

## BOARD OF DIRECTORS

Meeting Number:	01 17
Date of Meeting:	<b>Thursday, March 23, 2017</b>
Time of Meeting:	<b>4:00 – 7:00 pm</b>
Place of Meeting:	Mountsberg Conservation Area 2259 Milborough Line, Campbellville Telephone: 905.336.1158 x 2236

### LOCATION CHANGE and Agenda of Events:

**Mountsberg Conservation Area – For those of you who wish, there will be a Tour and Pancakes prior to the meeting as follows:**

2:00 – 3:00: Tour of Raptor Centre, new Barn and Mapletown  
3:00 – 3:45: Pancakes at Mapletown  
4:00 Discovery Centre for Meeting

Please advise Patricia Vickers ([pvickers@hrca.on.ca](mailto:pvickers@hrca.on.ca)) if you plan to participate in the Tour and have Pancakes.

### OUR PURPOSE

Our purpose is to protect our communities and conserve our natural environment through planning, education and recreation and to support our partners in the creation of sustainable communities within our watershed.

### OUR AMBITION

Our ambition is a healthy watershed with clean streams, abundant forests and natural habitats that are in balance with our growing communities and engaged residents.

## AGENDA

1.	<b>Acceptance of Agenda as distributed</b>	<b>Page</b>
2.	<b>Disclosure of Pecuniary Interest for Board of Directors</b>	
3.	<b>Presentation:</b> KPMG Finance Function Effectiveness Assessment Results Report #: CHBD 01 17 04	
4.	<b>Consent Items</b>	
4.1	Roll Call & Mileage	
4.2	Approval of Board of Directors and Inaugural Minutes dated February 23, 2017 Approval of Resolutions from Committees	1
4.3	Briefing Notes:	
	CH Committees	2
	Kelso Dam Update	3-5
	Pleasant View Natural Area 2017 Prescribed Burns	6-7

4.4	Quarterly Permits & Letters of Permission issued under Ontario Regulation 162/06 January 3, 2017 to March 3, 2017 Report #: CHBD 01 17 01	8-12
4.5	Conservation Halton Planning and Regulations Summary Report, 2016 Report #: CHBD 01 17 02	13-18
4.6	Conservation Halton's Guidelines for Ecological Studies Report #: CHBD 01 17 03	19-25
4.7	Finance Function Effectiveness Assessment Results Report #: CHBD 01 17 04	26-29
4.8	Payment Card Industry Data Security Standard (PCI-DSS) Report #: CHBD 01 17 05	30-32
5.	<b>Action Items</b>	
5.1	2016 Conservation Halton Investments and Allocation of Investment Revenue Report #: CHBD 01 17 06	33-35
5.2	2016 Conservation Halton Capital Projects Report #: CHBD 01 17 07	36-39
5.3	2017 Budget Capital Projects and Additional Funding, Kelso Switch Update Report #: CHBD 01 17 08	40
5.4	Budget Variance Report for the year ended December 31, 2016 and Reserve Balances Report #: CHBD 01 17 09	41-50
5.5	211 Glen Oak Drive, Oakville, proposed development Report #: CHBD 01 17 10	51-54
5.6	413 Avon Crescent, Oakville, proposed development Report #: CHBD 01 17 11	55-58
5.7	Forestry Business Case - Emerald Ash Borer (EAB) Report #: CHBD 01 17 12	59-65
6.0	<b>In Camera Items</b>	
6.1	Legal Issue – Confidential Briefing Memo Legal Issue – Report #: CHBD 01 17 13	66-69 70-73
7.	<b>Other Business</b>	
8.	<b>Adjournment</b>	

**Conservation Halton Board of Directors – March 23, 2017**

**RESOLUTIONS**

**CAO Compensation Committee – CC 03 17**  
**March 7, 2017**

**CC 01 01**

The CAO Compensation Committee recommends to the Conservation Halton Board of Directors to approve the CAO 2017 Objectives.

The Committee is recommending a compensation review for the CAO position to be completed in 2017.



**Conservation Halton**  
Administration Office  
2596 Britannia Road West  
Burlington ON L7P 0G3  
905 336 1158 Phone  
905 336 7014 Fax  
Website: conservationhalton.ca

## Memo

**To:** Conservation Halton Board of Directors

**From:** Patricia Vickers, Board Clerk/FOI Coordinator  
905.336.1158 x 2236; pvickers@hrca.on.ca

**Date:** March 23, 2017

**Subject:** Conservation Halton Board Committees

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As of January 2017, the Communication and Strategy Committees were dissolved. Currently, Conservation Halton Board of Directors have the following Committees and representation:

### Finance & Audit

Rob Burton (Chair)  
Cathy Duddeck  
Rob Duvall  
Moya Johnson (Vice Chair)  
Jim Sweetlove  
John Vice

### Governance

John Vice (Chair)  
Joanne Di Maio  
Cathy Duddeck  
Jim Sweetlove

### CAO Compensation

Gerry Smallegange (Chair)  
Rob Burton  
Mike Cluett  
Cathy Duddeck  
Moya Johnson  
John Vice

If there are members from the Communication and Strategy Committees who wish to sit on either of the Committees listed above, or if there are members on the above noted Committees who wish to change, please advise Patricia Vickers.



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Burlington ON L7P 0G3  
905 336 1158 Phone  
905 336 7014 Fax  
Website: conservationhalton.ca

## Memo

**To:** Conservation Halton Board of Directors  
**From:** Janelle Weppler – Associate Director, Engineering  
**Date:** March 23, 2017  
**Subject:** Kelso Dam Update

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This briefing note is in response to the following resolutions that were made during the Conservation Halton Board of Directors meeting on April 28, 2016:

- The Conservation Halton Board of Directors **direct staff to provide monthly updates as to the status of Kelso Dam, including water levels, plume sightings, project progress and any remedial actions being undertaken;** and
- The Conservation Halton Board of Directors **direct staff to work with the Ministry of Natural Resources and Forestry, Halton Region and Hatch to expedite, to the extent possible, the permanent remedial measures required to mitigate the dam breach risk at the Kelso Dam.**

### ***Kelso Reservoir Water Levels and Monitoring***

Conservation Halton staff continue to monitor and record the conditions at the Kelso dam with the reduced winter operating frequency of:

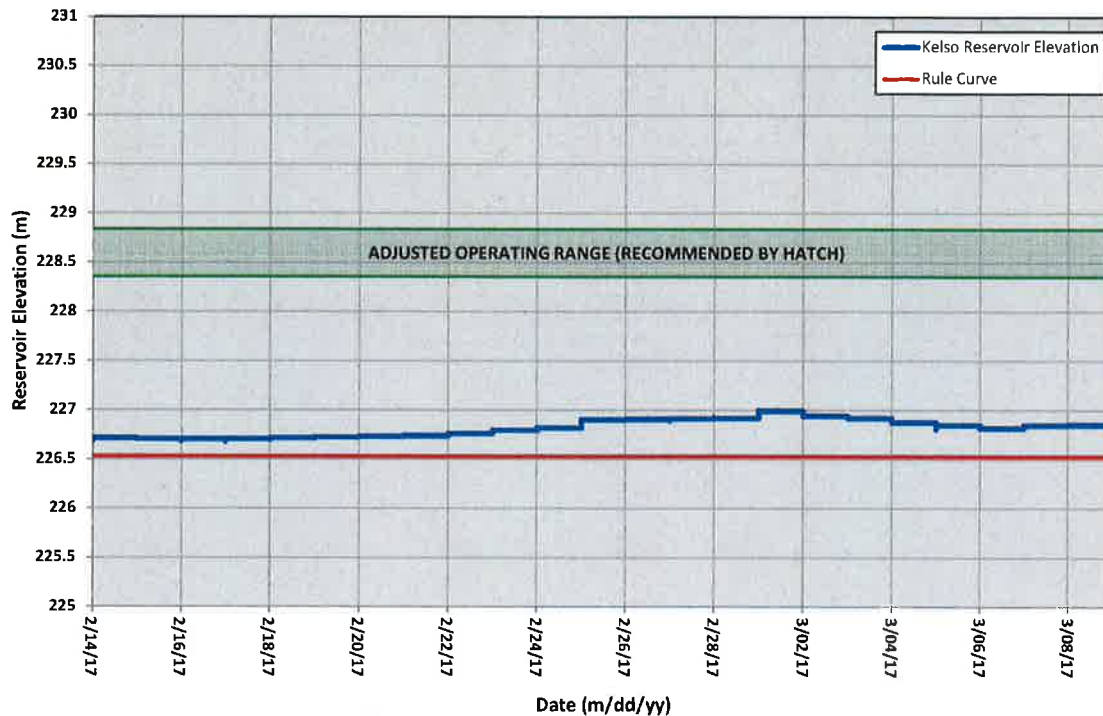
- Monthly piezometer (groundwater) readings within the earthen embankment;
- Two site visit inspections per month; and,
- Review of photographic records of the identified boil area taken every 30 minutes throughout the day (visible during daylight hours).

There continues to be no visible observation of sedimentation from the boil area (i.e. no plume sightings) since the last Kelso Dam Update report for the Board of Directors, dated February 14, 2017.

The following chart illustrates the recorded water levels within the Kelso reservoir relative to the reduced water level operating range recommended by Hatch.

## Kelso Reservoir Elevation

February 14, 2017 to March 9, 2017



### ***Recent Work & Next Steps***

Conservation Halton staff have undertaken the following work in support of upcoming repair and rehabilitation works at the Kelso dam:

#### Environmental Mitigation Measures

The Upper West Branch of Sixteen Mile Creek located immediately downstream of the Kelso dam is identified as a coldwater fishery. In addition to the existing comprehensive monitoring program for this creek, further data collection commenced in 2016 to confirm baseline conditions. Monitoring will continue throughout the duration of the project to assess potential impacts resulting from the proposed construction works at the Kelso dam and to identify any required mitigation measures.

Fish barriers were recommended and installed on February 14, 2017 to prevent spawning and access within the Kelso dam construction footprint.

Required tree and vegetation removal within the project footprint has been completed prior to April 15<sup>th</sup> to prevent the disturbance of nesting and migratory birds.

#### Utility Pole Relocation

Existing utility poles are located within the Kelso dam construction footprint and need to be relocated out of the proposed construction zone. A Request for Tender (RFT) was posted on March 10, 2017, closes March 16, 2017 with award on March 22 and completion of work planned for April 13, 2017.

#### Prequalification and Tendering

Selection of the contractor for the upcoming construction works at the Kelso dam is following a two-step process that includes prequalification of potential contractors followed by submission to the RFT from successfully prequalified contractors.

Conservation Halton staff, with support from Hatch and KD Enterprises (procurement advising consultant), prepared prequalification documents and posted for interested contractors on February 9, 2017, then closed on February 23, 2017. Conservation Halton received submissions from 10 interested contractors and the top four (4) were selected by Conservation Halton staff and Hatch, based on a weighted scoring of criteria including; experience with similar type and size of projects, ability to manage schedules/budget/change orders, project & professional references, and corporate history.

The successful prequalified contractors are:

1. Maple Reinders Constructors Limited,
2. Metric Contracting Services Corporation,
3. Dufferin Construction Company, and
4. Rankin Construction Incorporated.

RFT documents were issued to the four (4) prequalified contractors on March 10, 2017 and submissions are due on April 6, 2017. The lowest qualifying bid will be identified and recommended for approval by the Conservation Halton Board of Directors through a report at the Board of Directors meeting on April 27, 2017.

Construction of the proposed works at the Kelso dam are estimated to commence June 1, 2017 and end December 15, 2017, subject to confirmation of the successful contractor and proposed milestones documented within the awarded contract by the successful RFT bid.

#### Permitting and Approvals

Conservation Halton staff with the support of Hatch, continue to work with agencies on obtaining the required permits and approvals in preparation for the upcoming construction works at the Kelso dam.

#### Public Communications

##### *July 17, 2015*

An advisory letter was sent to 90 addresses located downstream of the Kelso dam on July 17, 2015. This letter provided a brief history and description of the Kelso dam, described the siltation plume and advised of the ongoing investigation being undertaken by Hatch. This letter also indicated that any updates would be provided upon completion of the investigation.

These letters initiated one response from one recipient via a telephone conversation with Conservation Halton staff regarding further understanding of the boil and associated siltation. No further communication was initiated or requested by other recipients.

##### *June 10, 2016*

Conservation Halton staff provided an update letter to the same 90 addresses located downstream of the Kelso dam that provided a reminder and overview of the letter sent July 17, 2015. This update letter also referenced subsequent studies and detailed design by Hatch to respectively understand and mitigate the identified boil and associated sedimentation. The letter also provided an estimated timeline for construction.

This letter did not receive any responses or inquiries.

#### Upcoming Communication

Conservation Halton staff will continue with public communication through a subsequent letter that will be issued in the near future regarding the upcoming construction at the Kelso dam.

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**Conservation Halton**  
Administration Office  
2596 Britannia Road West  
Burlington ON L7P 0G3  
905 336 1158 Phone  
905 336 7014 Fax  
Website: [conservationhalton.ca](http://conservationhalton.ca)

## Memo

To: Conservation Halton Board of Directors  
From: Nigel Finney, Watershed Restoration Planner  
905.336.1158 x 2305; [nfinney@hrca.on.ca](mailto:nfinney@hrca.on.ca)  
Date: March 23, 2017  
Subject: **Pleasant View Natural Area 2017 Prescribed Burns**

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Conservation Halton has retained Wildfire Specialists Inc. to plan and conduct a prescribed burn at the Pleasant View Natural Area – Cartwright and Hopkins Tracts during the spring of 2017. The burn will be conducted on 4.5 hectares of land in early to late April.

The budget for this initiative has been secured through fundraised restoration revenue sources with support from the Ministry of Natural Resources and Forestry's Species at Risk Stewardship Fund and TD Friends of the Environment Foundation. The goal of the prescribed burn at the Cartwright Tract is to restore and enhance the habitat for the American Columbo (*Frasera caroliniensis*), an endangered native wildflower. The goal of the prescribed burn at the Hopkins Tract is to prepare the site for ecological restoration and manage non-native invasive species.

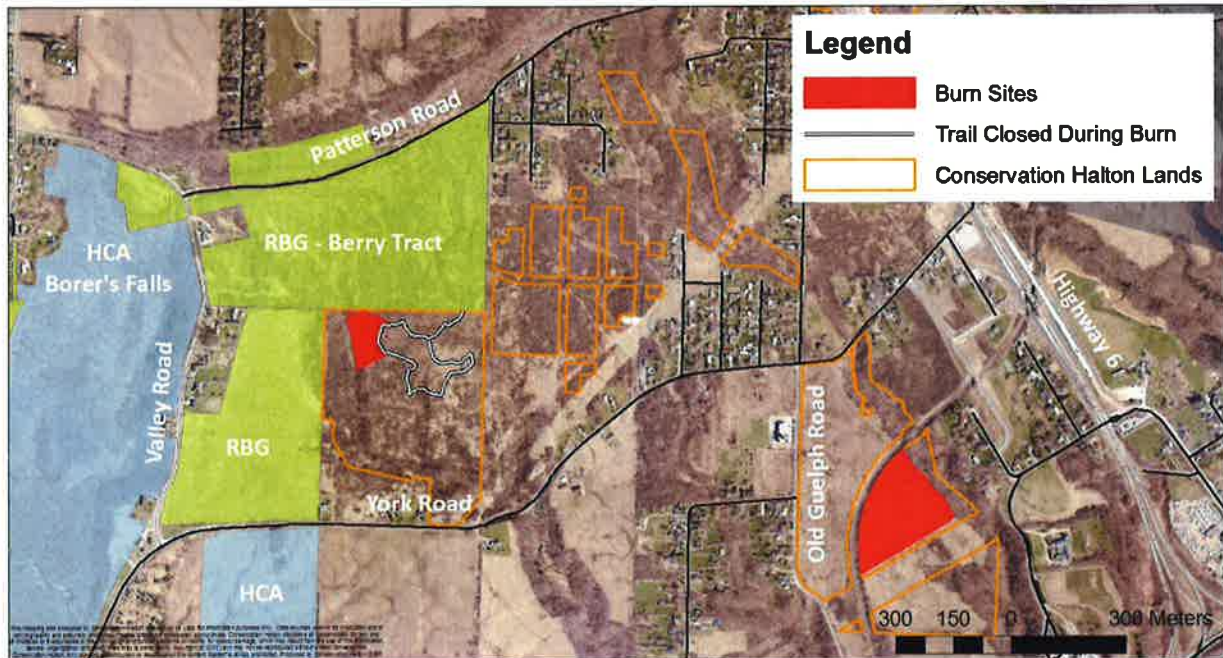
A prescribed burn is a deliberately set, carefully planned and controlled low severity fire which consumes ground level fine fuels such as dried leaves, needles, and small twigs. The practice is a widely used and recognized scientific method of controlling out-competing, non-fire tolerant invasive species, allowing for growth and encouraged regeneration of the naturally occurring historical trees, grasslands and planted seedlings.

Wildfire Specialists Inc. will plan and carry out the prescribed burns with an experienced and qualified crew. Conservation Halton staff will assist and monitor the burns, and the City of Hamilton Fire Department will be on site in a precautionary standby capacity. Staff will patrol the area until all woody debris is extinguished.

Local councillors, municipal and government officials, residents, and the media will be notified prior to the burn commencing. The prescribed burns will be approved by City of Hamilton Fire department and issued a permit. The project will be expected to take a couple of hours to complete.



