **Warmer** (4C average temperature increase), **Wetter** (50% increase in one day maximum rainfall, 100% increase in days with more than 25mm of rain, more rain in the summer months and 75% less snow in February) and **Wilder** (More intense rainstorm events, including a 15% increase in the potential for violent storms and a 53% increase in the potential for tornadoes).

The warmer than average winters in 2016 and 2017 caused unstable ice formation in the St Lawrence River and hampered the normal release of Lake Ontario water. This climate anomaly led to higher than average water levels in Lake Ontario in both the spring of 2016 and 2017, and may continue to challenge the management of Lake Ontario water levels,

Milder winters and springs have resulted in less ice cover and more open water on Lake Ontario. The ice accumulations that typically fill the shoreline in the spring are less common, and the shoreline may be more exposed to spring storms.

Resident Requests for Environmental Assessment

In June of 2017, CLOCA received a resident request for CLOCA to evaluate the shoreline erosion and flooding problem in the Port Darlington area by undertaking a *Class Environmental Assessment for Remedial Flood and Erosion Control Projects*. A Class Environmental Assessment is a specific planning and design process for conservation authorities, approved by the Minister of the Environment and Climate Change under the *Environmental Assessment Act,* which ensures that environmental effects are considered when undertaking remedial flood and erosion control projects. Staff analysis with respect to the applicability of this process is discussed below.

Staff met with Cedar Crest beach residents on July 6, 2017 to discuss CLOCA's roles in planning, development and shoreline management as well as options to address the hazardous conditions experienced earlier this year.

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Council of the Municipality of Clarington Resolutions

At its meeting of July 3, 2017 and in response to delegations and municipal staff reports related to the impacts from the unprecedented Lake Ontario water levels experienced earlier this year, the Council of the Municipality of Clarington resolved:

Resolution #C-203-17

> "…that the Municipality of Clarington request the federal and provincial government, and CLOCA to work together to develop an entire waterfront plan including Port Darlington channel, and the beach waterfront, and work towards a cost sharing agreement for the study and work and that St. Marys and other interested parties be invited to participate.
>
> That staff be directed to call these parties together with representatives of the resident community to form a working committee to clarify jurisdictional roles and responsibilities and secure funding and contribution agreements, such that a viable shoreline erosion control and beach restoration plan can be implemented as soon as possible; and
>
> That staff and working committee representatives present the plan to Council by October 2017."

This report provides the first opportunity for the CLOCA Board of Directors to consider the request of the Council of the Municipality of Clarington through the staff analysis and recommendations contained herein,

Staff Analysis

Completion of the *Port Darlington (West Shore) Damage Centre Study*

Given the urgent requests from residents and the Council of the Municipality of Clarington, the overlapping natural hazards present and the need to precisely define current coastal processes associated with the hazards at a site-specific scale, staff recommend that the previously initiated *Port Darlington (West Shore) Damage Centre Study* be completed as soon as practicable.

CLOCA staff have been in consultation with Aqua Solutions and have confirmed the availability of the original coastal engineer and author, Judy Sullivan, to re-initiate the project.

CLOCA staff propose to complete the *Port Darlington (West Shore) Damage Center Study* with several updates including considerations for climate change, recent historic water levels, updated provincial shoreline natural hazard policy, updated mapping and further analysis of potential options to address the risks from natural hazards.

The study would be conducted under the guidance of CLOCA and Clarington staff, but will seek input from the proposed working committee including Port Darlington Resident's Association and St. Mary's Cement, with opportunity for public input at a facilitated public information session.

Funding for the project will be provided through a Port Darlington reserve held by the Municipality of Clarington. The project has an upset limit of $50,000.

Next Steps

The completion of the study will provide an analysis by a qualified coastal engineer and supporting professionals. The completed report will identify priority hazardous zones and assess both short-term remedies and longer-term solutions to manage flooding and erosion. The study will also provide planning and policy guidance for future development within the damage center informed by the most recent information available regarding climate change, recent historic water levels, sediment transport, current provincial policy direction and updated mapping.

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With a completed report, staff would be in the position to report back to the Board of Directors with options for implementation that are informed by current analysis that is science-based and in conformity with current provincial Great Lakes Shoreline natural hazard management policy directions.

Implementation Options / Environmental Assessment

Implementation options may be proposed at various scales from property-specific to the regional Lake Ontario shoreline. Implementation options could include policy and regulatory changes/improvements to direct physical interventions related to land acquisitions and capital works projects or a combination of both. Any publicly-initiated physical projects would likely be an "undertaking" within the meaning of the *Environmental Assessment Act* and would therefore need to follow the *Class Environmental Assessment for Remedial Flood and Erosion Control Projects*. Implementation agents could include: senior levels of government, the Region of Durham or Municipality of Clarington, CLOCA, individual or groups of landowners or a combination, and similarly, possible funding sources for the undertaking will need to be investigated. This is consistent with the Municipality of Clarington resolution to "… call these parties together with representatives of the resident community to form a working committee to clarify jurisdictional roles and responsibilities and secure funding and contribution agreements, such that a viable shoreline erosion control and beach restoration plan can be implemented as soon as possible."

Decisions with respect to accepting and moving forward with any recommendations will rest with each agency involved. Following completion of the *Port Darlington (West Shore) Damage Center Study* and acceptance of implementation options, the next major step would be for each stakeholder to obtain the funding that may be needed.

Conclusion

Moving forward with the completion of the *Port Darlington (West Shore) Damage Centre Study* is a first step response to Clarington Council Resolution #C-203-17 and the request for a Class Environmental Assessment that will allow for a property-specific understanding of each shoreline natural hazard present. A completed report will provide a science-based platform upon which subsequent decisions related to shoreline management may be made by the Council of the Municipality of Clarington, CLOCA, residents and other stakeholders.

CLOCA staff have been working closely with Municipality of Clarington staff in the advancement of our understanding and management of issues pertaining to natural hazards and the Port Darlington shoreline community. Clarington staff have been provided an opportunity to review this staff report and they concur with the recommendations provided. Staff therefore make the following recommendations, which have regard to the request of the Council of the Municipality of Clarington's Resolution C-203-17 to the extent possible.

RECOMMENDATIONS:

THAT staff take the necessary actions to complete the Port Darlington (West Shore) Damage Centre Study in consultation with the requested working committee as soon as practicable;

THAT the firm of Aqua Solutions be retained to complete the study work as per the previously approved Terms of Reference, amended to address issues associated with Climate Change, recent historic water levels, Sediment Transport, Current Provincial Policy Direction, Updated Mapping and further assessment of potential options to address risks associated with natural hazards;

THAT CLOCA staff be directed to report back to the Board of Directors with the completed study with options for implementation in conformity with the recommendations of the study and provincial Great Lakes shoreline natural hazard management policy;

THAT the Council of the Municipality of Clarington be so advised in response to Resolution C-203-17.

RPS/CJ/bb
Attach.

John Scott Avenue
Baseline Road W
Baseline Road E
Martin Road
Spicer Square
Waverley Road
Simpson Avenue
401
Bowmanville Creek
Liberty Street S
Duke Street
Lake Road
Soper Creek
Energy Drive
Waverley Road
Westside Creek
West Beach Road
Port Darlington Road
Cove Road
Bowmanville Marsh
Westside Marsh
West Beach Road
Cedar Crest Beach Rd
Lake Ontario
0 150 300 600 Meters
1:13,000

12.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the analysis carried out through this study, a number of conclusions have been drawn and appropriate recommendations are listed below. In total, these recommendations provide policies to be used by the relevant conservation authorities and municipalities in managing the shoreline area.

1. Municipalities should recognize the hazard land characteristics of the shoreline, its aesthetic features and public amenities through appropriate official plan and zoning provisions.

2. Measures should be taken to protect environmentally sensitive areas along the shoreline. In particular, development proposals should not destroy or conflict with the protection of these sensitive features. The impacts of protecting updrift areas on the environmentally sensitive features must be assessed before approving protective works.

3. Acquisition of the shoreline should be considered by the appropriate agencies, where feasible and practical, because it is generally the most effective means of minimizing private property damage and risk to life resulting from shoreline hazards. It can also protect the public amenity and recreational value of the shoreline.

4. As a minimum, when acquisition is utilized as an alternative to shore protection, the area acquired should extend to the limits of the erosion and/or flooding setback of the area in question, with additional bluff lands to be set aside for open space purposes as may be required by the relevant approval agencies.

5. Acquisition of additional lands to protect sensitive areas or for recreational and aesthetic purposes should be considered by appropriate agencies as necessary and as budgets permit.

6. The implementation of shoreline protection structures must be examined on a site specific basis with regard given to potential impacts on adjacent and downdrift areas. Specific recommendations are given for various reaches in Table 12.1.

7. Prior to the implementation of any major shoreline structure, including any where it is proposed that setback limits be reduced, site specific coastal engineering studies must be completed to demonstrate their long term effectiveness and to identify potential impacts on updrift and downdrift properties. These studies must conclusively demonstrate to the satisfaction of the approving agencies that the proposed structure will function as intended.

12.0 CONCLUSIONS AND RECOMMENDATIONS (Cont'd)

8. Conservation Authorities through the province should establish "fill" and "construction" regulations for the shoreline which will be structured to allow authorities to control filling and construction within the setback limits and construction of shoreline protection works.

9. Prior to the establishment of any conservation authority capital works programs within the damage centres, further coastal engineering studies should be completed to further refine the design of proposed works.

10. Conservation Authorities should continue to operate the existing shoreline monitoring stations and establish those additional stations as defined in this report.

11. Site specific recommendations as to the applicability, or not, of implementing shore protection structures should be referred to in Table 10.1.

8.0 DAMAGE CENTRES (Cont'd)

8.1.3 City of Oshawa Lot 8, Concession BF
Damage Centre C3 (Map 2.3) (Reach #10)

The shoreline west of Lakeview Park rises to form a steep bluff which protrudes into the lake. A number of houses are located on the headland which extends westward for approximately 100 metres before the shoreline drops off again. Because this feature protrudes into the lake, it is a natural focal point for wave energy.

Some filling has been done in the past and concrete slabs provide some protection. However, unless the shoreline is properly protected, it will continue to erode. It should also be noted that a long-term acquisition program is being pursued by the City of Oshawa subject to budgetary conditions.

8.1.4 Port Darlington Beach
Damage Centre C4 (Map 2.7) (Reach #17)

The beach west of Port Darlington can be described as a sand spit backed by marshland, located at the mouth of Bowmanville Creek and adjacent to Westside Creek. The marshland is a designated environmentally sensitive area. Approximately 50 houses are located on this spit (Cedar Crest Beach Cottage Development) which has a maximum elevation of approximately 76.5 metres IGLD. The area is at risk from flooding of the river as well as from flooding due to wave activity on Lake Ontario.

The major problem with protecting this shoreline is the cost. Because the shoreline must be protected from both sides the cost is at least double what it would normally be and this may be too much for most property owners.

Ideally, the properties should be protected from river flooding by a clay dyke. On the lakeward face, a beach widening scheme should be implemented. This would involve importing and placing sand on the beach and containing the sand between hardpoints or behind offshore breakwaters. Detailed studies would be required to ensure that widening of the beach would not lead to a siltation problem in the harbour approach channel.

There is currently an acquisition plan that covers a part of this beach. The appropriate agency may consider acquisition of the entire beach area.

Excerpt from Clarington Official Plan (2016)

Natural Environment and Resource Management Policies

Regulatory Shoreline Area

3.7.6 The Regulatory Shoreline Area as identified on Map F, is that area along the Lake Ontario Waterfront which is subject to dynamic beaches, flooding and/or erosion. The extent and exact location of the Regulatory Shoreline Area shall be identified in the implementing Zoning By-law in accordance with the detailed Lake Ontario Flood and Erosion Risk Mapping of the relevant Conservation Authority.

3.7.7 The construction of new buildings or structures of any type within the Regulatory Shoreline Area shall not be permitted.