## Pleasant View Natural Areas 2017 Spring Prescribed Burn



**CONSERVATION HALTON**  
**CHBD 01 17 01**

**REPORT TO:** Board of Directors

**FROM:** Barbara J. Veale, Director, Planning & Regulations 905.336.1158 x 2273

**DATE:** March 23, 2017

**SUBJECT:** **Quarterly Permits & Letters of Permission issued under Ontario Regulation 162/06 January 3, 2017 to March 3, 2017**

**Recommendation**

THAT the Conservation Halton Board of Directors **receive for information the Permits and Letters of Permission issued by staff under Ontario Regulation 162/06 for the period of January 3, 2017 to March 3, 2017, as identified in the staff report dated March 23, 2017.**

**Report**

Between January 3, 2017 to March 3, 2017, 49 Permits and 4 Letters of Permission were issued (see attached table). All approvals were reviewed and approved in accordance with Board approved policies contained in *Policies and Guidelines for the Administration of Ontario Regulation 162/06 and Land Use Planning Policy Document April 27, 2006, revised November 26, 2015.*

Prepared by:



Michelle Caissie, Administrative Assistant  
Planning & Regulations

Respectfully submitted by:



Charles Priddle, Coordinator  
Regulations Program

Approved for circulation by:



Barbara J. Veale, Director  
Planning & Regulations

CH File No.	Permit No.	Address	Proposed Works	Complete	Issued	CH Staff Member
<b>Burlington</b>						
A/16/B/63	5462	0 Spring Gardens Road	Proposed installation of 30 metres of steel sheet pile retaining wall within 15 metres of the valley associated with Grindstone Creek	26/09/2016	09/01/2017	Ben Davis
A/16/B/53	5464	5035 No. 1 Sideroad	Proposed replacement of an existing 8m x 600mm CSP within a 17m x 1000mm CSP within the floodplain associated with a tributary of Bronte Creek.	01/09/2016	11/01/2017	Ben Davis
A/16/B/90	5467	2188 Grand Boulevard	Proposed demolition and reconstruction of a detached garage within the floodplain and valley associated with Bronte Creek	15/12/2016	18/01/2017	Cassandra Connolly
S/17/B/02	5473	2282 Lakeshore Road	Proposed reconstruction and restyling of roof, and the replacement of doors and windows on a property that is located within the erosion hazard associated with Lake Ontario	19/01/2017	23/01/2017	Charles Priddle
A/17/B/06	5474	3328 Cline Street	Proposed construction of an 11ft x 11ft rear deck within 7.5m of the floodplain associated with Sheldon Creek	19/01/2017	23/01/2017	Ben Davis
S/16/B/26	5482	830 Danforth Avenue	Proposed addition, reconstruction of a garage and enclosing a pool structure within the development setback associated with the erosion hazard of Hamilton Harbour/Burlington Bay	26/10/2016	27/01/2017	Charles Priddle
A/17/B/07	5481	480 Elwood Road	Proposed construction of a 13ft x 14ft 1 storey sunroom within the floodplain associated with Tuck Creek.	24/01/2017	27/01/2017	Ben Davis
A/16/B/77	5480	0 Mainway (ROW)	Proposed installation of a 900mm diameter feedermain (using trenchless technology and open trench methods) within the regulatory limits associated with Roseland Creek within the Mainway Right of Way	07/11/2016	27/01/2017	Cory Harris
A/16/B/76	5479	0 Guelph (ROW - Prospect to Mainway) Line	Installation of a 900mm diameter feedermain and 300mm diameter distribution main (using trenchless and open trench methods) within the limits of the floodplain of Roseland Creek within the Guelph Line & Prospect Street Right of Ways	07/11/2016	27/01/2017	Cory Harris
A/16/B/85	5485	2161 No. 1 Sideroad	Proposed vegetation clearing and maintenance along the Enbridge Line 9 Right-of-Way within the Regulated Area associated with a tributary of Grindstone Creek and a Provincially Significant Wetland (KP3017)	30/01/2017	31/01/2017	Cassandra Connolly
A/17/B/09	5486	4094 Appleby Line	Proposed vegetation clearing and maintenance along the Enbridge Line 9 Right-of-Way within the Regulated Area associated with a tributary of Bronte Creek and a Provincially Significant Wetland (KP3023)	30/01/2017	31/01/2017	Cassandra Connolly
A/16/B/86	5483	1117-1137 No. 1 Sideroad	Proposed vegetation clearing and maintenance along the Enbridge Line 9 Right-of-Way within the Regulated Area associated with a tributary of Grindstone Creek and a wetland greater than 2 hectares in size. (KP3016)	30/01/2017	31/01/2017	Cassandra Connolly
A/16/B/25	**REVISED** 5131	2076 McKerlie Circle	**REVISED** Proposed construction of a rear deck addition within 7.5 m of the floodplain associated with Appleby Creek	01/02/2017	08/02/2017	Cassandra Connolly
A/17/B/08	5498	3188 Steeplechase Drive	Proposed installation of an in-ground pool within 7.5m of the floodplain associated with Appleby Creek	14/02/2017	15/02/2017	Ben Davis
A/17/B/03	5506	2500-2510 Britannia Road West	Proposed reinforcement of an existing natural gas pipeline requiring the installation of a new 310m section of NPS 4" pipeline within the Regulated Area associated with Bronte Creek.	21/02/2017	23/02/2017	Cassandra Connolly

CH File No.	Permit No.	Address	Proposed Works	Complete	Issued	CH Staff Member
A/15/B/56	5504	2340 Britannia Road	Proposed installation of a NPS 4" natural gas pipeline within the Regulated Areas associated with a tributary of Bronte Creek.	21/02/2017	23/02/2017	Cassi Connolly
A/15/B/57	5505	b/w 2300 & 2340 Britannia Road	Proposed installation of NPS 4" natural gas pipeline across a tributary of Bronte Creek and within the Regulated Areas associated with that watercourse.	21/02/2017	23/02/2017	Cassi Connolly
A/15/B/55	5503	2303 Britannia Road	Proposed installation of NPS 4" natural gas pipeline within the Regulated Areas associated with a tributary of Bronte Creek	21/02/2017	23/02/2017	Cassi Connolly
A/15/B/54	5502	2300 Britannia Road	Proposed installation of NPS 4" natural gas pipeline within the Regulated Area associated with a tributary of Bronte Creek	21/02/2017	23/02/2017	Cassi Connolly
A/16/B/01	5511	1240 Hidden Valley Road	Proposed replacement of an existing bridge within the Regulated Area associated with Grindstone Creek	18/01/2017	02/03/2017	Ben Davis
A/17/B/10	Letter of Permission	3330 Milburough Line	Proposed installation of an in-ground pool to be located between 30 & 120 metres of a wetland greater than 2 hectares in size.	17/02/2017	22/02/2017	Cassandra Connolly

#### Halton Hills

A/17/HH/02	5507	9811 Fourth Line	Proposed construction of a garage within the floodplain of Sixteen Mile Creek and within 120 metres of a Provincially Significant Wetland	09/02/2017	27/02/2017	Laura Head
A/17/HH/01	Letter of Permission	11893 Nassagaweya Line	Proposed addition to an existing dwelling and new geothermal unit(s) to be located between 30 and 120 metres of a Provincially Significant Wetland	17/01/2017	20/01/2017	Laura Head

#### Hamilton

A/17/H/05	5477	150 Mill Street South	Proposed replacement of the existing municipal wastewater pumping station and the emergency outfall within the valley system associated with Grindstone Creek by extending the new building and a wet well 2.0 m closer to the physical top of bank including slope restoration as a result of the proposed replacement	24/01/2017	24/01/2017	Cassandra Connolly
A/15/H/33	5487	392 Dundas Street East	Proposed construction of the SWM Pond 1 and outfall and associated works within the Regulated Area associated with a tributary of Grindstone Creek.	31/01/2017	01/02/2017	Ben Davis
A/17/H/03	5499	159 Carlisle Road	Proposed rehabilitation of Bronte Creek including the Mountsberg Creek tributary. This work includes the removal of twin CSP culverts and replacement with a vehicular span bridge; removal of an existing concrete culvert to be replaced by a pedestrian span bridge; and, the re-aligning and redirecting of flows of Mountsberg Creek through natural channel design at Courtcliffe Park within the regulated area associated with a tributary of Bronte Creek	24/01/2017	16/02/2017	Ben Davis
A/17/H/02	5497	1390 Progression Road	Proposed maintenance and repairs to an existing water containment structure within, and adjacent to, a tributary of Bronte Creek.	14/02/2017	16/02/2017	Cassandra Connolly
A/16/H/44	**REVISED** 5362	1160 Edgewood Road	Proposed construction of a 50ft x 60ft x 16ft addition to an existing structure within 15m of Hayesland-Christie Wetland Complex, a Provincially Significant Wetland	10/02/2017	28/02/2017	Ben Davis

#### Milton

A/16/M/58	5460	8875 Britannia Road	Proposed pipeline installation within valley of Sixteen Mile Creek	14/07/2016	06/01/2017	Laura Head
A/16/M/82	5466	0 Britannia Road (Pt Lot 6, Conc. II (NDS) Traf.)	Proposed installation of 55 m of a new NPS 4 natural gas pipeline over an existing culvert within the regulated area associated with Sixteen Mile Creek	26/10/2016	12/01/2017	Ben Davis

CH File No.	Permit No.	Address	Proposed Works	Complete	Issued	CH Staff Member
A/15/M/19, A/16/M/03 & A/16/M/04	**REVISED** 4935	0 Louis St. Laurent (Gulf Beck Developments) Avenue	Proposed construction of the temporary diversion channel associated with SWS-2-A (tributary of Sixteen Mile Creek) within the Regulated Area associated with the Floodplain of Sixteen Mile Creek (Gulfbeck Property, Country Homes and Mattamy Framgard)	04/01/2017	17/01/2017	Ben Davis
A/16/M/46, A/16/M/75 & A/16/M/76	5470	0 Louis St. Laurent Ave	Proposed construction of a SWM outfall from Pond I to K within the regulated area associated with tributaries of Sixteen Mile Creek (SWS-1-A and SWS-2A) (Gulfbeck Property, Country Homes Property and Mattamy Church and Framgard Properties) Filed with A/16/M/46	25/10/2016	23/01/2017	Ben Davis
A/16/M/66	5472	0 Campbell Avenue East	Proposed road reconstruction within the Regulated Area associated with Sixteen Mile Creek	09/12/2016	23/01/2017	Laura Head
A/17/M/03	5475	8146 Guelph Line	Proposed septic tank replacement within 30 metres of a wetland greater than 2 hectares in size which is considered to be part of a Provincially Significant Wetland	18/01/2017	23/01/2017	Emma DeFields
A/17/M/06	5476	360-222 Bronte Street North	Proposed directional drilling beneath a tributary of Bronte Creek	25/01/2017	24/01/2017	Cassandra Connolly
A/16/M/51	5490	100 Garden (Rotary Park) Lane	Proposed improvements to park within the floodplain associated with Sixteen Mile Creek	20/01/2017	08/02/2017	Laura Head
A/17/M/01	Letter of Permission	8578 Twiss Road	Proposed construction of a new two-storey dwelling and accessory structures to be located between 15 and 30 metres from a wetland less than 2 hectares in size.	09/01/2017	06/02/2017	Laura Head
A/17/M/15	Letter of Permission	2110 Cunningham Court	Proposed construction of a deck, covered porch and a pool cabana to be located between 30 & 120 metres of a Provincially Significant Wetland	15/02/2017	22/02/2017	Laura Head

Oakville						
A/16/O/75	5478	0 Lakeshore (40m east of Forsythe to 100m west of Navy) Road	Proposed replacement of deteriorated Lakeshore Road Bridge over Sixteen Mile Creek	29/11/2016	25/01/2017	Laura Head
S/16/O/01	5488	1120 Westdale Road	Proposed patio, unexcavated terrace and grading within the erosion hazard associated with Lake Ontario.	18/01/2017	01/02/2017	Emma DeFields
A/17/O/03	5489	1210 Oxford Avenue	Proposed additions and rear deck within 15 metres of stable top of bank associated with Sixteen Mile Creek	24/01/2017	02/02/2017	Laura Head
A/17/O/07	5495	0 North Service (461 North Service) Road	Proposed conduit installed over a tributary of McCraney Creek.	09/02/2017	13/02/2017	Laura Head
A/17/O/06	5494	0 Bronte (in front of 2041) Road	Proposed conduit installed over a tributary of Fourteen Mile Creek	09/02/2017	13/02/2017	Laura Head
A/16/O/41	5491	0 King Henry (near 1328) Court	Proposed pedestrian stair replacement within the valley of Fourteen Mile Creek.	22/09/2016	15/02/2017	Laura Head
A/15/O/02	5493	21 Shepherd (@ 16 Mile Creek) Road	Proposed installation of a 900mm feedermain underneath Sixteen Mile Creek, south of the QEW, west of Cross Avenue in the Town of Oakville. (W2998)	14/02/2017	15/02/2017	Paul Bond
A/16/O/60	5496	383 River Side Drive	Proposed construction of a new dwelling and rear covered porch within 15 metres of the stable top of bank associated with Sixteen Mile Creek	20/01/2017	15/02/2017	Laura Head
A/16/O/41	5491	0 King Henry (near 1328) Court	Proposed pedestrian stair replacement within the valley of Fourteen Mile Creek.	17/11/2016	15/02/2017	Laura Head
A/16/O/61	5492	444 Chartwell Road	Proposed detached garage within 7.5 metres of the flooding and erosion hazard associated with Lower Morrison Creek.	13/10/2016	16/02/2017	Laura Head
A/17/O/11	5500	273 Duskyway Way	Proposed installation of an in-ground pool within the regulated area associated with Sheldon Creek.	17/02/2017	22/02/2017	Cassandra Connolly
A/17/O/09	5501	269 Canning Court	Proposed construction of a pool, deck and patio within 7.5 metres of the stable top of bank associated with Joshua's Creek	15/02/2017	22/02/2017	Laura Head

CH File No.	Permit No.	Address	Proposed Works	Complete	Issued	CH Staff Member
A/16/O/59	5508	41 Dundas Street East	Proposed installation of a new gas line over a tributary of Sixteen Mile Creek	06/09/2016	23/02/2017	Laura Head
A/16/O/81	5509	1360 Acton Crescent	Proposed construction of a new two-storey dwelling within 7.5 metres of the floodplain associated with Lower Wedgewood Creek	10/02/2017	27/02/2017	Laura Head
A/16/O/43	5510	0 Dorval Drive	Proposed replacement of two wooden lookouts within 15 metres of the stable top of bank associated with Sixteen Mile Creek	03/01/2017	28/02/2017	Laura Head
A/15/O/57	**REVISED** 5250	10 Maple Grove Drive	REVISED - Proposed Lower Wedgewood Creek restoration works including repair of existing stone and mortar channel walls; replacement of vertical channel wall with stacked armour stone wall; toe repair of existing stone and mortar channel walls; placement of stone riffles and pools in channel; installation of pedestrian bridge and walkway; and vegetation enhancement plan	15/02/2017	03/03/2017	Matt Howatt

**CONSERVATION HALTON  
CHBD 01 17 02**

**REPORT TO:** Board of Directors

**FROM:** Barbara Veale, Director Planning and Regulations, 905-336-1158 x.2273

**DATE:** March 23, 2017

**SUBJECT:** **Conservation Halton Planning and Regulations Summary Report, 2016**

**Recommendation**

THAT the Conservation Halton Board of Directors **receive for information the staff report Conservation Halton Planning and Regulations Summary Report, 2016 dated March 23, 2017.**

**Summary**

In 2016, the Planning and Regulations Department continued to deal with a heavy workload as large development proposals in the Halton area increase, particularly in North Oakville and Milton (Boyne Survey and Derry Green areas). Although the number of planning files has remained relatively stable, the scale, scope and complexity of files has intensified.

Staff was also busy responding to provincial requests for input on a number of initiatives that could have a significant impact on Conservation Halton's planning and permitting programs.

A significant increase in permit applications was experienced in 2016, primarily due to a series of Union Gas permits, required for the new gas line which crosses the watershed. Regulations staff made a concerted effort to deliver timely services. In addition, a large number of violations were resolved through compliance and restoration agreements.

In 2017-18, the primary foci for the Department will be on consolidating and finalizing comprehensive policies for administering Ontario Regulation 162/06 and land use planning, revamping the compliance and enforcement program, tracking files and the time spent on technical review, and improving service delivery to meet the targets identified in the CH Strategic Plan.

**Report**

Reorganization

In November 2016, the Water Resources Engineers, Planning Ecologists, and Regional Infrastructure Team were amalgamated with the Environmental Planning and Regulations sections to create the new Planning and Regulations Department. Five Coordinators, reporting to the Director, oversee the day-to-day operations of these sections. Planning and Regulations currently has 31 staff.

Review Process

Staff coordinated numerous new and on-going initiatives during 2016. Many of the on-going initiatives involve complex planning and technical issues and take several years to finalize. These initiatives include:

- Municipal and provincial environmental assessments,
- Subwatershed studies,
- Functional Stormwater and Environmental Management Studies (FSEMS),



- Subwatershed Impact Studies (SIS),
- Environmental Implementation Reports (EIR) and
- Functional Servicing Studies (FSS),
- Secondary plans, and
- Subdivision files.

Often, these types of studies require several re-submissions of technical studies and documentation before the municipality, Conservation Halton and other review agencies are satisfied that all planning and regulatory concerns have been met. Staff coordinates a comprehensive review of these files with staff technical teams. Environmental Planning staff manages the files and are responsible for all formal Conservation Halton correspondence to municipalities, landowners and consultants with respect to planning matters.

### Provincial Initiatives

In 2016, staff actively participated in the review of several provincial initiatives including:

- *Conservation Authorities Act*;
- Excess Soils Management Framework
- Coordinated Review for the Growth Plan, Niagara Escarpment Plan, Greenbelt Plan and the Oak Ridges Moraine Plan
- Ontario Municipal Board
- Wetland Conservation Strategy
- *Aggregate Resources Act*.

Several policy initiatives were completed including Large Fill Policies and policies for when On-Title Agreements would be requested as a condition of permit approval.

### Municipal/Regional Infrastructure Projects and Utilities

Twenty-eight (28) Environmental Assessments were reviewed related to all types of infrastructure including roads, utilities, water and wastewater.