3.7.8 Once a dwelling located in the Regulatory Shoreline Area is destroyed or demolished by whatever reason, and reconstruction is not recommended within 24 months, the existing residential use is deemed to cease.

http://ijc.org/greatlakesconnection/en/2017/08/extreme-conditions-challenges-high-water-levels-lake-ontario-st-lawrence-river/

Extreme Conditions and Challenges During High Water Levels on Lake Ontario and the St. Lawrence River

IJC GLC - August 7, 2017 - By Rob Caldwell, International Lake Ontario-St. Lawrence River Board

US Army National Guard members deploy a water-filled cofferdam by Sodus Point, New York, to help control Lake Ontario floodwaters. Credit: US Army National Guard

There has been much speculation and many theories put forth as to what factors contributed to the high-water crisis on Lake Ontario and the St. Lawrence River this year, from rain to snow, water levels and regulation Plan 2014. The truth is there were many factors. But as a colleague recently summed up, the main ones were “Rain, rain, and more rain!”

Of course, this is an over-simplification, but in retrospect, the high water levels stemmed mainly from four rain-related factors: an unusual mild and wet winter, above-normal inflows from the upper Great Lakes, a record-setting spring freshet in the Ottawa River basin, and heavy rainfalls across the Lake Ontario and the St. Lawrence River system that have continued through spring and early summer.

This unprecedented combination of climate conditions presented the International Lake Ontario-St. Lawrence River Board with a most difficult challenge. Let’s take a closer look at how things unfolded during the first half of 2017, including the factors leading to the record-high levels and how the board has taken into consideration these exceptional conditions in its decision making.

Watershed basin map with outlet locations. Credit: Environment & Climate Change Canada

2017 Brings New Plan

On Dec. 8, 2016, the International Joint Commission issued a Supplementary Order, replacing Plan 1958-D and adopting Plan 2014 as the new regulation plan effective Jan. 7, 2017. Plan 2014 prescribes a new set of rules that the board must ordinarily follow in setting the outflows from Lake Ontario through the St. Lawrence River, which are controlled at the Moses-Saunders generating station at Cornwall, Ontario and Massena, New York.

At the time Plan 2014 was implemented, Lake Ontario’s water level was 6 centimeters or 2.4 inches below its long-term (1918-2016) average for that time of year, and at about the same level as each of the past two years. The upper Great Lakes, including Lake Erie, which supplies about 85 percent of the total inflow of water to Lake Ontario via the Niagara River and Welland Canal, were somewhat above average, but not significantly so and also at similar levels to

recent years. Finally, at the start of January, ice was already forming on the St. Lawrence River in the Beauharnois Canal (located between Moses-Saunders and the city of Montreal further downstream on the St. Lawrence). The board had already reduced outflows from Lake Ontario to the rate required for ice formation, which applied under the old and new regulation plans, allowing a seamless transition.

A Mild and Wet Winter Season (January to March)

When ice starts forming at critical locations in the St. Lawrence River, outflows must be temporarily reduced to ensure the formation of a safe and stable ice cover. Doing so reduces the risk that the ice cover will collapse or that the fast-moving water will generate what's known as frazil ice (ice crystals suspended in water that is too turbulent to freeze solid), possibly resulting in an ice jam. Such an occurrence would significantly reduce outflows, causing immediate flooding upstream, and rapidly declining levels downstream. Once a stable ice cover has formed, the board can safely increase outflows.

By Jan. 17, the Beauharnois Canal was half-covered with ice and the unusual winter weather began. Unseasonably mild temperatures combined with a number of heavy precipitation events in January caused much of the precipitation to fall as rain, particularly in the more southerly parts of the basin. Much of the snow that fell also melted with the mild weather, running off into local streams and tributaries, and making its way to Lake Ontario and the St. Lawrence River.

Notably, daily high temperatures were above freezing for about a week straight from Jan. 16-23. With an extensive, prolonged thaw under way, the ice that had formed in the Beauharnois Canal began to disappear, and eventually receded to the point that Lake Ontario outflow was safely increased back to values previously passed during the open-water season. But by Jan. 25, following another period of colder weather, ice had started forming again and the flow was reduced again on Jan. 28. But mild weather returned, and so flow was again increased on Jan. 31.

This cycle of freezing and thawing continued in February, and flows were adjusted six times that month in response to fluctuating temperatures and ice conditions. A few days of typically cold winter weather at the start of February were followed by several days of milder, but below freezing temperatures, allowing ice to form slowly. However, the last half of the month was exceptionally warm: daily high temperatures recorded at Dorval, Quebec, near Beauharnois, were above freezing for 13 straight days from Feb. 18 through March 2 and reached 14.5 Celsius (58 Fahrenheit) on Feb. 25. The ice cover was gone by Feb. 26, and this permitted the board to increase the flow several times by month's end.

At the same time, water levels throughout the system began to increase gradually as snowmelt and wet weather continued. Lake Ontario rose significantly more than normal in February, as inflows were above average and outflows were restricted by fluctuating ice conditions. St. Lawrence River levels near Montreal also gradually edged upwards until suddenly shooting above average on Feb. 26 as snowmelt combined with rare February thunderstorms and rainfall.

Normally, by February, a solid ice cover has formed on the St. Lawrence River and remains in place, while occasionally, milder temperatures cause the ice cover to melt during this month. Either condition allows flows to be safely increased thereafter. At no time in recorded history had ice begun forming in March, and the board had no reason to believe this year would be any different. But between March 4 and March 30, substantial ice cover formed and disappeared twice in the Beauharnois Canal during what were two of the coldest stretches of weather seen all winter. As a result, Lake Ontario outflows varied considerably, being reduced as ice formed during a good part of the first half of the month, and then increased four times by a total of 18 percent from March 17- 22. Once increased, flows remained relatively stable for the rest of March.

Overall, the winter saw five periods of ice formation punctuated with thaw cycles in between, the most ever seen in the St. Lawrence River.

While highly variable ice conditions restricted outflows at times, the main driver of rising water levels throughout the Lake Ontario-St. Lawrence River system during the first three months of 2017 was the above-normal amount of water the basin received. This water came from precipitation, snowmelt and runoff from within the basin, and above-average and increasing inflows from Lake Erie, which also saw wet conditions and generally rising water levels throughout this period. From January through March, the net total water supply (i.e., total inflow) to Lake Ontario was above average, and the 12th highest for this three-month period since records begin in 1900. At the end of March, water levels

were where they were in 2016, and the mid-March 90-day forecasts from Canada and the US suggested average precipitation was expected in April, May and June.

Record Ottawa River freshet (April and May)

The unusual wet winter transitioned quickly to an exceptionally wet spring. Water levels on Lake St. Louis, located on the St. Lawrence River just upstream of Montreal, generally rose quickly throughout the first three weeks of April following a significant thaw event marked by thunderstorms and rainfall. This event, while relatively large, was not entirely unusual; the Ottawa River enters the St. Lawrence at this location and at this time of year snowmelt and rainfall tend to rapidly increase flows out of this large basin. Nonetheless, the peak flow of 6,877 cubic meters per second (242,900 cubic feet per second) on April 20 was a record for this date, and the highest Ottawa River flow since 1998.

From April 1-5, the Plan 2014 rule curve flow was followed. Thereafter, a series of rainstorms passed through the region, with areas to the north and east of Lake Ontario and into the Ottawa and St. Lawrence River basins being particularly hard-hit. This led to two dozen adjustments to Lake Ontario outflows during the month of April in response to the rapidly rising and highly variable Ottawa River and local tributary flows.

These adjustments were done in accordance with the Plan 2014 "F-limit," which was designed to mimic the board's decision making strategies under the previous regulation plan, Plan 1958-D, during high-water events in the 1990s (whereby flooding and erosion risks and impacts upstream on Lake Ontario and in the 1000 Islands were balanced with those downstream from Lake St. Louis through Lake St. Peter). During periods of wet spring conditions, as levels on Lake Ontario reach higher and more critical values, this multi-tiered rule also allows increased levels downstream at Lake St. Louis, which acts as somewhat of a barometer for other areas downstream, and Lake Ontario outflows are adjusted accordingly. The total inflow to Lake Ontario during the month of April was the second highest recorded since 1900.

While the wet weather continued, Lake Ontario and St. Lawrence River levels continued to rise, reaching record high levels and resulting in flooding and related impacts throughout the system. Lake Ontario's end-of-week level reached what is known as the criterion H14 upper trigger level on April 28. Criterion H14 is another rule, again part of Plan 2014, that when exceeded, authorizes the board to follow an alternative strategy and release outflows to provide all possible relief to riparians living along the shorelines of the entire system. There are four upper trigger levels per month (48 per year) and these thresholds can be expected to be exceeded 2 percent of the time, by definition, given historical water supplies. However, at the time, given the exceptional conditions, the board consensus was that the best way to balance the effects of water levels upstream and downstream and minimize flood and erosion impacts to the extent possible throughout the system was to continue to follow the "F-limit" of Plan 2014. As a result, deviations from the plan were not employed.

Unfortunately, as conditions remained critical, the wet weather only worsened in May. The total inflow to Lake Ontario during the month was the highest recorded since 1900. The month began with a so-called "perfect storm." There were two extremely large and slow-moving storm systems that passed through the region, the first on April 30 and the second from May 4-8. These storms combined to dump a minimum of 75 millimeters or 3 inches of rain over most of the Lake Ontario, Ottawa and St. Lawrence River basins, while some areas around Lake Ontario received twice that amount. Heavy rain also fell upstream of Lake Ontario on Lake Erie, where water levels also were rising and inflows to Lake Ontario increased to well above average values.

As a result, during the first third of May, water flowed into Lake Ontario at record-high rates and about 25 percent higher than any release the board can physically pass down the river. At the same time, the daily mean Ottawa River outflow (at Carillon Dam) peaked at 8,862 m^3/s (313,000 cfs) on May 8 – a new all-time record maximum, which resulted in significant flooding in many parts of the Ottawa River basin, in the Montreal area and in many areas of the St. Lawrence further downstream.

In response, outflows from Lake Ontario were reduced quickly and significantly over the first week of May to moderate the sharp rise in St. Lawrence River levels near Montreal. As Ottawa River flows subsided, the Lake Ontario outflow was increased rapidly, rising from a low of 6,200 m^3/s (219,000 cfs) on May 7 to a high of 10,200 m^3/s (360,200 cfs) on May 24 (i.e., raised 35 percent in 17 days). In so doing, the board continued to balance upstream and downstream levels according to the "F-limit," exceeded the Plan 2014 flow and initiated major deviations in accordance with criterion H14 to provide all possible relief to riparians upstream of the dam.

The flow of 10,200 m^3/s (360,200 cfs) was equivalent to the record-maximum weekly mean values passed under Plan 1958-DD in 1993 and 1998 and also equivalent to the maximum "L-limit" value, another rule within Plan 2014. This limit defines the maximum outflow that will maintain adequate levels and safe velocities for navigation in the International Section of the St. Lawrence River when Lake Ontario levels are very high – from above 75.70 meters until 76 meters (248.36 feet until 249.34 feet). The St. Lawrence Seaway imposed several mitigation measures to ensure safe vessel transits remained possible.

Despite these record high releases, inflows also remained well above normal seasonal values, and Lake Ontario levels remained high and peaked near the end of May at 75.88 meters or 248.95 feet, a new all-time record value. Montreal area levels, after their rapid rise toward record values throughout the first third of May, generally declined slowly thereafter as Lake Ontario outflows were increased, but Ottawa River outflows decreased at a faster rate.

In total, Lake Ontario outflows were adjusted 23 times in May.

Heavy Rainfalls Continue (June and July)

By June 2, water levels on Lake St. Louis had started to decline. On June 14, the board initiated additional major deviations from Plan 2014 flows, increasing the Lake Ontario outflow to 10,400 m^3/s (367,300 cfs). This was a new record-maximum weekly flow, the highest ever released from Lake Ontario. The St. Lawrence Seaway imposed further mitigation measures and undertook an assessment of this higher outflow for several days, concluding that it was the absolute maximum outflow possible to maintain adequate levels and safe velocities for navigation in the International Section of the river. After some deliberation regarding the impacts of increasing the outflows further, the board decided to maintain this outflow for the remainder of the month and into July.