Notable projects included:

- 14 Mile Creek/McCraney Creek Flood Mitigation Study and Lower Morrison/Lower Wedgewood Flood Mitigation Study, both of which are high risk priorities identified in the Oakville Flood Mitigation Opportunities Study, 2008
- Ninth Line (Derry Road to Highway 401/407)
- 10 Side Road to Highway 401/407)
- Britannia Road (Tremaine to 407)
- Dundas-Trafalgar EA and King Road EA (Burlington)
- CN Milton Logistics Hub
- Sixteen Mile Crossing (Boyne Area - Milton)
- Tuck Creek Flood Assessment and crossing upgrades between New Street and Spruce Avenue in Burlington
- Union Gas Parkway West Pipeline EA

In addition, the Regional Infrastructure Team has been working closely with Regional staff and their consultants on several major infrastructure projects. CH Permits have been issued and construction is now underway for the following major projects in 2016:

- Zone 4 Reservoir on Trafalgar Road north of 5 Side Road in Halton Hills and the associated watermain installation (this project will provide water services to the eastern portion of the Milton Boyne Survey/Secondary Plan Area, the Derry Green Industrial Park/Secondary Plan Area and the Steeles Ave/Hwy 401 Corridor in Halton Hills.)
- New Regional Wastewater Pumping Station and forcemain along Britannia Road between Third Line and Sixteen Mile Creek in the Town of Milton (this will provide sanitary sewer services to the eastern portion of the Milton Boyne Survey/Secondary Plan Area and the Derry Green Industrial Park/Secondary Plan Area)



- Steeles Ave. widening from Fifth Line South to Trafalgar Road, new bridge structures at Hornby and Sixth Line, Halton Hills (The larger bridge structures improve the hydraulic conditions through the respective creek reaches and improve overall road safety standards and freeboard distances under various flood conditions)

### Subwatershed Studies, Secondary Plans and Subwatershed Impact Studies

Staff participated in a number of Technical Steering Committees for Subwatershed Studies/Secondary Plans including:

- South Milton (Phase Four) in the Town of Milton;
- Merton Tertiary Plan in Oakville and Tremaine-Dundas Subwatershed Study, Evergreen Secondary Plan, and Grindstone Holdings Inc., in the City of Burlington;
- Southwest Georgetown Subwatershed Plan and Premier Gateway Scoped Subwatershed Plan, Town of Halton Hills;
- Ninth Line Subwatershed Study, City of Mississauga.
- Involved in ongoing negotiations to meet minutes of settlement for several appeals associated with the Region of Halton's Official Plan (ROPA 38) in Milton (OPA 30).
- Review of several large Subwatershed Impact Studies (SIS)/Environmental Implementation Reports (EIR) in the Boyne Survey and Derry Green Business Park in Milton;
- EIRs in North Oakville including Lazy Pat, Green Ginger, Davis Minardi Phase 2A and 2B, Merton Study Area, Mattamy Preserve 2 and Pendent/Lower Fourth, Minto, and Star Oak Developments.
- Environmental staff co-ordinated over 87 active subdivision files during 2016 and were involved in 4 active OMB hearings.

### 2016 Planning Applications

Outlined in Table 1 are the numbers of new planning applications under the *Planning Act* that were received by Conservation Halton for review in 2016. The numbers below do not account for on-going file review for files received prior to 2016.

**Table 1. Planning Act Applications Received for Review, 2012 -2016**

Plan Submissions	2012	2013	2014	2015	2016
Site Plans	43	59	52	66	62
Consents	25	16	18	21	14
Minor Variances	56	60	88	72	81
Official Plan Amendments	4	5	3	1	6
Zoning Amendments	18	17	36	9	9
Subdivisions	8	3	18	9	7
Site Alterations	0	0	0	10	8
<b>TOTAL</b>	<b>154</b>	<b>160</b>	<b>215</b>	<b>188</b>	<b>187</b>

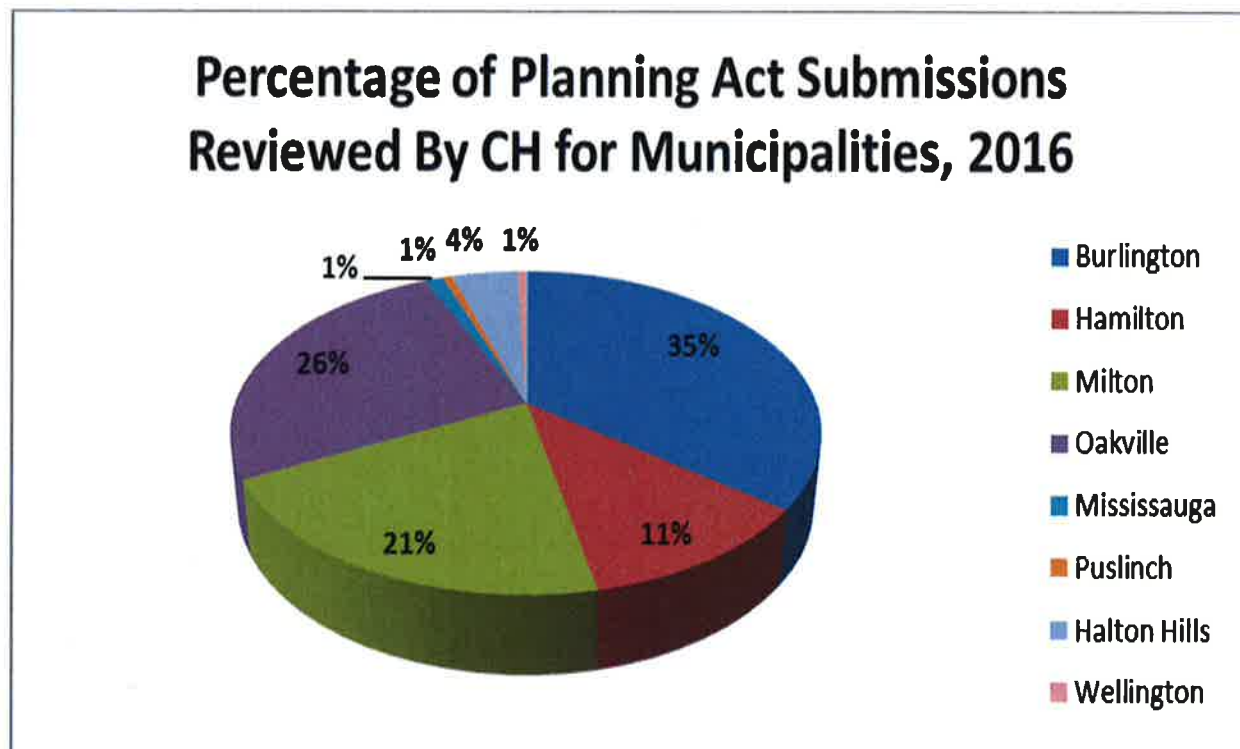
In addition, Conservation Halton reviewed Niagara Escarpment Commission Development Permit applications and other complex technical studies and reports as shown on Table 2.

**Table 2.** Plan Review for Niagara Escarpment Development Permit Applications and Complex Technical Reviews

Plans Reviewed	2012	2013	2014	2015	2016
NEC Development Applications & Parkway Belt	86	90	84	98	101
Environmental Assessments*	37	21	22	33	28
Environmental Impact Reports	11	7	18	15	6
Subwatershed Studies	5	5	6	7	7

The breakdown of these files by municipality is shown in Figure 1.

**Figure 1.** Percentage of *Planning Act* Submissions Review by Conservation Halton for Municipalities



## Inquires

In 2016, the Planning and Regulations staff responded to hundreds of general inquiries and formal requests for information as shown in the Table 3.

**Table 3.** Solicitor Inquiries and No Objections/Clearance Letters, 2016

2016	Solicitor Inquiries	No Objections Letters
Burlington	59	48
Halton Hills	8	6
Hamilton	2	22
Milton	40	31
Mississauga	4	2
Oakville	51	23
Puslinch	1	0
<b>TOTALS</b>	<b>165</b>	<b>132</b>
<b>2015 Totals</b>	<b>171</b>	<b>93</b>
<b>2014 Totals</b>	<b>186</b>	<b>131</b>

## Applications for Permit and Violations under Ontario Regulation 162/06

Over the past six years, there has been a gradual increase in the number of permit applications. In 2016, a large number of permits for private utilities (Union Gas) were processed. Table 4 summarizes the applications received under Ontario Regulation 162/06.

**Table 4.** Permit Applications Received, 2010 - 2016

Category	2010	2011	2012	2013	2014	2015	2016
Private	111	117	135	125	126	117	138
Commercial/ Industrial Single Unit	15	14	16	14	18	20	33
Residential/Industrial/ Commercial Multi-Units /Lots	15	25	25	11	18	36	25
Government/Utilities	96	72	71	100	98	95	142
Letters of Permission	70	49	61	67	53	68	71
Fish Timing Window	0	4	4	5	4	7	27
Agreements	0	0	23	11	1	16	31
<b>Total</b>	<b>307</b>	<b>281</b>	<b>335</b>	<b>333</b>	<b>318</b>	<b>359</b>	<b>467</b>

## Violations

During 2016, the Regulations staff focused on addressing complaints and resolving confirmed violations. All violation files initiated since January 2015 were reviewed and addressed (the statute of limitations under the *Conservation Authorities Act* is two years). Including unresolved 2015 files and 2016 files, there remained 19 active files at the end of 2016 (Table 5). Many violations are addressed on-site with willing landowners. No formal violation file is created. In an effort to resolve the remaining violations on a voluntary basis, Regulations staff will pursue either a Restoration or Compliance Agreement with the landowner, as appropriate.

**Table 5.** Status of Violations, 2016

Violations 2016	Reported/ Detected	Confirmed*	Charges Laid	Outstanding Violations*
<b>Total 2016</b>	98	82	1	19

## Court Cases

At the beginning of 2016, there were six active court cases. One additional court case was commenced in 2016. By December 2016, two cases had been resolved through negotiated settlements, with five active court cases being carried over to 2017.

## Forecast for 2017

It is anticipated that plan review and permitting applications will continue to increase as development proceeds, particularly in North Oakville and Milton (Boyne Survey and Derry Green areas). New development in Halton Hills (Southwest Georgetown and Premier Gateway areas) and Mississauga (Ninth Line area) will commence by 2021. CH staff will continue to work with municipal staff, landowners, and the public to review and comment on technical studies, upper level planning documents and secondary plan policies.

In 2017-18, the primary focus will be on consolidating and finalizing comprehensive policies for administering Ontario Regulation 162/06 and land use planning, revamping the compliance and enforcement program, tracking files and the time spent on technical review, and improving service delivery.

Prepared, respectfully submitted and approved:



Barbara J. Veale, Director  
Planning & Regulations

**CONSERVATION HALTON**  
**CHBD 01 17 03**

**REPORT TO:** Board of Directors

**FROM:** Lesley Matich, Coordinator, Planning Ecology, 905-336-1158 x 2323

**DATE:** March 23, 2017

**SUBJECT:** **Conservation Halton's Guidelines for Ecological Studies**

**Recommendation**

THAT the Conservation Halton Board of Directors **receive for information the Conservation Halton Guidelines for Ecological Studies, dated March 2017.**

**Report**

In 2005, the Board of Directors approved Conservation Halton's Environmental Impact Study (EIS) Guidelines. These guidelines were based on policy and scientific direction at that time. They do not take into account significant changes in legislation and policy direction that have taken place over the past 11 years such as the provincial *Endangered Species Act* (2008), the *Natural Heritage Reference Manual* (2010) and the *Provincial Policy Statement, 2014*. In this regard, the guidelines are outdated. During 2016, staff drafted simpler, more general guidelines, in keeping with current science and ecological principles.

The language has been modernized and the Guidelines have been streamlined and simplified through the removal of unnecessary details. A more user-friendly layout has been adopted. Consultation was undertaken with municipal partners and other stakeholders to ensure that any duplication with existing municipal Environmental Impact Assessment Guidelines or Environmental Impact Study Guidelines was minimized. Conservation Halton's new Guidelines for Ecological Studies will be used to facilitate the review of applications made under Ontario Regulation 162/06, the *Environmental Assessment Act*, *Aggregate Resources Act* and the Niagara Escarpment Plan and technical studies associated with other initiatives or plans such as Subwatershed Studies and the Greenbelt Plan (see attached). Conservation Halton will follow the existing municipal EIA or EIS Guidelines for the review of planning applications under the *Planning Act*.

Respectfully submitted:



Lesley Matich, Coordinator  
Planning Ecology

Approved for circulation:



Barbara J. Veale, Director  
Planning and Regulations



## Conservation Halton's Guidelines for Ecological Studies

**March 2017**



## **Introduction**

An Ecological Study creates a baseline inventory of ecological data for a given study area. Conservation Halton's Guidelines for Ecological Studies outline expectations for Ecological Studies required by Conservation Halton. They provide clear and consistent direction to proponents in their study preparation. The policies of Conservation Halton's Ontario Regulation 162/06 may trigger the need for an Ecological Study. These Guidelines will also be used to facilitate Conservation Halton's review of applications made under the *Environmental Assessment Act*, *Aggregate Resources Act* and the Niagara Escarpment Plan and in the review of technical studies associated with other studies or plans such as Subwatershed Studies and the Greenbelt Plan.

Conservation Halton will use municipal Environmental Impact Study/Assessment Guidelines for the review of applications under the *Planning Act* where they exist.

## **Ecological Study Requirements**

Table 1 outlines the requirements for an Ecological Study. Pre-consultation is strongly encouraged so that study requirements for all review agencies are clearly outlined. There may be some opportunity to scope requirements. This will be discussed and agreed to during the pre-consultation. As part of the pre-consultation process, a coordinated site visit with review agencies may be required. After pre-consultation, the proponent is required to submit a draft Terms of Reference (ToR), for approval by the review agencies prior to the completion of field inventories.



**Table 1: Contents of the ES**

SECTION	CONTENT
<b>Introduction</b>	Include a discussion on the need for an ecological study and include a list of the review agencies involved in approving the Terms of Reference.
<b>Describe the Surrounding Natural Environment</b>	<p>On a map (or maps), provide the following items based on existing available information from agencies (e.g., CAs, MNRF, etc.):</p> <ul style="list-style-type: none"> <li>• Limit of Approximate Regulation Limit (ARL) as defined by Conservation Halton, including all applicable hazards</li> <li>• Provincially Significant Wetlands (PSW) as well as any other wetlands as defined by the Ministry of Natural Resources and Forestry (MNRF), Conservation Halton or others</li> <li>• Limits of the Natural Heritage System (NHS) or key features of the PPS, as determined by the applicable agency</li> <li>• Environmentally Sensitive/Significant Areas (ESAs), where applicable</li> <li>• Areas of Natural and Scientific Interest (ANSIs) as defined by Ministry of Natural Resources and Forestry</li> <li>• Vegetation communities, evaluated using Ecological Land Classification</li> <li>• Potential Significant Wildlife Habitat</li> <li>• Water features such as headwaters drainage features, watercourses, lakes, ponds, springs and seeps, and recharge and discharge areas etc.</li> <li>• Contours at 1 metre intervals or less where available</li> </ul>
<b>Biophysical Inventory and Characterization of Site</b>	<p>Include a recent (i.e., completed within 5 years) biophysical inventory to describe the surrounding environment as well as the adjacent lands 120m from the edge of the property or other defined relevant area. Include a review of secondary sources (compiling information from existing documents), and either a scoped field inventory, or a detailed inventory, determined through pre-consultation with the review agencies. The ES should explain and justify the level of investigation undertaken, including reasons for excluding typical surveys not conducted for a given project, as part of the scoping exercise.</p> <p>Table 2 Field Survey Requirements of the ES (below), provides specific direction on the various inventory protocols and expectations for the study.</p> <p>The accompanying text should document the methodologies used for any field studies that were necessary, including a table outlining purpose of the study, the date, time of visits, and information about the qualified professional (e.g., ecologist, biologists, hydrogeologists, etc.) carrying out the study, the protocols used and the weather during the surveys. Discuss any property access limitations. Summarize the results of the biophysical inventory in the main text of the report, with the full results included as an appendix to the document. To be complete, all field data sheets should be included in this appendix. Include all calibration or QA/QC forms used in the preparation of the report, as applicable.</p> <p>Include maps showing the survey locations (with survey types clearly differentiated), the results of the ELC field work, the limit of the NHS, and any other relevant information collected during the field assessment. The location of Species at Risk (SAR) <b><u>should not be included in public reports due to the sensitivity of the data</u></b>, however the details on SAR finding should be filed with the Natural Heritage Information Centre (NHIC) and Conservation Halton. Assess and evaluate Significant Wildlife Habitat as per the PPS, NHRM, Significant Wildlife Habitat Technical Guide and applicable Ecoregion Criteria, with reference to the Significant Wildlife Habitat Mitigation Support Tool.</p> <p>Maps should clearly identify all ecological aspects on recent air photos, including the following:</p> <ul style="list-style-type: none"> <li>• Conservation Halton's Approximate Regulation Limits (ARL) and the features regulated by CH as refined and approved by CH through the ES or other studies.</li> <li>• PSWs, Provincially Significant Coastal Wetlands and other regulated wetlands as delineated by</li> </ul>



SECTION	CONTENT
	<p>Conservation Halton and/or the Ministry of Natural Resources and Forestry (MNRF) on the site</p> <ul style="list-style-type: none"> <li>• Hydrologic features, temperature classification, and catchment areas.</li> <li>• Regional NHS/ESAs/other protected areas identified in Official Plans, as determined on site by the relevant agency. For those municipalities without a defined NHS, identify core features not noted above but which comprise a NHS.</li> <li>• Areas of Natural and Scientific Interest (ANSI).</li> <li>• Significant Woodlands as assessed, delineated and approved by the relevant agency</li> <li>• Any identified Significant Wildlife Habitat, including Candidate or Unconfirmed SWH based on the completed field surveys, taking into consideration habitat and ecological functions in addition to species. Site visits with approval staff may be required.</li> <li>• Habitat of any SAR, including federal, provincial, S1-S3, regionally rare or locally rare species (should be forwarded to Conservation Halton under separate cover).</li> <li>• Fish habitat, including seasonal habitat such as ephemeral streams.</li> <li>• Areas of groundwater discharge and recharge, headwater drainage features assessment, and other hydrogeological features such as springs and seeps, Intake Protection Zones, Wellhead Protection Areas, etc.</li> <li>• The results from the biophysical survey such as ELC communities etc.</li> <li>• Wildlife movement corridors and connections.</li> <li>• Physiography.</li> <li>• Soil types and drainage characteristics.</li> </ul> <p>In addition, the mapping should include a legend, north arrow, scale and date of map production. Maps should be legible and provided at a scale appropriate for the site and the report.</p>
<b>Monitoring</b>	<p>Outline the monitoring protocol, if required. The need for monitoring the site will be determined on a case-by-case basis and depends on the sensitivity of the NHS and/or feature the proposed development is adjacent to and the projected impacts/mitigation proposed. To be developed through the consultation process. For more detailed information on the monitoring protocols and methodology, please refer to Conservation Halton's Ecological Monitoring Protocols Document (<i>IN PREPARATION</i>).</p>

Conservation Halton data can be obtained by submitting a Digital Information Request Form, available at [www.conservationhalton.ca](http://www.conservationhalton.ca). A fee may be applicable and if so, must be paid before the data is released.