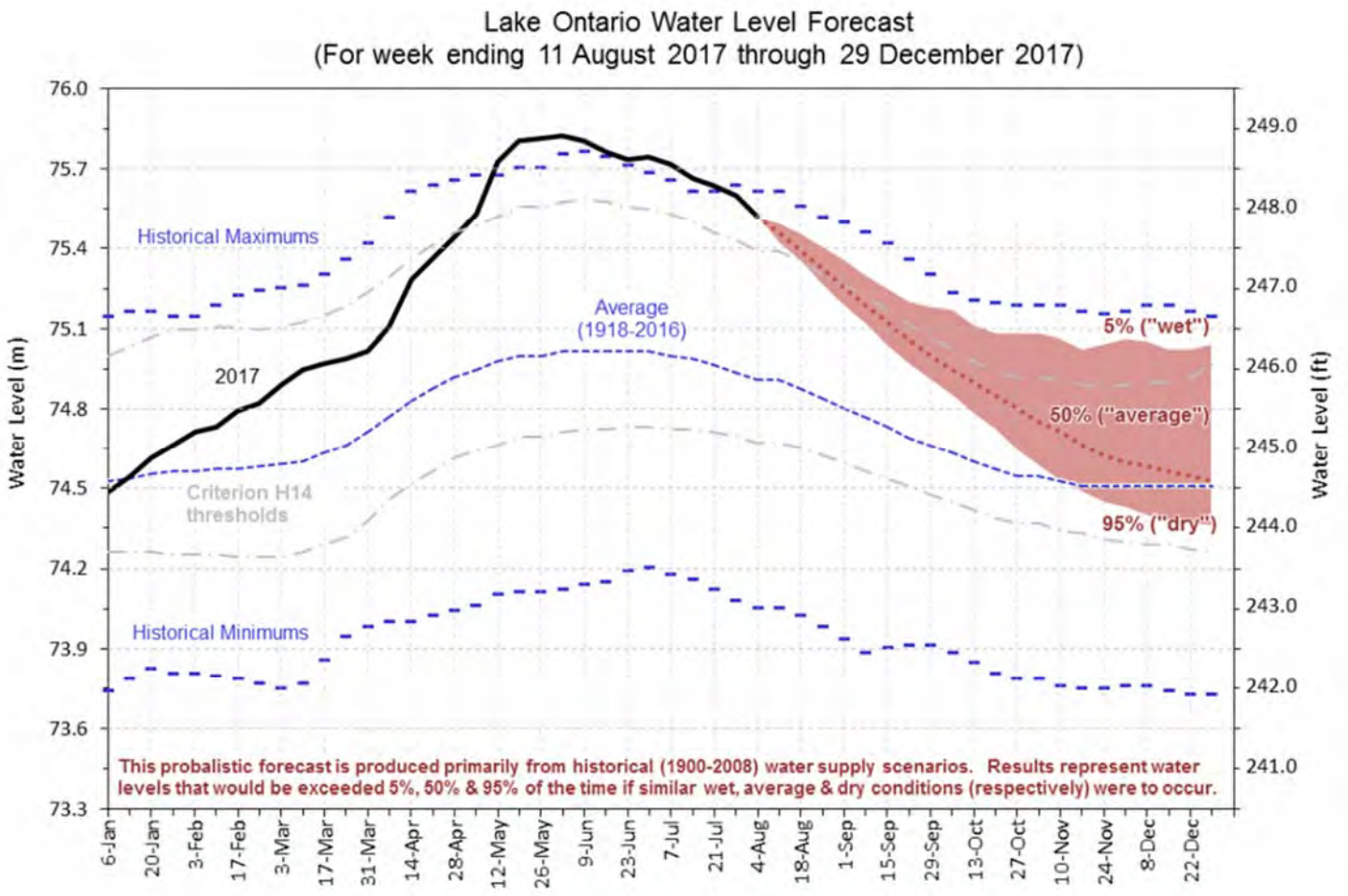
The monthly mean outflow from Lake Ontario in June averaged 10,310 m^3/s (364,100 cfs), 38 percent above the June long-term average (1900-2016) and a new record-high value for any month, exceeding the previous record of 10,010 m^3/s (353,500 cfs) set in May and June of 1993.

Wet weather continued in June. A particularly noteworthy storm on June 23 dropped 20.5 mm or 0.8 inches of rain on the Lake Ontario basin. After gradually declining for most of the month, Lake Ontario levels rose slightly as a result. The total inflow to Lake Ontario during the month was the second highest recorded in June since 1900. Nonetheless, the record-high outflows allowed Lake Ontario levels to fall 9 cm or 3.5 inches overall in June – much more than the typical 1 cm or 0.4 inch decline, and the 11th highest June decline on record. By the end of June, Lake Ontario was 10 cm or 3.9 inches below the peak level recorded on May 29. About 6.6 cm or 2.6 inches of that water was removed from Lake Ontario, owing to major deviations undertaken since May 23. The remainder was due to high outflows prescribed by Plan 2014 and the fact that inflows, while still high, had begun to decline.

Montreal area levels generally fell through the middle of June as Ottawa River outflows declined, but rose slightly at the end of June and even further during the first week of July, reaching high levels and flooding similar to that seen earlier in the spring.

The board agreed to continue releasing 10,400 m^3/s (367,300 cfs) into July. Despite these efforts, the continuing wet conditions sustained the high levels and severe impacts to Lake Ontario and St. Lawrence River property owners, recreational boaters, businesses and tourism. Lake Erie remained well above average, and combined with significant rainfall during the past month, the total inflow to Lake Ontario remained high.

Decisions and the Path Forward



Lake Ontario water level forecast through end of 2017. Credit: Environment & Climate Change Canada

The first several months of 2017 have been an especially challenging time for those living and working throughout the Lake Ontario-St. Lawrence River system. Many have been impacted by the exceptionally high water levels. While levels have begun to decline, the effects continue to be felt and may continue for months to come.

For its part, the board has made every effort to address the exceptional weather conditions and reduce levels to the extent possible. Outflows were continuously adjusted from January through March during what was a generally wet winter, with highly variable temperatures and challenging ice conditions. As the weather turned from bad to worse, the board continued to adjust outflows in April and May, this time to address the extreme precipitation, record inflows and rapidly rising water levels which have caused severe flooding and associated impacts throughout the system. Since then, the board has increased outflows to record-high values in an attempt to lower the extraordinary levels of Lake Ontario and provide relief to those impacted, while also considering the impacts to riparian interests downstream on the St. Lawrence, and to other stakeholders, including commercial navigation and the industries it supports.