Table 2, Field Survey Requirements of the ES outlines the survey methodology and protocols to follow to complete an ES. Please note that the review agencies may require additional surveys not listed in this table, on a site-specific basis or as a result of the initial inventory results.

**Table 2: Field Survey Requirements of the ES**

Y/N	Survey	Optimal Inventory Period	Methodology and Protocols	Notes
<input type="checkbox"/>	Ecological Land Classification (ELC)	<ul style="list-style-type: none"> <li>May to early June, July to September</li> </ul>	<ul style="list-style-type: none"> <li>ELC System for Southern Ontario First Approximation (Lee et al., 1999) or as updated from time to time</li> </ul>	<ul style="list-style-type: none"> <li>Classification to the Vegetation Type.</li> <li>Should the community not be available within the Guide, please use the community series level and provide notation as to why this approach is used.</li> <li>Include all data sheets (e.g., soils, disturbance, etc.).</li> <li>Mapping should clearly differentiate between the polygons.</li> </ul>
<input type="checkbox"/>	Wetland Evaluation and Delineation	<ul style="list-style-type: none"> <li>Evaluation: variety of seasons to ensure the full evaluation occurs as per OWES</li> <li>Delineation: Late spring to early fall, before the first hard frost with CH and potentially MNRF staff</li> </ul>	<ul style="list-style-type: none"> <li>Ontario Wetland Evaluation System (OWES) for Southern Ontario (3<sup>rd</sup> Edition, 2014 or as updated from time to time)</li> </ul>	<ul style="list-style-type: none"> <li>Detailed inventory and assessment including vegetation, mammals, birds, reptiles, amphibians, fish, insects, benthos etc., using specific protocol noted in this table.</li> <li>Ensure sufficient time for MNRF to process.</li> </ul>
<input type="checkbox"/>	Vegetation Inventory	<ul style="list-style-type: none"> <li>Spring ephemerals: May to early June</li> <li>Summer: mid-June to August</li> <li>Fall: September to October (weather dependent, may alter due to frost)</li> </ul>	<ul style="list-style-type: none"> <li>Full vegetation species list to be provided, can be combined with ELC</li> <li>Details on species such as their level of invasiveness, CoC, CoW, species rarity etc., should be included</li> </ul>	<p>Species rarity to be based on:</p> <ul style="list-style-type: none"> <li>Species at Risk in Ontario list (MNRF)</li> <li>S-Rank using the Natural Heritage Information Centre species lists</li> <li>Local rarity using Halton Natural Areas Inventory (2006) and Hamilton Natural Areas Inventory (2014)</li> </ul>
<input type="checkbox"/>	Birds	<ul style="list-style-type: none"> <li>Breeding birds: May 24 to July 10</li> <li>Migrants and over wintering birds: species and site specific</li> <li>Owls: November to April (species dependant)</li> <li>Marsh birds: April to July (species dependant)</li> </ul>	<p>Habitat Dependent:</p> <ul style="list-style-type: none"> <li>Ontario Breeding Bird Atlas protocols</li> <li>Marsh Monitoring Program Protocols</li> <li>Area searches and wandering transects</li> </ul>	<ul style="list-style-type: none"> <li>Point counts required for monitoring.</li> <li>Generally consists of two survey visits spaced approximately 10 days apart, spread evenly over the season.</li> </ul>
<input type="checkbox"/>	Amphibians	<ul style="list-style-type: none"> <li>Early spring – summer (species dependent)</li> <li>Active Visual Encounter Surveys (VES) on rainy late March – early April nights</li> </ul>	<ul style="list-style-type: none"> <li>Bird Studies Canada Great Lakes Marsh Monitoring Program (including 3 separate spring/early summer seasonal survey timing windows).</li> <li>Active Visual Encounter Searches (VES) for salamanders</li> </ul>	<ul style="list-style-type: none"> <li>If sampling in urban areas, point counts longer than three minutes may be recommended</li> <li>Trapping may be required for JESA, if known or suspected, and as required and permitted by the MNRF.</li> </ul>

Y/N	Survey	Optimal Inventory Period	Methodology and Protocols	Notes
<input type="checkbox"/>	Reptiles	<ul style="list-style-type: none"> <li>April – June</li> <li>Late Summer/Fall: Late August to October for migration or congregating species</li> <li>Weather dependent</li> </ul>	<ul style="list-style-type: none"> <li>Species and habitat dependent</li> <li>May include cover board surveys, spring emergence surveys etc.</li> <li>Consultation recommended ahead of work</li> </ul>	<ul style="list-style-type: none"> <li>Provide a description of methods in appendices.</li> </ul>
<input type="checkbox"/>	Butterflies	<ul style="list-style-type: none"> <li>June – August</li> <li>July (peak)</li> <li>Weather dependent</li> </ul>	<ul style="list-style-type: none"> <li>Species and habitat dependent</li> <li>Consultation recommended ahead of work</li> </ul>	<ul style="list-style-type: none"> <li>Provide a description of methods in appendices.</li> </ul>
<input type="checkbox"/>	Dragonflies and damselflies	<ul style="list-style-type: none"> <li>June – August</li> <li>July (peak)</li> <li>Weather dependent</li> </ul>	<ul style="list-style-type: none"> <li>Species and habitat dependent</li> <li>Consultation recommended ahead of work</li> </ul>	<ul style="list-style-type: none"> <li>Provide a description of methods in appendices.</li> </ul>
<input type="checkbox"/>	Mammals	<ul style="list-style-type: none"> <li>Species dependent</li> </ul>	<ul style="list-style-type: none"> <li>Sightings and tracking</li> <li>Small mammal trapping depending on the site</li> </ul>	<ul style="list-style-type: none"> <li>Provide a description of methods in appendices.</li> </ul>
<input type="checkbox"/>	Bats	<ul style="list-style-type: none"> <li>During leaf off season for cavity tree surveys</li> <li>Extent of survey to be determined during pre-consultation</li> </ul>	<ul style="list-style-type: none"> <li>Species and habitat dependent</li> <li>SAR Bats may require different surveys than SWH bats.</li> <li>MNRF Guidelines, where applicable</li> <li>Consultation recommended ahead of work</li> </ul>	<ul style="list-style-type: none"> <li>Provide a description of methods in appendices.</li> </ul>
<input type="checkbox"/>	Benthic Invertebrates	<ul style="list-style-type: none"> <li>Spring</li> </ul>	<ul style="list-style-type: none"> <li>Using Ontario Benthos Biomonitoring Network Protocol</li> </ul>	<ul style="list-style-type: none"> <li>Identify to family or lowest practical level for analysis.</li> </ul>
<input type="checkbox"/>	Fish Survey and Fish Habitat	<ul style="list-style-type: none"> <li>Late April to June for intermittent creeks</li> <li>June – early Sept. for residents</li> <li>Migration surveys in April/May and/or Sept./Nov.</li> </ul>	<ul style="list-style-type: none"> <li>Using Ontario Stream Assessment Protocol (Module 3).</li> </ul>	<ul style="list-style-type: none"> <li>Observations (mapping) should include the following: flow, channel form, riparian characteristics, anthropogenic and other disturbances, enhancement opportunities, substrate, groundwater indicators, instream habitat features and structures.</li> </ul>
<input type="checkbox"/>	Water Quality	<ul style="list-style-type: none"> <li>Spring to fall</li> </ul>	<ul style="list-style-type: none"> <li>Dry and wet conditions, sampling 3 times for each</li> </ul>	
<input type="checkbox"/>	Drainage patterns, headwater features and watercourses	<ul style="list-style-type: none"> <li>Multiple assessments: Spring freshet/rain events, late April-May, July-August</li> <li>Aquatic habitat assessment in late April-May</li> </ul>	<ul style="list-style-type: none"> <li>Using Ontario Stream Assessment Protocol to identify the watercourse</li> <li>Evaluation, Classification and Management of Headwater Drainage Features, prepared by CVC/ TRCA (2014)</li> <li>Secondary Source and ground truthing of the site</li> </ul>	

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**CONSERVATION HALTON  
CHBD 01 17 04**

**REPORT TO:** Board of Directors

**FROM:** Sheryl Ayres, Senior Director, Finance & Strategic Initiatives  
(905) 336-1158 x 2250

**DATE:** March 23, 2017

**SUBJECT:** **Finance Function Effectiveness Assessment Results**

**Recommendation**

THAT the Conservation Halton Board of Directors **receive for information the staff report dated March 23, 2017 on the results of the Finance Function Effectiveness Assessment.**

**Summary**

The audit firm of KPMG was recently engaged to complete a Finance Function Effectiveness Assessment as approved by the Board of Directors at their meeting on January 26, 2017. This process was initiated by the CAO, as per direction from the Finance & Audit Committee, and led by the Senior Director, Finance & Strategic Initiatives.

KPMG's assessment concluded that the current financial practices and internal controls at Conservation Halton meet all public sector financial requirements. Current financial practices are essentially transactional focused and, in the future, the focus needs to evolve to a long-term financial focus with greater forecasting, scenario analysis, and business cases developed to support business decisions and provide greater financial certainty of business continuity. Existing resources are adequate to sustain the current transactional approach into the future; however, additional resources will be required to shift the focus to an approach with greater financial forecasting and analysis.

The assessment provides 14 opportunities for future improvements, prioritized by complexity to implement, impact, and criticality.

**Report**

The assessment was completed by KPMG, Conservation Halton's current auditors, as they are uniquely positioned to conduct an effectiveness assessment in the most efficient manner. To ensure appropriate independence, the assessment was conducted by an Advisory Partner in Management Consulting, who has extensive experience in advisory and consulting services with a focus on finance related services, and not our regular audit team.

A review of current financial practices to ensure efficient and effective operations for the future was conducted. KPMG utilized a framework to provide comparisons of current financial processes against leading practices to ensure fiduciary responsibilities and statutory obligations are being met. They also compared current processes to leading practices to provide recommendations for future improvement opportunities.

The assessment also considered how public sector financial requirements continue to evolve with changing legislation, increased reporting requirements, new requirements such as asset management planning, budgets are becoming more detailed and complex and are now a year round process, and the involvement of more stakeholders and partners with diverse requirements. Greater collaboration, analysis, and financial planning both internally and externally with business partners is a requirement to ensure fiscal responsibility.

In conducting the assessment, KPMG consulted with various staff across the organization to gather information, as outlined in the following table:

Staff consulted	Information gathered
CAO	Confirmed direction and understanding of assignment and offered thoughts on current processes and challenges.
Finance staff	Confirmed current processes, current challenges, and offered ideas for improvements to processes.
Director, Operations Director, Planning & Regulations Associate Director, Engineering	Provided customer perspective on services provided, timelines, and challenges with current processes.

The assessment provides 14 opportunities for future improvements prioritized by complexity to implement, impact, and criticality. The following table summarizes each of the opportunities in order of priority and the approach that will be taken to implement the recommendations. Many of the opportunities are already in the process of being addressed as proactive implementation of the recommendations will ensure solid and timely financial stewardship.

Opportunity	Approach to implementation	Status/Timeline
1. Enforce controls on budget reallocations	<ul style="list-style-type: none"> <li>2017 budget reallocations were completed as a result of the recent reorganization of departments. This was completed to allow new Directors to have accountability and responsibility for their departments and programs. Consultations with the Directors have been completed to update them on the reallocation of budgets. This is a one-time occurrence to ensure the proper alignment of financial reporting with the new organizational structure</li> <li>Financial policies for each reserve including purpose statements will be developed to ensure appropriate use of reserve funds</li> <li>Operating and capital funds will be segregated and transactions appropriately treated between funds</li> <li>Meetings are occurring to increase communication and engagement with internal customers to understand level of detail required for financial reporting</li> </ul>	In progress / June 2017 completion.
2. Engage stakeholders in format of financial reports	<ul style="list-style-type: none"> <li>Discussions are occurring to increase communication and engagement with internal customers to understand reporting requirements</li> <li>Financial reports will be created that meet customers' needs</li> </ul>	In progress / June 2017 completion.

Opportunity	Approach to implementation	Status/Timeline
3. Clearly define roles & responsibilities in Finance team	<ul style="list-style-type: none"> <li>Review structure of Finance department and job summaries for each position. Meet with staff to confirm responsibilities.</li> <li>Review requirement for additional resources to provide additional financial analysis to departments through business cases, scenario analysis, forecasting, and reporting</li> </ul>	To be completed by April 30.
4. Finance to perform more value-added services	<ul style="list-style-type: none"> <li>Review requirement for additional resources to provide additional financial analysis to departments through business cases, scenario analysis, forecasting, and reporting</li> <li>Increase communication and engagement with internal customers to support their business requirements</li> <li>Provide more training opportunities to Finance team to develop skills and knowledge</li> </ul>	In progress / training will be an ongoing requirement.
5. Develop greater collaboration between departments	<ul style="list-style-type: none"> <li>Develop working groups with staff involved in certain processes and with IT to develop interfaces between software systems to increase automation of tasks</li> <li>Develop working groups to recommend changes to existing processes with the outcome to improve processes</li> <li>Increase communication and engagement with internal customers through regular meetings on key processes</li> </ul>	To be initiated in Q2 2017 with a goal to have some improvements in place by end of year. This will be an ongoing requirement.
6. Enable additional modules in Great Plains financial software	<ul style="list-style-type: none"> <li>Explore opportunities to add functionality to financial software supported by cost/benefit analysis</li> <li>Ensure software is upgraded to current version as available</li> <li>Consider opportunities/challenges with using Great Plains in the cloud vs hosted solution</li> </ul>	Upgrade to current version to be completed in June. Additional modules will be explored throughout the year and ongoing in the future.
7. Track budgets & actuals on a more granular level	<ul style="list-style-type: none"> <li>Increase communication and engagement with internal customers to understand level of detail needed to track budgets and actuals for programs and projects</li> <li>Allows for progression towards program based budgeting</li> </ul>	Will be implemented through preparation of 2018 budget.
8. Comply with PCI regulations	<ul style="list-style-type: none"> <li>Build and maintain secure network for transactions made through payment cards</li> <li>Conduct gap analysis to determine next steps</li> </ul>	In progress. Secure network to be completed by April for gap analysis to begin. Expect to be compliant by end of 2017. Ongoing monitoring and testing required in the future.
9. Establish performance metrics	<ul style="list-style-type: none"> <li>Measurement of KPI's are being developed through Strategic Plan annual workplans and will be reported quarterly to the Board of Directors</li> </ul>	In progress. First report expected to be provided to Board in July.

Opportunity	Approach to implementation	Status/Timeline
10. Track timesheets	<ul style="list-style-type: none"> <li>• Increase communication and engagement with internal customers to explain importance of this information</li> <li>• Templates and guidelines to be developed to provide staff direction for tracking time</li> <li>• Consider implementation of a time tracking module in Great Plains supported by a cost/benefit analysis</li> </ul>	Planning & Regulations have started time tracking. To be implemented in other departments later in 2017. This will be an ongoing requirement.
11. Address information technology capability gaps	<ul style="list-style-type: none"> <li>• Provide more training opportunities to Finance and IT teams to develop skills and knowledge</li> <li>• Develop interfaces between software systems to increase automation of tasks</li> </ul>	Training will be an ongoing requirement. Development of interfaces will be investigated later in 2017/early 2018.
12. Nice to have Great Plains improvements	<ul style="list-style-type: none"> <li>• Explore opportunities to improve Great Plains functionality through additional modules supported by cost/benefit analysis</li> </ul>	This opportunity is a lower priority and will be considered in late 2017/early 2018.
13. Transition to more EFTs than cheques	<ul style="list-style-type: none"> <li>• Send out mass mailing to vendors to request banking information to transition from cheques to EFT payments</li> </ul>	Will proceed in Q2 2017.
14. Establish and enforce document management protocols	<ul style="list-style-type: none"> <li>• Provide guidance and direction to staff to discourage sharing working copies of documents through email attachments</li> <li>• Consider transitioning documents to the cloud and using sharing functionality in workbooks</li> </ul>	In progress.

Staff are pleased with the results of the assessment completed by KPMG and agree with the findings, opportunities and suggestions for improvements as outlined in the report. This assessment represents good value to Conservation Halton and conducting this type of assessment should be considered with each term of a new Board of Directors to ensure continued financial efficiency and effectiveness.

The successful implementation of the opportunities outlined in the report will require the commitment of not only the staff in Finance but all staff in the organization. Strong leadership and engagement of Finance staff to build collaborative relationships with internal customers and stakeholders is essential to success and greater financial efficiency and effectiveness in the future.

Prepared by:



Sheryl Ayres  
Senior Director, Finance & Strategic Initiatives

Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer

**CONSERVATION HALTON  
CHBD 01 17 05**

**REPORT TO:** Board of Directors

**FROM:** Craig Minnett, Manager, Information Technology Services  
905-336-1158 x 2269

**DATE:** March 23, 2017

**SUBJECT:** Payment Card Industry Data Security Standard (PCI-DSS)

**Recommendation**

THAT the Conservation Halton Board of Directors **receive for information the staff report dated March 23, 2017.**

**Summary**

The Payment Card Industry Data Security Standard (PCI-DSS) was developed to encourage and enhance cardholder data security and facilitate the broad adoption of consistent data security measures globally. Consequently, organizations that accept and store credit card numbers must work towards becoming PCI-DSS compliant. In essence, organizations that accept credit cards must follow a series of 12 requirements and fill out a Self Assessment Questionnaire (SAQ) to ensure proper compliance. Steps have already been taken by CH staff to ensure that the CH data network is secure and resistant to unauthorized access and data theft. However, to ensure that CH systems are officially PCI-DSS compliant, Conservation Halton has hired the consulting firm MNP, to engage the organization in a 5-phase approach to becoming compliant. It is the goal of Conservation Halton to become PCI-DSS compliant by the end of 2017.

**Report**

Steps have been taken to ensure that Conservation Halton (CH) networks are secure and resistant to unauthorized access or data theft. Therefore, as CH works towards completing the last steps to achieve PCI-DSS compliance, there are security safe guards in place currently. Some examples of these current security measures are as follows, but are not limited to:

- encrypted IP SEC tunnels between remote locations
- IP SEC for mobile VPN users, enterprise grade firewall at all locations
- Stored Credit Card numbers are encrypted
- Radius server to ensure secure WiFi communications
- ESSE advanced threat protection
- CH data networks have a segregated guest network so that if users need to access an internet connection, they can do so, in a secure manner.
- Secure single user sign on for Point of Sale (POS) login
- PCI training for front line staff
- Physical pinpad locks on all pinpads



Conservation Halton uses a software package called Siriusware to complete all online, card present and card non-present transactions, such as what occurs via ecommerce. Siriusware is a Payment Application Data Security Standards (PA-DSS) certified product. PA-DSS is a set of industry security standards that assist software vendors with creating and maintaining secure payment applications. PA-DSS assures merchants and their customers that their point-of-sale systems are not storing prohibited credit card data and are PCI-DSS Compliant. Therefore, any credit card numbers that traverse CH networks or are stored on any server are encrypted via this application, which protects credit card numbers from being viewed by unauthorized personnel.

In addition to the security measures CH has already implemented, it is the responsibility of the merchant to ensure that a PA-DSS application, such as Siriusware, is operating in a PCI-DSS environment. PCI-DSS is the global data standard adopted by the payment card brands for all entities that process, store or transmit cardholder data and/or sensitive authentication data. PCI-DSS compliancy ensures that best security practices are in place when accepting payment via payment cards. If there is a security breach and an organization is not at least working towards PCI-DSS compliance, they can be susceptible to fines or lose the ability to accept credit cards as payment in extreme cases.

Even though the credit card numbers that are stored on CH servers are encrypted by the PA-DSS, application, Siriusware, CH is still obligated to follow the requirements outlined in the PCI-DSS Requirements and Security Assessment Procedures manual. CH processes and stores encrypted credit card data, throughout the course of conducting normal business and thus is required to meet these requirements

To help CH become PCI-DSS compliant, MNP has been hired. MNP has proposed and is engaged in the execution of a proprietary multistep compliance program to assist CH with their compliancy.

Phase 1: Scope Discovery (Completed)

Phase 2: Readiness assessment and GAP analysis (May 2017, Cost \$14,000)

Phase 3: Remediation (July, August 2017, Cost unknown based on GAP analysis)

Phase 4: Compliance Assessment (September, October 2017, Cost unknown)

Phase 5: Maintenance (November, December 2017, Cost unknown)

The Phase 1, Scope Discovery, is complete. The purpose of the first phase is to audit cardholder dataflow through the CH environment. The main recommendation of Phase 1 is to reduce this scope as the number of servers, applications and personnel that are involved with handling cardholder data can be limited. The CH Information Technology team has begun the scope reduction by segregating the CH payment network from the broader data network. Completion of the network segregation will be finished at the end of April 2017.

Phase 2 is a readiness assessment and gap analysis. It will identify compliance gaps in the CH Card Data Environment (CDE). Compliance gaps can be classified into three main categories as it relates to PCI-DSS, technology, process and policy. Identified gaps will be remediated through business process and environment changes. MNP will make recommendations and provide a customized remediation plan. Essentially, Phase 2 will reveal the work and budget that will be needed to complete Phase 3.

Phase 3 is the gap remediation phase. Gap remediation is conducted by the client with the assistance of MNP as required in order to achieve PCI-DSS compliance. As mentioned previously, the budget and workload for Phase 3 will not be totally understood until the completion of Phase 2.

Phase 4 is the compliance assessment phase, which will begin after the remediation phase (Phase 3) is complete. This is the phase whereby MNP will provide a report on compliance and will help CH validate the Self-Assessment Questionnaire (SAQ). The SAQ is a document that is provided by the PCI-DSS council that must be filled out by merchants that accept and store credit cards. The SAQ is essentially a check list to ensure all of our technology, process and policies are PCI-DSS compliant.

For CH to remain PCI compliant, there must be various checks and balances to ensure the payment network is kept secure. This is where Phase 5 of the of MNP's proprietary five-phased approach to a PCI compliance program comes into play. The maintenance phase will help CH remain PCI compliant and safe by ensuring that our networks are monitored and tested regularly as outlined in the PCI requirements procedures manual.

Staff are working on developing a budget for the PCI project work and will bring a recommendation forward in a future report for approval by the Board.

Prepared by:



Craig Minnett, Manager  
Information Technology Services

Respectfully submitted:



Laura Bourne, Senior Director,  
People, Performance & Culture

Approved for circulation:



Hassaan Basit,  
CAO/Secretary-Treasurer

**CONSERVATION HALTON  
CHBD 01 17 06**

**REPORT TO:** Board of Directors

**FROM:** Marnie Piggot  
Director, Finance  
905 336-1158 x 2240

**DATE:** March 23, 2017

**SUBJECT:** **2016 Conservation Halton Investments and  
Allocation of Investment Revenue**

**Recommendation**

THAT the Conservation Halton Board of Directors **approve the allocation of investment revenue of \$171,445, including Transfers to Reserves for 2016 for investment revenue earned on Reserve balances as noted in the staff report dated March 23, 2017.**

**Report**

In 2016, investment income of \$461,587 was earned on a total investment portfolio of \$21,094,880 compared to income of \$447,901 in 2015 on a portfolio of \$17,831,009.

Surplus cash was invested in accordance with the Conservation Halton Investment Policy in the following instruments:

- Bank Business Investment Account
- Short term money market instruments being G.I.C.'s and
- Money Market, Bond, Long Term Bond and Equity Pooled Funds through The One Investment Program for municipalities and eligible public sector organizations.

Investments are also maintained separately for the Water Management System Fund and Conservation Halton Foundation for accounting purposes. Surplus cash for the various funds is invested by the Director, Finance throughout the year.

Surplus cash on hand can vary significantly during the year based on seasonal park revenues, capital project expenditures and municipal funding installments.

**2016 Investments and Investment Revenue**

Investment balances as of December 31, 2016 by investment type and investment revenue earned are as follows:

Type of Investment	Balance Dec 31, 2016	Average Rate of Return (excluding unrealized holding gains)	2016 Investment Revenue
Business Investment Account	\$ 3,525,139	1.1%	\$ 38,456
GIC's	4,000,000	1.3%	49,241
The One Investment Program	4,358,252	1.9%	83,748
Subtotal	11,883,391		171,445
Long-term Water Management System Fund	9,211,489	3.4%	290,142
Total	\$ 21,094,880		\$ 461,587

### Interest rates

Interest rates have remained at historical lows and continued to be volatile throughout the year. Rates declined in the late spring and increased again by the 4<sup>th</sup> quarter. Interest rates ranged from 1.0% to 1.5% for a one year GIC and from .6% to 1.0% on the Bank Investment Account in 2016.

### One Pooled Investment Funds

In order to maximize return on investments, The One Fund was created to pool together the monies of multiple Ontario public sector investors in each investment portfolio. Investors also benefit from actively managed and diversified investment portfolios, with investment management costs spread over a large asset base.

The One Fund investments are recorded at the lower of cost or market value for accounting purposes in accordance with Public Sector Accounting Board (PSAB) standards. The total market value of the One Funds at December 31, 2016 is \$4,671,780 compared to the book value of \$4,358,252, resulting in an unrealized holding gain of \$313,528. The One Fund total market value has increased to \$4,698,479 as of February 28, 2017 and market values are regularly monitored.

### Allocation of Investment Revenue

As per Conservation Halton Budget Principles, investment earnings are first allocated to Reserve Funds prior to operating revenues. The allocation of operating interest between programs is allocated proportionately based on the current year actual amounts.

Staff recommend the allocation of the \$171,445 of investment earnings on the Conservation Halton Reserve balances and operating funds for 2016 as outlined below. Investment earnings are allocated to each Reserve based on the average annual balance and the average annual rate of return consistent with prior years.

<u>Reserve or Operating Fund</u>	<u>Allocation of 2016 Investment Revenue at Average Annual Rate 1.50%</u>
Vehicle, Equipment and Building	\$ 11,500
Water Capital – Municipal	1,900
Water Capital – Self Generated	11,700
Watershed Management – Revenue Stabilization	3,900
Debt Financing	2,300
Legal	3,100
Water Festival	3,100

Conservation Areas - Capital	33,200
Conservation Areas - Revenue Stabilization	9,400
Land and Property	1,900
Stewardship & Watershed Restoration	<u>1,500</u>
Subtotal Investment Revenue allocated to Reserves	83,500
Watershed Management and Support Services – Operating	46,945
Conservation Areas – Operating	<u>41,000</u>
Total Investment Revenue	<b><u>\$171,455</u></b>

Prepared by:



Marnie J. Piggot  
Director, Finance

Respectfully submitted:



Sheryl Ayres  
Senior Director,  
Finance & Strategic Initiatives

Approved for circulation:



Hassaan Basit,  
CAO/Secretary-Treasurer

**CONSERVATION HALTON  
CHBD 01 17 07**

**REPORT TO:** Board of Directors

**FROM:** Marnie Piggot  
Director, Finance  
(905) 336-1158 x 2240

**DATE:** March 23, 2017

**SUBJECT:** **2016 Conservation Halton Capital Projects**

**Recommendation**

THAT the Conservation Halton Board of Directors **approve the transfer of \$13,388 from the Vehicle and Equipment Reserve;**

AND FURTHER THAT the Conservation Halton Board of Directors **approve the closing of the capital projects identified in the staff report dated March 23, 2017.**

**Summary:**

The attached Capital Project summary provides an overview of the various capital projects carried out in 2016. The 2016 capital project costs include work completed on projects carried over from prior year budgets. The summary also provides the funding sources for the capital projects and indicates if the capital project can be closed as it is either completed or in a few instances being deferred for re-inclusion in a future budget.

Total 2016 costs incurred are \$1,723,176. There are no unfunded amounts, with the exception of forestry equipment purchased for \$13,388 through the operating budget which are being transferred to a capital account due to the nature of the transactions. It is being recommended that this capital project be funded through a transfer from the Vehicle and Equipment Reserve.

Capital projects were less than the 2016 Budget amount of \$2,145,000 with the delay of the Administration Office renovation costs to early 2017 and the deferral of some capital projects for the Conservation Areas early in the year as a result of less than anticipated net revenue for the 2016 Glen Eden season.

**Report:**

Significant capital project work in the 2016 Capital Budget amounts are as follows:

**Dams & Channels Major Repair & Maintenance Projects - \$471,839**

A significant portion of the 2016 costs of \$471,839 are for the Kelso Dam urgent repair project. Monitoring, evaluation and assessment work at Kelso Dam has been ongoing since the siltation plume was first observed in June 2015 and continued in 2016 with 2016 costs of \$74,472. Costs were approved by the Board in 2016 and awarded to Hatch for \$177,900 for the definition phase study consulting work and, a further \$829,356 consisting of \$456,783 for dam remediation design and tender support and, \$372,573 for construction support. Actual work completed in 2016 for definition phase and remediation design work totaled \$288,377. The

Kelso Dam costs have been funded through funds received from the Ministry of Natural Resources and Forestry (MNRF) Water and Erosion Control Infrastructure (WECI) program, municipal capital funding and deferred capital revenue received through prior year budgets for Dam Major Repair & Maintenance projects not completed.

The Kelso dam remediation design was completed in March 2017 and the construction tender was issued on March 10<sup>th</sup> after a contractor pre-qualification process. The estimated construction support of \$372,573 is included in the 2017 Budget for Kelso Dam of \$5,265,000.

Channel Slab Replacement work on the Hager-Rambo and Milton Channels was completed in March 2016 with costs of \$21,467. All works have been completed and these projects will close with budget savings of \$109,501.

Dams & channel maintenance projects included public safety assessments at all four dams, and valves, gate inspections and data loggers at two dams.

#### **Watershed Plan Implementation - \$154,084**

Costs incurred in 2016 exceed the budget amount of \$120,000 as a result of increased staff costs. The increased project costs are funded through deferred municipal capital funding carried over from previous years for Watershed Plan Implementation.

#### **Facility Major Maintenance - Administration Office \$61,442**

The roof replacement and auditorium renovations were completed in 2016 with costs of \$47,945. These projects were initiated through the 2015 Budget, are funded through approved transfers from the Debt Financing Reserve and are recommended to be closed with budget savings of \$80,549.

Design consulting services of \$13,497 are for renovations in the front office and reception area that are part of the 2016 Budget of \$400,000 that is debt financed through Halton Region.

#### **Equipment \$13,388**

Forestry equipment was purchased in 2016 to assist with EAB tree removal work in the 2016 operating budget and was transferred to capital. A transfer from the Vehicle & Equipment Reserve is recommended to fund this purchase.

#### **Land Donations - \$371,000**

Three properties were acquired by Conservation Halton through donations by the property owners in 2016 with appraised values totaling \$371,000.

#### **Forest/Land Management - \$24,428**

The development of a land securement strategy was commenced in 2016 and will be completed in 2017. This project was included in a prior year budget is funded with the related deferred municipal capital funding carried over from prior years.

#### **Conservation Areas – Facility & Infrastructure \$422,925**

Conservation Area capital project costs of \$422,925 are detailed in the attached schedule and consist of projects contained in the 2016 Budget and prior year budgets. The 2016 capital

project work is primarily funded by a transfer from the Conservation Areas Capital Reserve of \$405,907 after funding received through the Conservation Halton Foundation of \$17,018 for completion of the Mountsberg Raptor Centre Accessibility Upgrades.

Capital projects totaling \$375,000 at Kelso/Glen Eden are being closed as these projects have been deferred temporarily with the delay in capital projects in early 2016 with the short Glen Eden season and other project priorities as a result of Canada 150 grant approvals. A total of five projects will be closed with budget savings of \$37,088.

The Crawford Lake Deer Clan Longhouse was completed in 2016 at a total cost of \$1,287,364 since 2014. The total project costs slightly exceed the budget amount by \$8,264. Reserve funding for this project is within the approved amounts and the increased costs have been funded through donations received through the Conservation Halton Foundation in prior years.

### **Municipal Funding – Capital**

Municipal Funding of \$291,500 for Capital Projects was approved in the 2016 Budget. The funding above the 2016 Budget amount for capital projects carried over from prior year budgets and approved to be funded municipally was transferred from deferred municipal capital revenue.

### **Municipal Debt Financing**

Municipal Debt Financing of \$24,630 is being requested for 2016 actual capital expenditures from Halton Region. This amount is within the approved budget amounts to be debt financed for capital projects. The capital expenditures that are debt financed are the Administration Office renovation design work and 50% of the Channel Slab replacements.

Debt financing incurred up to 2016 is repaid to Halton Region over a ten year period, including interest at the Halton Region actual annual investment rate of 3.2% for 2016. Annual debt financing charges are included in the Conservation Halton Operating Budget. The 2016 Municipal debt financing balance as of December 31, 2016 is \$2,001,106. This balance is prior to the 2016 debt financing of \$24,230 that will be added to the debt balance in 2017 when it is received, for a total amount of \$2,025,336.

Prepared by:



Marnie J. Piggot, Director  
Financial and Administrative Services

Respectfully submitted:



Sheryl Ayres  
Senior Director, Finance & Strategic Initiatives

Approved by:



Hassaan Basit  
CAO/Secretary-Treasurer



Conservation Halton  
Capital Project Summary  
For the Year Ended December 31, 2016

Capital Project	Total Capital Project Budget	Prior Years Capital Costs	2016 Capital Costs	Total Capital Project Costs	Budget Unspent/ Variance	Capital Project to be Closed	Capital Project Funding
<b>Dams &amp; Channels Major Repair and Maintenance Projects</b>							
Kelso Dam - Definition Study, Remediation Design & Const'n Support	1,007,256	-	288,377	288,377	718,879		50% MNRFP; 50% Municipal; Deferred Revenue
Kelso Dam - Monitoring, Risk Assessment & Evaluation	133,000	147,612	74,472	222,084	(89,084)		50% MNRFP; 50% Municipal; Deferred Revenue
Dams & Channels Maintenance Projects	125,000	-	87,523	87,523	37,477	Close	50% MNRFP; 50% Municipal
Channel Slab Replacements - Milton & Hager-Rambo	785,000	654,032	21,467	675,499	109,501	Close	50% MNRFP; 50% Debt Financing
			471,839				
<b>Flood Forecasting &amp; Warning</b>	75,000	-	47,645	47,645	27,355		Municipal
<b>Watershed Plan Implementation</b>	120,000	-	154,084	154,084	(34,084)		Municipal & Deferred Municipal Revenue
<b>Facility Major Maintenance - Administration Office</b>							
Roof replacement	520,000	469,639	10,174	479,813	40,187	Close	Debt Financing; Reserves
Renovation - Auditorium meeting space	152,000	73,867	37,771	111,638	40,362	Close	Reserves
Renovation - Front Offices and Reception Area	400,000	-	13,497	13,497	386,503		Debt Financing
			61,442				
<b>Information Technology Infrastructure</b>	80,000	-	72,925	72,925	7,075	Close	Municipal
<b>Equipment</b>	-	-	13,388	13,388	(13,388)	Close	Reserve
<b>Land donations</b>	-	-	371,000	371,000	(371,000)	Close	Donations
<b>Forest/Land Management</b>	73,689	9,820	24,428	34,248	39,441		Deferred Municipal Revenue
<b>Foundation Funded Capital Projects</b>	100,000	-	-	-	100,000	Close	See Partnership Projects costs and funding
<b>Conservation Areas Facility &amp; Infrastructure</b>							
Kelso/Glen Eden - various infrastructure projects	375,000	-	-	-	375,000	Close	Projects deferred - include in future budget
Kelso/Glen Eden - Ropes Challenge Course	300,000	34,114	15,722	49,836	250,164		Reserve
Kelso/Glen Eden - Stairway replacement	125,000	-	102,331	102,331	22,669	Close	Reserve
Kelso/Glen Eden - Master Plan	100,000	-	34,565	34,565	65,435		Reserve
Kelso/Glen Eden - WOW Camp Equipment	85,000	-	10,538	10,538	74,462		Reserve
Kelso/Glen Eden - Water System Servicing	429,035	217,979	79,734	297,713	131,322	Close	Reserve
Crawford Lake Longhouse	1,279,100	1,253,114	34,250	1,287,364	(8,264)	Close	Reserve; Federal Grant; CH Foundation
Crawford Lake - Accessibility Upgrades	30,000	-	-	-	30,000		Reserve
Mountsberg - Drive Shed	50,000	-	18,971	18,971	31,029	Close	Reserve
Mountsberg - Raptor Centre Accessibility Upgrades	170,000	120,407	42,258	162,665	7,335	Close	Reserve; Federal Grant; CH Foundation
Mountsberg - Barn	250,000	202,896	33,366	236,262	13,738	Close	Reserve
Hilton Falls - Visitor Centre Roof replacement	25,000	-	12,800	12,800	12,200	Close	Reserve
Information Technology Infrastructure - Conservation Areas	40,000	-	38,390	38,390	1,610	Close	Reserve
			422,925				
<b>Transfer to Reserve - Investment revenue</b>		-	83,500				Investment revenue
<b>Total Capital Projects</b>	<b>\$6,829,080</b>	<b>\$3,183,480</b>	<b>\$1,723,176</b>	<b>\$4,823,156</b>			

**CONSERVATION HALTON  
CHBD 01 17 08**

**REPORT TO:** Board of Directors

**FROM:** Craig Minnett, Manager, Information Technology Services  
905-336-1158 x2269 – cminnett@hrca.on.ca

**DATE:** March 23, 2017

**SUBJECT:** **2017 Budget Capital Projects and Additional Funding  
Kelso CA Switch Replacement**

**Recommendation**

THAT the Conservation Halton Board of Directors **approve an increase of \$80,000 in Conservation Area capital projects in the 2017 Budget, to be funded through a transfer from the Conservation Areas Capital Reserve.**

**Summary**

Kelso Conservation Area requires a hardware refresh along its fiber loop that consists of the replacement of 17 Ethernet switches. The total cost of implementing these improvements including the hardware and deployment services will total \$70,000 plus a \$10,000 contingency. This hardware refresh was planned to take place in 2018, however, the current switches that are in place are beginning to fail and therefore, the replacement of these switches should be advanced to 2017.