Despite these efforts, wet weather has continued and levels have remained high. There are unfortunately no simple solutions, but the board will continue to consider all possible options, as well as associated impacts, in setting outflows from Lake Ontario. High outflows are expected to continue for several weeks, and as warmer and drier summer conditions continue and evaporation rates increase into the fall. The board expects water levels throughout the system will generally continue to decline, providing gradual relief from the high water crisis of 2017. But keep in mind that water levels may remain above normal for some time to come, and autumn brings a higher chance of damaging storms. Strong winds and wave action can cause significant fluctuations on the lake and river, with temporary changes of more than half a meter (2 feet) in certain locations.

Further information on Lake Ontario flow regulation can be found at the International Lake Ontario-St. Lawrence River Board Facebook page and the board's web site.

Board Reaching Thousands Online

By Arun Heer, International Lake Ontario-St. Lawrence River Board

Since the establishment of the International Lake Ontario-St. Lawrence River Board by the International Joint Commission in 1952, keeping people informed about water level and flow conditions in the lake and river has been a top priority. With the Lake Ontario-St. Lawrence River basin covering such a broad geographic area, including communities in New York, and the provinces of Ontario and Quebec, communication has often been challenging and resource intensive. In the past, the board relied on methods such as in-person public meetings, telephone conferences, and mailing news releases and hard-copy letters to connect with people.

Today, the board is reaching out with modern communication tools such as Facebook, webpages, electronic mailing lists, animated videos, and digital press releases to deliver messages quickly. The board's Facebook page, in particular, has proven to be a great forum for posting information on topics such as water levels, outflow changes and hydrologic forecasts.

The Facebook page had close to 800 "likes" in January, and that number had increased to more than 2,300 as of July 24. Facebook has become a place where the board can interact with the community in real-time, and where members of the public can interact with one another to share and exchange information.

The board encourages everyone to visit its Facebook page for the most up-to-date information on board activities and join the conversation. Additionally, short educational videos, media releases, and other information can be found on the board's website.

FEBRUARY 2018 – VOLUME 1, ISSUE 1

PORT DARLINGTON 2018 UPDATED SHORELINE STUDY– Public Information Centre Newsletter & Frequently Asked Questions

Aqua Solutions, Baird Engineering & Planning Solutions Inc.
Together with CLOCA & The Municipality of Clarington[1]

Background

- Reports of flooding and erosion damage have been occurring along the Lake Ontario shoreline.
- Flooding and erosion along the Lake Ontario shoreline has been top of mind for residents, who have alerted the Municipality of Clarington and the Central Lake Ontario Conservation Authority.
- Shoreline flooding and erosion risks are associated with the physical location of people and their property in relation to natural hazards.
- The Cedar Crest Beach area residents have petitioned the Municipality of Clarington to coordinate a unified plan for erosion mitigation on private lands in the Cedar Beach area.
- A number of studies have been completed including:
  - Lake Ontario Shoreline Management Plan, 1990
  - Newcastle Waterfront: Preliminary Coastal Engineering Assessment, 2003.
  - Policy & Procedural Manual Developed by CLOCA, 2013.
  - Port Darlington Shoreline Study, 2004

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First Public Information Meeting & Listening Session Scheduled for March 3rd, 2018!

The first community meeting is being held on Saturday, March 3rd, 2018. No decisions have been made and the purpose of this meeting is to:

1. Introduce the 2018 Shoreline Study and the Consulting Team.
2. Share some background information with you about the Shoreline Study, the process, timing and deliverables.
3. Allow you to share your concerns (flooding, shoreline erosion, other).
4. Allow you an opportunity to ask questions about the Shoreline Study.
5. Provide you with an opportunity to share your ideas and solutions to address the shoreline issues.

[1] "Information and submissions provided to the study team by members of the public will be subject to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act.*"

Frequency Asked Questions

1. **WHAT IS THE PURPOSE OF THIS PUBLIC INFORMATION CENTRE?**
   This Public Information Centre is being held to provide you with an early opportunity to share your concerns and your suggestions for the 2018 Shoreline Study.

2. **HOW WILL THE CURRENT STUDY BE DIFFERENT FROM THE 2004 SHORELINE STUDY?**
   The original Draft Port Darlington Shoreline and Flood Damage Centre (Aqua Solutions 2004) study began to identify the hazardous areas (flooding, erosion, and dynamic beach) for the Port Darlington study area in order to precisely define and understand the natural hazards in the area in relation to existing and proposed development. The 2018 study will build upon and complete the 2004 draft study, informed by the recent historic water levels, climate change, and sediment transport. The study will also explore and evaluate shoreline management options including feasibility and consistency with provincial natural hazard management policy direction.

3. **WHERE IS THE STUDY AREA?**
   The study area includes the Port Darlington shoreline community including Watson Drive, Cedar Crest Beach Road, Cove Road, and West Beach Road.

4. **HOW DOES THIS SHORELINE STUDY RELATE TO THESE OTHER EFFORTS THAT ARE ONGOING?**
   There are other efforts that are on-going including:
   - Emergency response preparedness planning to ensure a coordinated effort in the event of another flood event.
   - Communication with provincial and federal agencies to investigate possible assistance.

5. **WHAT OPPORTUNITY WILL THERE BE FOR RESIDENTS TO BECOME INVOLVED IN THE SHORELINE STUDY?**
   There are many opportunities for residents and interested parties to become involved in the 2018 Shoreline Study. There is an online survey in the event that you would like to share your individual comments. There is a Public Information Meeting & Listening Session scheduled for March 3rd and there will be an additional Public Meeting & Listening Session in the Fall of 2018. We will be issuing Newsletters to keep you informed as the Study progresses and, in addition, we invite you to contact us directly if you have questions, comments or concerns.

6. **HAS THE STUDY BEEN COMPLETED?**
   No. The study has only just started. Aqua Solutions together with Baird Engineering will be looking at the issues and identifying a number of possible alternatives to manage the hazards. Once this information has been gathered, it will be shared with the public.

The Issues Facing the Shoreline

What Are Your Thoughts? What Have You Seen? What Are You Experiencing?