**Report**

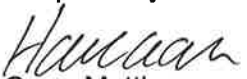
In 2006, a fiber optic loop was installed at Kelso Conservation Area to connect key buildings in a contiguous network. The fiber loop was installed to facilitate the installation of a VOIP telephony system and a data network. Nortel Base stack 470 switches were installed as part of the original work that was done in 2006, to allow throughput of the fiber loop at each building node and to provide network services to each building,

The original Nortel switches that were installed in 2006 are now 11 years old and consequently have reached their end of life. The switches were originally planned to be replaced at the 12 year mark in the budget year, 2018. However, it has been determined, due to the number of switches that are either failing or have failed that they should be replaced as soon as possible.

Prepared by:

  
Craig Minnett  
Manager, Information Technology Services

Respectfully submitted:

  
Gene Matthews  
Director, Operations  
Conservation Lands

Approved for circulation:

  
Hassaan Basit  
CAO/Secretary-Treasurer

**CONSERVATION HALTON  
CHBD 01 17 09**

**REPORT TO:** Board of Directors

**FROM:** Marnie Piggot, Director, Finance  
905 336-1158 x 2240

**DATE:** March 23, 2017

**SUBJECT:** **Budget Variance Report for the year ended  
December 31, 2016 and Reserve Balances**

**Recommendation**

THAT the Conservation Halton Board of Directors **approve the following transfers to Reserves:**

- **\$691,890 to the Conservation Areas Capital Reserve;**
- **\$150,000 to the Conservation Areas Revenue Stabilization Reserve;**
- **\$46,000 to the Legal Reserve;**
- **\$29,000 to the Watershed Management Capital Reserve;**
- **\$55,902 to the Capital Projects Reserve – Debt Financing Charges; and**
- **\$203,309 to the Watershed Management Stabilization Reserve as outlined in the staff report dated March 23, 2017;**

THAT a new Stewardship & Restoration Reserve be established and a transfer of \$290,000 to the reserve be approved;

AND FURTHER THAT **the Budget Variance Report for the year ended December 31, 2016 be approved for use in preparing the 2016 audited financial statements.**

**Summary:**

The Conservation Halton overall 2016 operating surplus is \$1,410,199 and is summarized in the chart below and detailed in the attached Budget Variance statement for the year ended December 31, 2016. The operating surplus is comprised of an operating surplus in the Watershed Management and Support Services programs of \$568,309 and an \$841,890 operating surplus in the Conservation Areas program. Capital project costs of \$1,723,156 and funding for 2016 are also reported in the statement and are discussed in a separate report.

The 2016 year-end audit will be completed by our auditors, KPMG in early April. A draft 2016 audited financial statement will be presented at the April Finance Committee meeting for approval at the April 27, 2017 Conservation Halton Board of Directors meeting.

	2016 BUDGET	2016 PROJECTION	ACTUAL DEC. 31/16	% ACTUAL/ BUDGET	ACTUAL DEC. 31/15
<b>Watershed Management &amp; Support Services</b>					
Revenue	\$13,668,946	\$ 14,258,890	\$14,591,571	106.7%	\$13,573,040
Expenditures	<u>13,668,946</u>	<u>14,167,798</u>	<u>14,023,262</u>	102.6%	<u>13,363,663</u>
<b>Surplus</b>	<b>\$ 0</b>	<b>\$ 91,092</b>	<b>\$ 568,309</b>	<b>100.0%</b>	<b>\$ 209,377</b>
<b>Conservation Areas</b>					
Revenue	\$11,226,754	\$11,091,380	\$11,394,822	101.5%	\$11,377,862
Expenditures	<u>10,587,301</u>	<u>10,754,487</u>	<u>10,157,677</u>	95.9%	<u>10,664,292</u>
Surplus – before Prior Period Adjustment	<b>\$ 639,453</b>	<b>\$ 336,893</b>	<b>\$ 1,237,145</b>	<b>193.5%</b>	<b>\$ 713,570</b>
Prior Period Adjustment	<u>0</u>	<u>0</u>	<u>(395,255)</u>		<u>0</u>
<b>Surplus- after Adjustment</b>	<b>\$ 639,453</b>	<b>\$ 336,893</b>	<b>\$ 841,890</b>	<b>131.7%</b>	<b>\$ 713,570</b>
<b>Total Surplus</b>	<b>\$ 639,453</b>	<b>\$ 427,985</b>	<b>\$ 1,410,199</b>	<b>220.5%</b>	<b>\$ 922,947</b>

### Watershed Management & Support Services Operating Surplus

The projected operating surplus for the Watershed Management & Support Services program was previously estimated at \$91,092.

The actual 2016 Watershed and Support Services operating surplus of \$568,309 is higher than the projected surplus by almost \$477,000 as a result of:

- Watershed Services (now Science & Partnerships) increased revenue \$290,000
  - Staffing cost savings and increased other revenues in property management, investment revenue and Watershed Administration transfer from deferred revenue 122,000
  - Initiatives included in the 2016 Projection and not completed (Finance Function assessment and Strategic plan consulting) 65,000
- \$477,000

The Watershed Services increased revenue consists of revenue collected in prior years, some of which is for future stewardship or restoration projects. This funding has been transferred from deferred revenue and recognized as revenue in 2016. Staff are recommending a change in accounting treatment for the previously deferred revenue to be recognized as revenue in 2016 and the amount in excess of related costs of \$290,000 be transferred to a new Stewardship & Restoration Reserve. Transfers from the Reserve to fund the various projects can be included in future budgets through the annual budget process.

During 2016 there were a number of vacancies in staff positions that were on hold until the completion of the organization realignment. Several of the vacant staff positions were replaced with new positions as a result of the reorganization and the new staff positions have been filled or are in the process of being filled.

The Watershed Management and Support Services operating surplus of \$568,309 is recommended to be allocated to Reserves as follows:

Watershed Management Capital Reserve	\$ 29,000
Legal Reserve	46,000
Stewardship & Restoration Reserve (new)	290,000
Watershed Management & Support Services – Stabilization Reserve	<u>203,309</u>
<b>Total</b>	<b><u>\$568,309</u></b>

The transfer to the legal reserve is based on 50% of the 2016 compliance agreement permit fees collected in 2016 as these fees are approximately two-times the regular permit fee. The increased fee and transfer to the legal reserve will assist with future legal expense variances related to compliance agreements and negotiated settlements.

### **Transfer to Watershed Management & Support Services – Stabilization Reserve**

After the transfer to the new Stewardship & Restoration, Capital, and Legal Reserves, the remaining balance of the Watershed Management & Support Service program operating surplus is \$203,309. The balance is recommended to be transferred to the Watershed Management & Support Services – Stabilization Reserve to fund several initiatives as follows:

• Finance Function Effectiveness Assessment approved January 2017	\$ 28,000
• Strategic planning software and consulting services	40,309
• Asset Management Plan consulting services	50,000
• Staff professional development	<u>85,000</u>
Total Transfer to Watershed Stabilization Reserve	<u><b>\$203,309</b></u>

### **Conservation Areas Operating Surplus**

The Conservation Areas operating surplus of \$841,890 is after a prior period adjustment of \$395,255 for the amount of deferred annual pass revenue as of December 31, 2015. The change in practice for the reporting of annual passes is recommended to match annual pass revenue recognition to the actual pass membership period.

The Conservation Areas operating surplus is higher than the projected amount for several reasons. Park revenues are higher, especially for annual pass sales and as a result of increased visitation at the Hilton Falls, Rattlesnake Point and Mount Nemo parks. Projected expenses were significantly reduced for estimated costs as a result of further legal advice received.

The Conservation Areas operating surplus is recommended for transfer to the following reserves:

Conservation Areas Capital Reserve	\$691,890
Conservation Areas Revenue Stabilization Reserve	<u>150,000</u>
	<u><b>\$841,890</b></u>

The transfer to the Stabilization Reserve of \$150,000 will bring the Reserve balance to 7.5% of the 2017 revenue budget, which is mid-way of the target reserve balance of 5% to 10%.

### **Reserves**

A Reserve Continuity schedule is attached that provides details of transfers to and from Reserves. Interest allocated on Reserve balances for 2016 is detailed in a separate report.

After reserve transfers the total reserves as of December 31, 2016 are \$6,090,490.

### **Budget Variance Report:**

Attached is the Budget Variance Report for the year ended December 31, 2016. The 2016 Projected and 2016 Budget amounts have also been included in the Budget Variance Report for comparative purposes.

Details of significant variances from the 2016 Budget are as follows:

## TOTAL SUMMARY

Note 1. Revenue	2016 Budget	2016 Projected	Actual Dec. 31/16	% Actual of Budget
-----------------	----------------	-------------------	----------------------	-----------------------

Other Grants and Partnership Project Funding	<u>\$ 692,560</u>	<u>\$1,360,974</u>	<u>\$1,314,614</u>	<u>189.8%</u>
---	-------------------	--------------------	--------------------	---------------

Other Grants and Partnership Project Funding is over the 2016 Budget amount as a result of several stewardship and restoration projects where grant approvals were received after the completion of the 2016 Budget was approved. Partnership Project expenditures have also been increased by a similar amount as a result of these revenues.

Internal Chargebacks	2016 Budget	2016 Projected	Actual Dec. 31/16	% Actual of Budget
----------------------	----------------	-------------------	----------------------	-----------------------

Internal Chargebacks	<u>\$1,203,400</u>	<u>\$1,114,300</u>	<u>\$1,006,110</u>	<u>83.6%</u>
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Internal chargebacks are less than the 2016 Budget amount and the projected amount due to vacancies in staff positions that provided support to the Conservation Areas and the Conservation Halton Foundation. These staff positions have been eliminated in the 2017 Budget. The staff costs associated with the chargebacks are reduced by a similar amount as a result of the staff vacancies. There is a neutral net impact as a result of the reduced chargebacks.

## Note 2. Expenditures

Purchased Services	2016 Budget	2016 Projected	2016 Actual	% Actual of Budget
--------------------	----------------	-------------------	----------------	-----------------------

Purchased Services	<u>\$2,936,762</u>	<u>\$3,617,407</u>	<u>\$3,500,146</u>	<u>119.2%</u>
--------------------	--------------------	--------------------	--------------------	---------------

Variances in purchased services over the 2016 Budget amounts are in the following programs:

Planning & Regulations – Legal and consulting	\$ 155,189
Partnership Projects	445,579
Corporate Services – Legal and consulting	87,544
Conservation Areas	(121,518)
Other programs - various	(3,410)
	<u>\$ 563 384</u>

Legal and consulting fees of \$455,189 related to plan review, permit applications and violations were incurred in 2016 and exceeded the budget amount of \$350,000 by \$155,189 as a result of several violation cases.

Partnership Projects purchased services are for new projects approved after the completion of the 2016 Budget that are fully funded by project grants.

Corporate Services increased legal and consulting fees are related to the staff reorganization, employee relations issues, and financial software support.

Conservation Areas purchased services are less than the budget amounts primarily for reduced legal and infrastructure services.

Debt Financing Charges	2016 Budget	2016 Projected	2016 Actual	% Actual of Budget
Debt Financing charges – total	<u>\$458,536</u>	<u>\$458,536</u>	<u>\$552,634</u>	120.5%

Debt Financing Charges include actual debt charges paid to the Region of Halton of \$402,634 for principal and interest owing on debt financing received for capital projects. The actual amount is less than the 2016 Budget amount of \$458,536 as the debt charges in the budget is based on all debt that has been approved, although there are no charges incurred until the debt has been issued. The under-expenditure of \$55,902 between the actual and budget amount is being recommended for transfer to the Debt Financing Reserve for future debt financing costs.

Also in the 2016 actual expenditure is \$150,000 in principal repayments made on the loan received from the Hamilton Community Foundation in 2015 to fund the Cootes to Escarpment land acquisition. The loan principal repayments were fully funded by donations received by the Conservation Halton Foundation in 2016 for the principal repayments. A further \$150,000 was received in February 2017 from the Conservation Halton Foundation reducing the loan balance to \$558,000.

#### Watershed Management & Support Services

Note 3. Revenue	2016 Budget	2016 Projected	2016 Actual	% Actual of Budget
Planning & Regulations	<u>\$2,506,260</u>	<u>\$2,225,850</u>	<u>\$2,173,618</u>	86.7%

The majority of Planning & Regulations revenue is for planning and permit fees. Revenue recognized during the year is based on the actual amount of work completed on applications received in the current year and fees carried over from prior years for work still to be completed. Actual planning and permit fees received in 2016 were almost \$1,660,000 and revenue recognized in 2016 based on work completed was \$1,722,000. The revenue recognized is short of the budget amount of \$2,036,000 by about \$314,000. The lower revenue was anticipated in the 2016 Projection based on applications received and was offset by reduced staffing costs for position vacancies during the year. Planning and permit fees will continue to be monitored in 2017 for potential budget variances.

Prepared by:



Marnie Piggot  
Director, Finance

Respectfully submitted:



Sheryl Ayres  
Senior Director, Finance  
and Strategic Initiatives

Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer

# CONSERVATION HALTON

## Budget Variance Report

For the Year Ended December 31, 2016

### TOTAL SUMMARY

	2016 <u>Budget</u>	2016 <u>Projected</u>	Year To Date Actual <u>Dec. 31/16</u>	% Year to Date Actual <u>of Budget</u>	2015 <u>Actual</u>
<b>Revenue</b>					
Program revenue	\$13,826,172	\$13,635,766	\$14,499,949	104.9%	\$13,681,294
Provincial Funding - Operating	767,273	832,935	759,424	99.0%	888,507
Municipal Funding - Operating	8,406,295	8,406,295	8,406,295	100.0%	7,989,188
Other Grants and Partnership Project Funding	692,560	1,360,974	1,314,614	189.8%	1,329,137
Internal Chargebacks	1,203,400	1,114,300	1,006,110	83.6%	1,062,776
Transfers from Reserves	0	0	0	0.0%	0
<b>Total Operating Revenue</b>	<b>24,895,700</b>	<b>25,350,270</b>	<b>25,986,392</b>	<b>104.4%</b>	<b>24,950,902</b>
<b>Total Capital Revenue</b>	<b>2,145,000</b>	<b>1,428,079</b>	<b>1,723,176</b>	<b>80.3%</b>	<b>3,978,595</b>
<b>Total Revenue</b>	<b>\$27,040,700</b>	<b>\$26,778,349</b>	<b>\$27,709,569</b>	<b>102.5%</b>	<b>\$28,929,497</b>
<b>Expenditures</b>					
Salaries and Benefits	16,800,883	16,277,856	15,985,656	95.1%	15,919,095
Materials and Supplies	2,420,966	2,902,772	2,543,663	105.1%	2,885,382
Purchased Services	2,936,762	3,617,407	3,500,146	119.2%	3,265,246
Financial and Rent	325,700	392,664	316,402	97.1%	315,760
Internal Chargebacks	1,138,400	1,098,050	1,051,534	92.4%	1,034,233
Debt Financing Charges - Principal	359,896	359,896	478,099		260,034
Debt Financing Charges - Interest	98,640	98,640	74,535		69,245
Total Debt Financing Charges	<u>458,536</u>	<u>458,536</u>	<u>552,634</u>	120.5%	<u>329,279</u>
Transfer to Reserves	175,000	175,000	230,902	131.9%	278,960
<b>Total Operating Expenditures</b>	<b>24,256,247</b>	<b>24,922,285</b>	<b>24,180,938</b>	<b>99.7%</b>	<b>24,027,955</b>
<b>Total Capital Expenditures</b>	<b>2,145,000</b>	<b>1,428,079</b>	<b>1,723,176</b>	<b>80.3%</b>	<b>3,978,595</b>
<b>Total Expenditures</b>	<b>26,401,247</b>	<b>26,350,364</b>	<b>25,904,114</b>	<b>98.1%</b>	<b>28,006,550</b>
<b>Prior Period Adjustment - Annual Passes</b>	<b>0</b>	<b>0</b>	<b>(395,255)</b>	<b>100.0%</b>	<b>0</b>
<b>Excess of Revenue over Expenditures (Operating)</b>	<b>\$639,453</b>	<b>\$427,985</b>	<b>\$1,410,199</b>	<b>220.5%</b>	<b>\$922,947</b>



# CONSERVATION HALTON

## Budget Variance Report

For the Year Ended December 31, 2016

### Watershed Management & Support Services - Operating

#### SUMMARY (BY PROGRAM)

##### Revenue

	2016 <u>Budget</u>	2016 <u>Projected</u>	Year To Date Actual <u>Dec. 31/16</u>	% Year to Date Actual <u>of Budget</u>	2015 <u>Actual</u>
Municipal Funding - Operating	\$8,213,941	\$8,213,941	\$8,213,941	100.0%	\$7,796,834
Provincial Funding (MNRF Operating)	300,311	300,311	300,311	100.0%	300,311
Provincial Funding (Source Protection and Land Management)	466,962	532,624	459,113	98.3%	588,196
Operations - Property Management and Forestry	264,450	375,000	414,939	156.9%	351,001
Planning & Regulations	2,506,260	2,225,850	2,173,618	86.7%	1,979,809
Watershed Management Administration	388,800	473,700	491,518	126.4%	508,310
Engineering & Flood Forecasting & Operations	0	24,000	14,602	0.0%	0
Watershed Services	67,122	57,640	341,140	508.2%	44,664
Administration	1,184,800	1,105,700	1,258,082	106.2%	1,058,796
Partnership Projects	276,300	950,124	924,307	334.5%	945,119

Note 3.

##### Total Operating Revenue

**\$13,668,946 \$14,258,890 \$14,591,571 106.7% \$13,573,040**

##### Expenditures (by Program)

Operations	\$3,236,848	\$3,108,052	\$2,996,093	92.6%	\$2,988,583
Planning & Regulations	1,833,487	1,948,169	1,951,124	106.4%	1,877,922
Watershed Management Administration	774,892	778,736	777,316	100.3%	734,153
Engineering & Flood Forecasting & Operations	1,454,170	1,335,304	1,347,782	92.7%	1,328,435
Watershed Services	1,709,495	1,556,111	1,557,290	91.1%	1,345,644
Source Water Protection	418,562	484,224	406,559	97.1%	511,951
People, Performance & Culture	2,136,452	2,169,186	2,046,020	95.8%	1,994,770
Finance	644,130	708,847	708,149	109.9%	586,606
Administration	551,074	495,509	535,277	97.1%	639,159
Partnership Projects	276,300	950,124	914,114	330.8%	748,202
Debt Financing Charges	458,536	458,536	552,634	120.5%	329,279
Transfer to Reserve - Debt Financing Charges	0	0	55,902	0.0%	51,960
Transfer to Reserves	175,000	175,000	175,000	100.0%	227,000

##### Total Operating Expenditures

**\$13,668,946 \$14,167,798 \$14,023,262 102.6% \$13,363,663**

##### Excess of Revenue over Expenditures

**\$0 \$91,092 \$568,309 100.0% \$209,377**

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# CONSERVATION HALTON

## Budget Variance Report

For the Year Ended December 31, 2016

### Conservation Areas - Operating

#### SUMMARY (BY PROGRAM)

##### Revenue

Conservation Areas - Annual Passes	\$550,000	\$780,000	\$794,228	144.4%	\$763,677
Conservation Areas - Other	17,000	21,000	45,433	267.3%	83,320
Kelso / Glen Eden	8,064,900	7,514,800	7,688,521	95.3%	7,932,386
Crawford Lake / Mountsberg	1,759,000	1,773,726	1,740,865	99.0%	1,629,244
Rattlesnake Point / Hilton Falls / Mount Nemo	643,500	809,500	933,420	145.1%	776,881
<b>Sub Total</b>	<b>11,034,400</b>	<b>10,899,026</b>	<b>11,202,468</b>	<b>101.5%</b>	<b>11,185,508</b>
Municipal Funding - Education Program	192,354	192,354	192,354	100.0%	192,354
<b>Total Operating Revenue</b>	<b>11,226,754</b>	<b>11,091,380</b>	<b>11,394,822</b>	<b>101.5%</b>	<b>11,377,862</b>

##### Expenditures

Administration, Vehicle and Equipment Operations	\$404,390	\$471,420	\$368,958	91.2%	\$350,145
Kelso / Glen Eden	6,533,910	6,653,765	6,251,640	95.7%	6,910,679
Crawford Lake / Mountsberg	1,966,669	2,003,841	1,945,194	98.9%	1,850,984
Rattlesnake Point / Hilton Falls / Mount Nemo	630,332	612,561	609,184	96.6%	573,389
Internal Chargebacks - Support Services	1,052,000	1,012,900	982,700	93.4%	979,095
<b>Total Operating Expenditures</b>	<b>10,587,301</b>	<b>10,754,487</b>	<b>10,157,677</b>	<b>95.9%</b>	<b>10,664,292</b>
<b>Prior Period Adjustment - Annual Passes</b>	<b>0</b>	<b>0</b>	<b>(395,255)</b>	<b>100.0%</b>	<b>0</b>
<b>Excess of Revenue over Expenditures</b>	<b>\$639,453</b>	<b>\$336,893</b>	<b>\$841,890</b>	<b>131.7%</b>	<b>\$713,570</b>

# CONSERVATION HALTON

## Budget Variance Report

For the Year Ended December 31, 2016

### CAPITAL PROJECT SUMMARY

	2016 <u>Budget</u>	2016 <u>Projected</u>	Year To Date Actual Dec. 31/16	% Year to Date Actual of Budget	2015 <u>Actual</u>
<b><u>Revenue</u></b>					
Municipal Funding - Capital	\$291,500	\$613,950	\$524,268		\$328,944
Ministry of Natural Resources and Forestry - Capital	245,000	294,684	235,919		514,213
Land - Contributions and Long Term Debt Proceeds	0	0	371,000		881,972
Municipal Debt Financing	400,000	40,734	24,230		675,133
Other Municipal Funding - Development Fees	0	0	0		10,368
Foundation Funded Capital Projects	100,000	0	17,018		96,723
Proceeds on disposal - Vehicles & Equipment	0	0	0		49,110
Other Funding	50,000	13,330	0		82,657
Interest - Watershed Management & Support Serv. Reserves	0	0	40,900		40,900
Interest - Conservation Areas Reserves	0	0	42,600		87,110
Transfers from Reserves for Capital Projects-Debt Fin. Vehicles & Eqpt.	178,500	47,945	61,333		423,552
Transfer from Reserves for Capital Projects - Conservation Areas	880,000	417,437	405,907		787,912
<b>Capital Projects Funding</b>	<b>\$2,145,000</b>	<b>\$1,428,079</b>	<b>\$1,723,176</b>	<b>80.3%</b>	<b>\$3,978,595</b>
<b><u>Expenditures</u></b>					
Dams and Channels Maintenance Projects	\$490,000	\$95,900	\$87,522		\$59,840
Dams and Channels Major Repair Projects	0	493,467	384,317		968,586
Flood Forecasting and Warning Program Upgrades	75,000	75,000	47,645		25,000
Watershed Implementation Program	120,000	150,000	154,084		130,956
Facility and Major Maintenance	400,000	77,945	61,442		543,507
Information Technology Infrastructure	80,000	80,000	72,925		69,262
Land - Donation, Acquisition and Securement Strategy	0	25,000	395,428		881,972
Foundation Funded Capital Projects	100,000	0	0		18,795
Master planning	100,000	25,000	34,565		0
Vehicle & Equipment Replacement	0	13,330	13,388		174,535
Ice Storm	0	0	0		23,702
Reserve loan repayment	50,000	0	0		0
Transfer to Reserves (Interest on Reserves)	0	0	83,500		66,800
Conservation Areas Capital Projects	730,000	392,437	388,360		1,015,641
<b>Capital Projects Expenditures</b>	<b>\$2,145,000</b>	<b>\$1,428,079</b>	<b>\$1,723,176</b>	<b>80.3%</b>	<b>\$3,978,595</b>

**CONSERVATION HALTON**  
Continuity of Reserves  
December 31, 2016

Name of Reserve	Reserve Balances Jan. 1, 2016	Reserve Expenditures Approved in 2016 & prior Budget	Reserve Transfers to be Approved Mar. 23, 2017 Board	Reserve Balances Dec. 31, 2016	Notes
<b>Watershed Management &amp; Support Services</b>					
Vehicle, Equipment & Building		150,000	(13,388) 11,500		2016 Budget Reserve municipal funding Capital Budget - Equipment
Vehicle & Equipment \$681,120; & Building \$34,780)	715,900			864,012	Investment revenue allocation Vehicle & Eqpt \$828,732; Building \$35,280
Watershed Management Capital Projects Reserve - Municipal Funds	119,875	25,000	1,900	146,775	2016 Budget Reserve municipal funding Investment revenue allocation
Watershed Management Capital Reserve - Self Generated	280,811	-	29,000 11,700	321,511	Transfer from 2016 Operating Surplus Investment revenue allocation Budget - Capital Projects
Watershed Management & Support Services - Stabilization	263,035		3,900 203,309	470,244	Investment revenue allocation Transfer from 2016 Operating Surplus
Capital Projects - Debt Financing Charges	183,991	(47,945)	55,902 2,300	194,248	Transfer excess municipal funding over actual charges Investment revenue allocation Capital Projects-Admin. Office Roof & Auditorium
Legal	209,791		46,000 3,100	258,891	Transfer from 2016 Operating Surplus Investment revenue allocation
Water Festival	214,111		3,100	217,211	Investment revenue allocation
Land & Property	127,000		1,900	128,900	Investment revenue allocation
Stewardship & Restoration	0		1,500 290,000	291,500	Investment revenue allocation Transfer from 2016 Operating Surplus
<b>Conservation Areas</b>					
Capital	2,078,447	(405,907)	33,200 691,890	2,397,630	Investment revenue allocation Facility and Infrastructure Projects Transfer from 2016 Operating Surplus
Revenue Stabilization	640,168		150,000 9,400	799,568	Investment revenue allocation
<b>Total Reserves</b>	<b>\$4,833,129</b>	<b>\$ (278,852)</b>	<b>\$ 1,536,213</b>	<b>\$ 6,090,490</b>	

**CONSERVATION HALTON  
CHBD 01 17 10**

**REPORT TO:** Board of Directors

**FROM:** Laura Head, Regulations Officer, 905-336-1158 x. 2333

**DATE:** March 23, 2017

**SUBJECT:** **Proposed development within the 7.5 metre allowance associated with the flood plain of McCraney Creek, 211 Glen Oak Drive, Town of Oakville, Regional Municipality of Halton**  
**CH File No.: A/15/O/04**

**Recommendation**

THAT the Conservation Halton Board of Directors **approve the issuance of a permit for the construction of a residence within the 7.5 metre allowance associated with the flood plain of McCraney Creek at 211 Glen Oak Drive, Town of Oakville, Regional Municipality of Halton.**

**Summary**

The subject property is located at 211 Glen Oak Drive, in the Town of Oakville, and contains a portion of the flood plain associated with McCraney Creek and the 7.5 metre regulation limit from the flood plain.

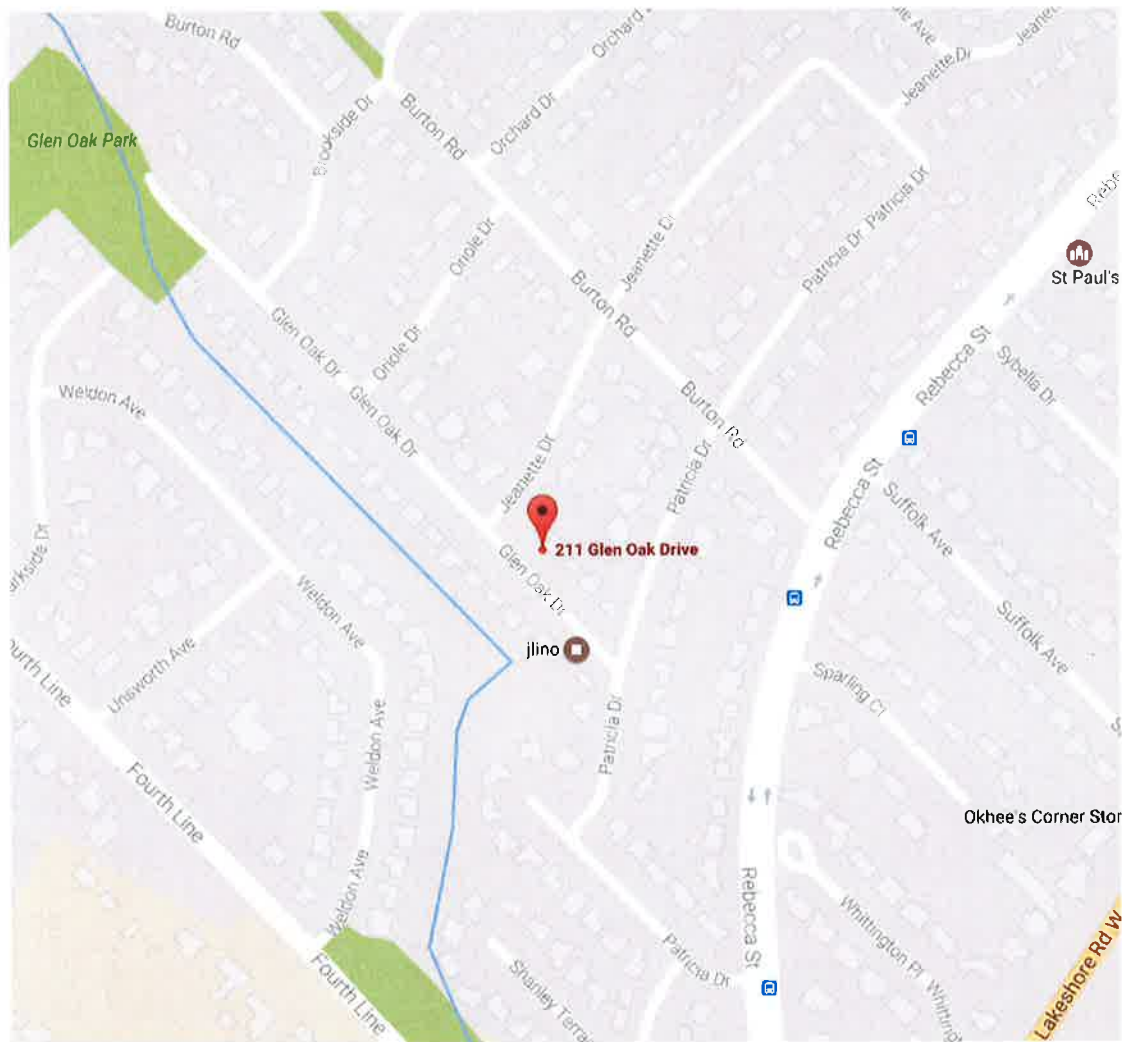
On February 8, 2017, staff received a permit application to construct a new two-storey single family dwelling, attached covered porch and associated landscaping and grading located within the 7.5 metre allowance associated with the flood plain. Specifically, the new dwelling will be located a minimum 3 metres from the flood plain at its closest point.

This proposal does not meet current Board-approved that policy states reconstructions, alterations or additions are permitted provided the works do not encroach closer to the hazard than existing development and are not within 6 metres of the flood plain. Staff can only issue permits that meet Board-approved policies. However, based on the unique circumstances described in the below report, staff recommend approval of the proposed works.

**Report**

Background

The property, 211 Glen Oak Drive, Oakville (Figure 1), is approximately 0.19 acres in size, is near lands that are traversed by a tributary of McCraney Creek and contains a portion of the floodplain associated with that watercourse. The property contains the flooding hazards associated with McCraney Creek and the 7.5 metre regulation limit associated with that hazard. The surrounding neighbourhood is comprised of residential lots and the majority of properties on Glen Oaks Drive are regulated by Conservation Halton.



**Figure 1:** 211 Glen Oak Drive, Oakville, Ontario

### Proposal

The proposal is to demolish the existing dwelling and construct a new single family dwelling, covered porch and associated landscaping and grading. The existing dwelling to be demolished is located within the 7.5 metre regulation limit from the flood plain, specifically, the existing dwelling is located less than 1 metre from the flood plain at its closest point. The proposed dwelling will increase the setback from the flood plain from 1 metre to a minimum 3 metre allowance at its closest point (Figure 2).

### Conservation Halton Policy Review

The proposed development consists of the construction of a new dwelling located between 3 metres and 6 metres from the flood plain. The applicable policy under which development in the regulated area of the floodplain applies is Policy 3.27.1 *Minor Valley Systems – Development within 7.5 metres of Flood Plain*. The encroachment of the new dwelling does not meet Board-approved policy which states:

#### **3.27.1 Existing Development within 7.5 metres of Flood Plain**

Where buildings and structures already exist within 7.5 metres of the flood plain, reconstruction, alteration or additions may be permitted subject to the following:

- a) The reconstruction, alteration or addition does not encroach any closer to the flood plain than the existing development at its closest point;



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The intent of Policy 3.27.1 is to restrict development within 7.5 metres of the regulated hazard to ensure an adequate setback and provide a freeboard from the flooding hazard. However, staff is recommending approval of the permit because of the unique circumstances associated with this file as listed below:

- a) the development is located entirely outside of the flooding hazard;
- b) the development is located further from the flood plain than the existing dwelling which is an improved situation;
- c) the proposed dwelling is providing greater access between the proposed dwelling and flood plain than currently exists;
- d) it is not reasonable on this property to achieve the 6 metre allowance from the flood plain in the front yard while meeting municipal site constraints.