WE WANT TO HEAR FROM YOU!

1. Have you experienced flooding along the shoreline? If so, where?
2. Are you aware of others who have experienced flooding along the shoreline? If so, where?
3. Have you experienced erosion along the shoreline? If so, where?
4. Are you aware of others who have experienced erosion along the shoreline? If so, where?
5. Have you experienced other shoreline-related issues?
6. Are you aware of others who are experiencing shoreline-related issues and concerns?
7. What solution will best address shoreline erosion?
8. Are there recommendations that you believe should be included in the 2018 Shoreline Study?
9. Is there specific action that you believe needs to be taken? If so, when and who in your view should be responsible?

Your comments are important to us. Please take the time to share your thoughts, comments and concerns with us.

Please provide your comments by completing the electronic survey...the survey weblink follows:

https://www.surveymonkey.com/r/6KYKRNK

This Photo by Unknown Author is licensed under CC BY-NC

Keeping You Informed...

We are committed to working with you and to keeping you informed as this study moves forward. Comments are welcome at any point throughout the Shoreline Study process.

A second PIC will be held in the fall of 2018 after the consultant team has developed possible alternative actions for managing the hazards faced by Port Darlington residents.

On-Line Presentation Material Available

You are invited to view and explore the Storyboard Presentation materials on-line at your convenience using the following URL link:

https://goo.gl/Y4WzSc

Please note that the Google Chrome web browser is required in order for the presentation to be viewed on your device.

Looking For More Information? Still Have Questions? We Invite You to Contact Us...

Perry Sisson Director of Engineering and Field Operations Central Lake Ontario Conservation Authority (CLOCA) Phone: (905) 579-0411 x 118 Email: psisson@cloca.com	Chris Jones Director of Planning and Regulation Central Lake Ontario Conservation Authority (CLOCA) Telephone: (905) 579-0411 x 116 Email: cjones@cloca.com

We Look Forward to Working With You!

October 2018 – VOLUME 1, ISSUE 2

PORT DARLINGTON SHORELINE HAZARDS STUDY

2ND Community Newsletter & Frequently Asked Questions

Aqua Solutions 5 Inc., Baird Engineering & Planning Solutions Inc. Together with CLOCA & The Municipality of Clarington[1]

Introduction

Central Lake Ontario Conservation Authority (CLOCA) is developing an updated Shoreline Study for the Port Darlington shoreline community including Watson Drive, Cedar Crest Beach Road, Cove Road, and West Beach Road. The 2018 Shoreline Study is being carried out by Baird Engineering and Aqua Solutions, two consulting firms that specialize in coastal engineering.

The original Draft Port Darlington Shoreline and Flood Damage Centre (Aqua Solutions 2004) study began to identify the hazardous areas (flooding, erosion, and dynamic beach) for the Port Darlington study area in order to precisely define and understand the natural hazards in the area in relation to existing and proposed development. The 2018 study will build upon and complete the 2004 draft study, informed by the recent historic water levels, climate change, and sediment transport. The study will also explore and evaluate shoreline management options including feasibility and consistency with provincial natural hazard management policy direction.

The study area is 1.8 km along Lake Ontario shoreline, west of the mouth of Bowmanville Creek, and east of St. Mary's lands.

"The Port Darlington Beach Damage Centre C4 (Reach #17)...This area is at risk from flooding of the river as well as from flooding due to wave activity on Lake Ontario." (Sandwell Report, 1990)

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[1] "Information and submissions provided to the study team by members of the public will be subject to the provisions of the *Municipal Freedom of Information and Protection of Privacy Act.*"

What's New?

In March, we held a Public Information & Listening Session and since then, detailed engineering work has been underway by Baird Engineering and Aqua Solutions. When we met on March 3rd, we promised to keep you informed of our progress and we also promised to share the Shoreline Study.

Since March, a Technical Assessment & Analysis has been underway by the consulting team. The consultants are looking at planning and policy as well as an overview of shoreline process, erosion and shoreline protection works concepts and climate change.

Once the draft consultant studies have been received and reviewed by CLOCA and the Municipality of Clarington, the drafts will be posted on the CLOCA website at www.cloca.com/study.php .

A second public meeting will be held to receive input. **The second Public Information & Listening Session will be held Saturday December 1, 2018 from 9:00am to noon at the Darlington Energy Complex, Auditorium (OPG Darlington).**

In addition to the technical assessment, the consulting team will also be taking into account the input and advice shared at the Public Information Meeting & Listening Sessions and also through the Community Survey that can be accessed online at the following weblink:

https://www.surveymonkey.com/r/6KYKRNK

We received a lot of exceptional input, guidance and advice from those who attended the Public Session on March 3rd. We would like to share some of that input with you!

First Public Meeting & Listening Session Held March 3rd, 2018!

Public Meeting & Listening Session Extremely Well-Attended!

Critical Advice Is Received From the Community

The first community meeting was held on Saturday, March 3rd, 2018 from 8:30 am – 12:00 pm. The purpose of the meeting was to:

1. Introduce the 2018 Shoreline Study and the Consulting Team.
2. Share background information about the Shoreline Study, the process, timing and deliverables.
3. Allow participants to share concerns (flooding, shoreline erosion, other).
4. Provide attendees with an opportunity to ask questions about the Shoreline Study.
5. Provide a forum to ensure those in attendance are able to share their ideas and solutions to address the shoreline issues.

The Public Meeting & Information Session created a space for meaningful conversation about shoreline flooding and erosion in the Study area. Close to 80 people attended. Three presentations were provided:

1. Perry Sisson, Director of Engineering & Field Operations and Chris Jones, Director of Planning & Regulation from CLOCA provided information about the history of shoreline flooding and erosion and an overview of how the community has evolved over time.
2. Judy Sullivan, President, Aqua Solutions Inc. provided an overview of the Port Darlington Shoreline & Flood Damage Centre Study.
3. Karen Wianecki, Director of Practice, Planning Solutions Inc. provided an overview of the proposed Community Engagement Process.

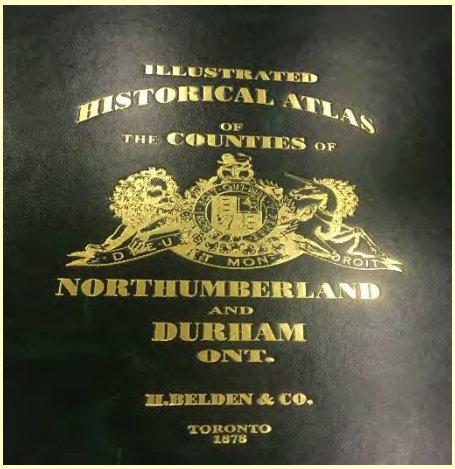
There were many excellent questions, comments and suggestions that came forward from the community. A summary of the presentations and key messages are included below:

Shoreline Flooding & Erosion Concerns: A Historical Overview

An overview of erosion and flooding hazards was provided. In the study area, all five hazards are in place (Great Lakes flooding, erosion and dynamic beach as well as riverine flooding and erosion). For more information, we have also uploaded a copy of the "MNR Guide – Understanding Natural Hazards."

> Natural hazards are defined as "Natural, physical environmental processes that occur near or at the surface of the earth that can produce unexpected events."

The area started to develop when the first plan of subdivision was registered on title in 1917. Additional lot creation took place in the area until 1962 but CLOCA did not begin to regulate stream-based hazards until the 1960s, well after development had been established in the area. In addition, the early CLOCA regulations did not apply to the Great Lakes hazards. The Port Darlington area was originally zoned agricultural, and it wasn't until 1984 that a new Comprehensive Zoning By-law was introduced, and the area was zoned as Shoreline Residential and Environmental Protection.



An interactive flooding tool was shared by CLOCA to demonstrate the extent of flooding that occurred in 2017.

The 2018 Port Darlington Shoreline & Flood Damage Centre Study

There are a number of flooding and erosion hazards affecting the Study area:

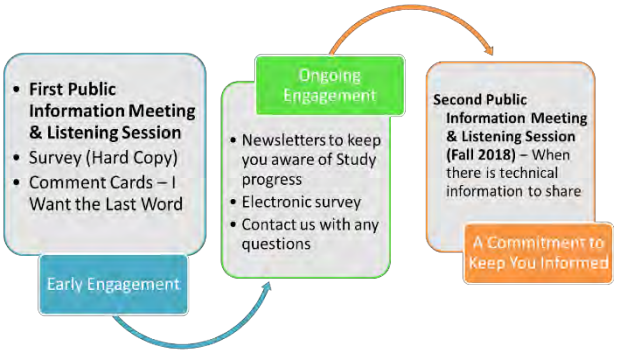
1. Flooding from Bowmanville Marsh & Creek
2. Flooding from Westside Creek Wetland/Westside Creek;
3. Flooding from Lake Ontario;
4. Erosion from Lake Ontario;
5. Dynamic Beach Hazards from Lake Ontario.

This study will update the Draft 2004 Report and planning/policy guidance for future development within the damage centre. It will also review concept protection works options, their feasibility, and consider an opinion of probable costs. It will incorporate the most recent information available to document:

- Sediment transport processes;
- Recent historic water levels;
- Flooding, erosion and dynamic beach hazards from Lake Ontario;
- Current provincial policy direction;
- Climate Change; and
- Updated mapping from CLOCA.

The Proposed Community Engagement Process

Process is as important as product. This is an exercise that focuses on developing a new Shoreline & Flood Damage Centre Study as a foundation for taking informed action to address shoreline management issues. It is therefore imperative that the community be engaged, and that the emphasis be placed on advancing a collaborative planning model that is solutions-focused.



Key Messages From the Community

Karen provided a recap of the key learnings and statements that emerged from the meeting:

1. "This is a critical issue for all of us – for residents, community leaders, CLOCA, municipal staff and the consulting team. This issue is also inherently complex. For the residents, this is real!
2. This is a special place. The area has become increasingly diverse. It is a strong, solid, tightly-knit community.
3. We need to leverage historical data and explore all the information available, particularly as it pertains to the pier (e.g. erosion data for that period of time that pre-dates the installation of the pier).
4. Take a holistic and systemic approach to the Study. Look at and explore how the barrier beach affects the marsh and overflow channel; what would happen if the pier were expanded.
5. The right information must be communicated to the right people, in the right way. Internet connectivity is a huge issue for the community. This needs a solution.
6. St. Mary's has secured the services of a consultant to complete a forensic study of the channel. CLOCA will continue to work with St. Mary's to monitor the overflow channel and ensure that it is maintained and continues to be functioning effectively and efficiently.
7. The real issue is wave energy and the damage that it can cause in normal conditions.
8. There has been a significant evolution in the geography of the study area over time, but also a significant evolution in the policy, planning and regulatory landscape.
9. We need a solution in the short-term that will address resident concerns over the long-term.
10. Collaborative action is needed – we need to work together. Let's be certain that we don't repeat history. Let's find a solution that will address all of our concerns.
11. "We have nothing natural here anymore. We have a massive pier that has impacted littoral drift."
12. Action was taken by homeowners to protect their shoreline properties.
13. The 2018 Shoreline Study needs to consider both sides of the pier (erosion and accretion) – east and west.
14. To date, residents feel that they have been left to manage the issues on their own. Residents need help – this is a major issue and a major concern that has been devastating and hugely disruptive for many."

"Collaborative action is needed. We need to work together. We do not need to repeat history. We need a short-term solution that will address our concerns long-term."

Keeping You Informed…

We are committed to working with you and to keeping you informed as this study moves forward. Comments are welcome at any point throughout the Shoreline Study process.

A second PIC will be held on **Saturday December 1, 2018 from 9:00am to noon at the Darlington Energy Complex, Auditorium (OPG Darlington). The meeting will include presentations for the technical assessments, evaluated shoreline management options, and possible alternative actions for managing the hazards faced by the Port Darlington residents.**

On-Line Presentation Material Available

You are invited to view and explore the Storyboard Presentation materials on-line at your convenience using the following URL link:

https://goo.gl/Y4WzSc

Please note that the Google Chrome web browser is required in order for the presentation to be viewed on your device.

Looking For More Information? Still Have Questions?
We Invite **You to Contact Us…**

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We Look Forward to Working With You!