Prepared by:



Laura Head, Regulations Officer  
Planning and Regulations

Respectfully submitted:



Charles Priddle, Coordinator Regulations Program  
Planning and Regulations

Respectfully submitted:



Barbara J. Veale, Director  
Planning and Regulations

Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer



**CONSERVATION HALTON  
CHBD 01 17 11**

**REPORT TO:** Board of Directors

**FROM:** Laura Head, Regulations Officer, 905-336-1158 x. 2333

**DATE:** March 23, 2017

**SUBJECT:** **Proposed development within the 7.5 metre allowance associated with the stable top of bank of Lower Wedgewood Creek, 413 Avon Crescent, Town of Oakville, Regional Municipality of Halton**  
**CH File No.: A/17/O/01**

**Recommendation**

**THAT the Conservation Halton Board of Directors approve the issuance of a permit for the construction of a residence within the 7.5 metre allowance associated with the stable top of bank of Lower Wedgewood Creek at 413 Avon Crescent, Town of Oakville, Regional Municipality of Halton.**

**Summary**

The subject property is located at 413 Avon Crescent, in the Town of Oakville, and contains a portion of the flood plain and stable top of bank associated with Lower Wedgewood Creek. Conservation Halton regulates 7.5 metres from the greater of the two hazards, in this case, the greater hazard is the stable top of bank associated with Lower Wedgewood Creek.

On February 6, 2017, staff received a permit application to construct a new two-storey single family dwelling, attached covered deck and associated landscaping and grading. The proposed development will be located partially within the 7.5 metre allowance, specifically, the new dwelling will be located 4.22 metres from the stable top of bank at its closest point (Figure 1).

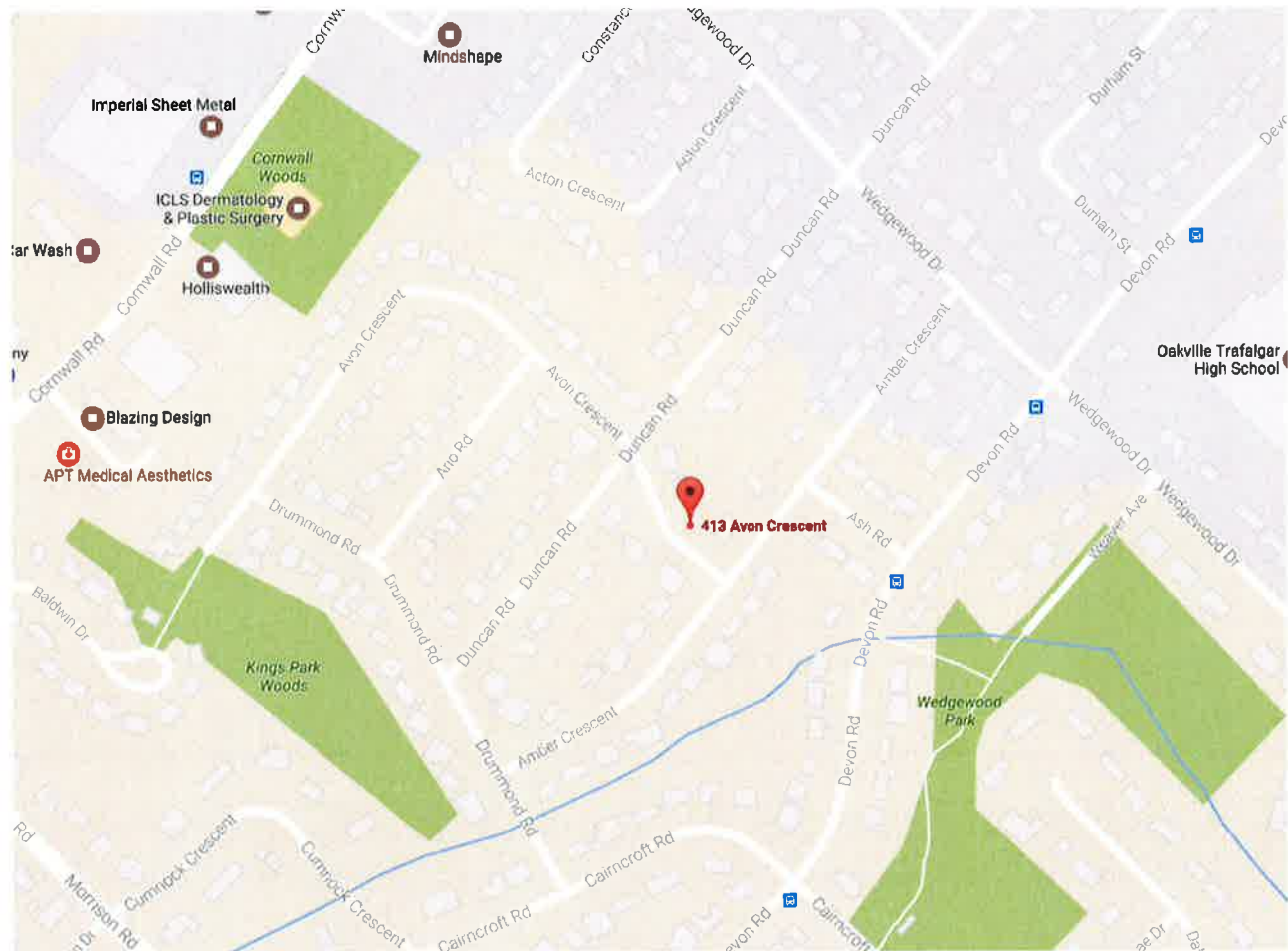
This proposal does not meet current Board-approved policy, as the policy states that reconstructions, alterations or additions are permitted provided the works do not encroach closer to the hazard than existing development and are not within 6 metres of the stable top of bank. Staff can only issue permits that meet Board-approved policies. However, based on the unique circumstances described in the below report, staff recommend approval of the proposed works.

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## Report

The property, 413 Avon Crescent, Oakville (Figure 2), is approximately 0.26 acres in size and is traversed by a tributary of Lower Wedgewood Creek and the associated valleyland. The property contains the flooding and erosion hazards associated with Lower Wedgewood Creek and the 7.5 metre regulation limit associated with that creek. Approximately 70% of the property is regulated by Conservation Halton pursuant to Ontario Regulation 162/06. The surrounding neighbourhood is comprised of residential lots, some of which are regulated by Conservation Halton. The properties backing onto Lower Wedgewood Creek include a portion of the valley.



**Figure 2:** 413 Avon Crescent, Oakville, Ontario

## Proposal

The proposal is to demolish the existing dwelling and construct a new single family dwelling, covered porch and associated landscaping and grading. The existing dwelling to be demolished is located within the 7.5 metre regulation limit from the stable top of bank, specifically 4.22 metres from the stable top of bank at its closest point. The applicant is proposing a larger home which maintains the existing dwellings' setback from stable top of bank and expands to the front and side yards. The proposed dwelling will not encroach closer to the valley feature than the existing dwelling.

According to Conservation Halton policies, staff could approve a reconstruction, alteration or addition provided it does not encroach closer to stable top of bank than existing development and the proposed works are not within 6 metres of the stable top a bank. Accessory structures are permitted within the 7.5 metre allowance but not within 3 metres from stable top of bank, as such, the proposed rear deck meets Conservation Halton policies.

The proposed development consists of the construction of a new dwelling located 4.22 metres from stable top of bank on the south corner and 6.0 metres from the stable top of bank at the north corner. The applicable policy under which development in the regulated area of the stable top of bank applies is Policy 3.36 *Minor Valley Systems – Development within 7.5 metres of Stable Top of Bank*. The encroachment of the building addition does not meet Board-approved policy which states:

**3.36.1** Where buildings and structures already exist within 7.5 metres of the stable top of bank of minor valley systems, any replacement (same size and use) or additions may be permitted subject to the following:

- a) the replacement or addition does not encroach any closer to the stable top of bank than the existing development at its closest point;
- b) even if existing development is closer than 6 metres to the stable top of bank, no new development is permitted within 6 metres of the stable top of bank in order to provide for an erosion access allowance as per the Provincial Policy Statement;
- c) a geotechnical assessment may be required (at the expense of the applicant, by a qualified geotechnical engineer) to determine the location of the stable top of bank and to determine if the proposed development will have a negative impact on slope stability. See Policy 3.4.2 and Section 5 for study requirements; and,
- d) In cases where the building or structure can be reasonably relocated outside of the setback the applicant will be encouraged to do so.

The intent of Policy 3.36.1 is to restrict development within 7.5 metres of the regulated hazard to ensure an adequate setback from the erosion hazard. However, staff is recommending approval of the permit because of the unique circumstances associated with this file as listed below:

- a) the development is located entirely outside of the stable top of bank erosion hazard,
- b) the development would not encroach further toward the stable top of bank erosion hazard than existing development on this property,
- c) the proposed dwelling does provide a small access allowance and does not encroach within any existing access,
- d) the proposed setback from the hazard is in keeping with the properties in the neighbourhood; some properties are within the hazard while this proposal maintains the existing setbacks from features,
- e) it is not reasonable on this property to assume that a dwelling could be built entirely beyond the 6 metre allowance from stable top of bank as the lands outside the regulated limit are confirmed

Prepared by:



Laura Head, Regulations Officer  
Planning and Regulations

Respectfully submitted:



Charles Priddle, Coordinator Regulations Program  
Planning and Regulations

Respectfully submitted:



Barbara J. Veale, Director  
Planning and Regulations

Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer



**CONSERVATION HALTON  
CHBD 01 17 12**

**TO:** Board of Directors

**FROM:** Niall Loble, Manager Risk & Land Holdings Services  
905 336 1158 x 2256

**DATE:** March 23, 2017

**SUBJECT:** Forestry Business Case - Emerald Ash Borer (EAB)

**Recommendation**

THAT the Conservation Halton Board of Directors **approve the Forestry Business Case - Emerald Ash Borer (EAB)** as attached.


**Report**

The approved 2017 budget provides \$400,000 of funding from the Region of Halton to support the management of Emerald Ash Borer (EAB) on Conservation Halton property. As reported at the January 2017 Board of Directors, Report #: CHBD 08 16 05, the Region of Halton staff have requested that CH prepare a business case for addressing EAB to support both the approved 2017 budget and in advance of the 2018 budget to be considered by Regional Council in early 2017.

Staff have prepared a revised Forestry Business Case - EAB which outlines the approach to be taken to manage EAB on CH lands. The proposed approach requires \$8.4M in funding over the next ten years to provide the resources as outlined in the Business Case.

Attachment: Forestry Business Case – Emerald Ash Borer (EAB)

Prepared by:



Niall Loble, Manager  
Risk & Land Holdings Services

Respectfully submitted:



Gene Matthews, Director  
Lands Services Division

Approved for circulation:



Hassaan Basit  
CAO/Secretary-Treasurer

# Forestry Business Case – Emerald Ash Borer (EAB)



## Executive Summary

Emerald Ash Borer (EAB) is posing a significant and ongoing management pressure on Conservation Halton property, posing a risk to existing physical assets, as well as staff and visitors. In addition, risk is posed to neighbouring property owners. The risk is created through a known mechanism of failure of ash trees caused by EAB infection. Conservation Halton estimates that on Conservation Halton property, between 7% and 20% of the canopy cover can be ash and that this equates to several 100,000's of individual ash trees. An assessment in late 2015 and early 2016 identified between 50,000 and 100,000 ash trees on Conservation Halton property that can be considered a 'risk' within excess of 92% of these being within the Halton Region part of Conservation Halton's jurisdictional Watershed.

An Emerald Ash Borer (EAB) Management Program is proposed over the period 2017 – 2026 to address EAB management and risk concerns within the Halton Region area of the watershed, on Conservation Halton property. This program is budgeted to cost \$8,416,000 over 10 years.

## Proposed EAB Budget

	Year 1 - 2017	Year 2 - 2018	Year 3 - 2019	Year 4 - 2020	Year 5 - 2021	Year 6 - 2022	Year 7 - 2023	Year 8 - 2024	Year 9 - 2025	Year 10 - 2026
Staff Costs	\$ -	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000	\$ 784,000
Contractor Costs	\$ 400,000	\$ 200,000	\$ 200,000	\$ 50,000	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ -	\$ -
Capital Costs	\$ -	\$ 150,000	\$ 150,000	\$ -	\$ -	\$ -	\$ 40,000	\$ 40,000	\$ -	\$ -
Materials Costs	\$ -	\$ 20,000	\$ 20,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000	\$ 10,000
<b>Total</b>	<b>\$ 400,000</b>	<b>\$ 1,154,000</b>	<b>\$ 1,154,000</b>	<b>\$ 844,000</b>	<b>\$ 804,000</b>	<b>\$ 804,000</b>	<b>\$ 834,000</b>	<b>\$ 834,000</b>	<b>\$ 794,000</b>	<b>\$ 794,000</b>
10 Year Total	\$ 8,416,000									
Note – based on 2017 Job Rate										

## Proposed EAB Approach - Summary

Timeframe	Year 1 2017	Years 2 & 3 2018/19	Years 4 – 10 2020 - 2026
Resources	<ul style="list-style-type: none"> <li>\$400,000</li> <li>External Contractors</li> </ul>	<ul style="list-style-type: none"> <li>\$1.154m</li> <li>External Contractors</li> <li>Two Full time (Contract) arborist teams</li> <li>Equipment (trucks, chipper etc)</li> </ul>	<ul style="list-style-type: none"> <li>~\$800,000</li> <li>Two Full time (contract) arborist teams</li> <li>Equipment renewal</li> <li>Replacement small tools</li> <li>Contractor support as required</li> <li></li> </ul>
Output	<ul style="list-style-type: none"> <li>Work started on Urban Flood Alleviation System, approx. 50% completion (5km)</li> </ul>	<ul style="list-style-type: none"> <li>Work completed on Urban Channels</li> <li>EAB in high risk areas largely managed</li> <li>~10-15,000 trees annually removed</li> </ul>	<ul style="list-style-type: none"> <li>Between 5,000 and 8,000 tree removals annually focused on addressing trail EAB and boundary EAB</li> </ul>
Outcome	EAB considered 'managed'; residual EAB in smaller regenerating ash, treatment program continuing as needed managed through existing resources; in excess of 50,000 trees will have been removed.		

**External Contractors** will be engaged on a site specific basis where they can deliver added value. This will be, for example, in areas where specialist equipment is required, or where there is a need to remove larger numbers of trees in a given area. An example of where this may occur is within the urban flood alleviation channel system where the nature of access and material removal will require additional equipment.

**Internal staff** will be used for undertaking a significant amount of work on Conservation Halton property. The use of an internal staff team will deliver efficiencies in cost and programming as internal staff will become familiar with both site location and special requirements (such as undertaking tree work with a recognition of ongoing Park operations). It is envisaged staff will be engaged on 2 – 3 year contract basis to allow flexibility in approach to EAB management.

## EAB

Emerald Ash Borer (EAB) is a bright green coloured winged insect that is a non-native invasive species to Canada that was first identified in 2002. EAB rapidly spread through south western Ontario, being identified on the edge of the GTHA in 2008 and confirmed present on CH lands in 2012. The winged insect is the adult which bores into the ash tree to lay eggs. These eggs become pupa that feed on the tree and over winter within it, before hatching as a winged adult and repeating the cycle.

In the process of boring into the ash and feeding on the inner layers of the tree, the EAB essentially 'ring barks' a tree, impacting the ability for a tree to transport water and nutrients up and down the trunk. This kills the tree. In a heavily infested tree, from first infestation to total death can be less than 18 months, and it is not unusual to see an ash leaf in the spring, to die by mid-summer as a result of an infestation.

EAB are extremely effective at locating ash and have been shown to have a 98% mortality of ash in areas that they have been present.

Ash is a common component of a range of forest environments. On CH property, ash is a less dominant component than it may be in more urban woodlands, but can locally make up as much as 20% of our forest canopy. Our urban channel systems have areas where trees were planted at the time of the channel being installed, many of which were ash; some areas of our channel systems are almost exclusively ash.

EABs high mortality and rapid impact on ash means that any ash tree that has potential to strike a 'target' (building, trail, property etc.) through its failure can be considered a 'hazard'. The sheer volume of trees that are or will become hazards in a relatively short period of time is creating a significant pressure, beyond existing resources, to manage.

CH's forestry team undertook in 2015 to quantify and class the risks that EAB posed:

- 1. Designated trails and activity areas within publically accessible lands**

It is estimated that as of September 2015, there were in excess of 20,000 dead ash trees of 10cm diameter at breast height (DBH) and larger along our promoted trail and activity areas

- 2. The urban flood alleviation channel system**

In summer 2016, CH estimated that there are at least 2000 – 3000 ash trees along the 12km of channel system CH operates in Halton Region. These trees are all showing signs of EAB impacts and many are already dead. Approximately half of these trees are considered 'large' at a DBH of 25cm or greater

- 3. Neighbouring properties & other areas and lands**

To date, no assessment of the scale or nature of this liability has been undertaken. Given that CH has, in both trails and channels discovered a consistent average of around 200 ash per kilometre, the number of ash trees around CH property perimeters is estimated to be well in excess of 20,000 dead and advanced dying. It is likely that beyond the areas that CH manages for public access, where there is known to be significant public recreational use, there are likely as many as a further 50,000 ash trees that pose a concern.

**In total, Conservation Halton believes that there are at least 50,000 ash trees and likely closer to 100,000 ash trees that are located in one of its identified risk zones. An in-house arborist team, as proposed below can remove around 3,500 - 4000 trees a year. Over the ten years of the proposed program, with the support of external contractors, it is feasible to attend to in excess of 50,000 higher priority trees in the first 5 – 6 years and largely address EAB issues over the ten years**

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Conservation Halton manages approximately 4200ha of land; 3600ha (86%) of land falls within the Region of Halton. All higher risk areas (bullets 1 and 2 above, 22,000 – 23,000 trees) fall within the Region of Halton. Based on the upper estimate of approximately 100,000 trees (23,000 in classes 1 and 2, 20,000+ on property perimeters and 50,000+ trees in other areas assuming that 86% of the 70,000 in class 3 are in Halton Region) that fall into one of the above categories, 92,000 are within the Region of Halton.

## **Conservation Halton Approach**

### **Year 1**

In 2017, subject to confirmation of the budget, Conservation Halton will engage external contractors to start addressing EAB concerns on the flood alleviation channels in Burlington, Milton and Oakville. It is anticipated that this will address EAB concerns along approximately 3 – 5km of channel. External contractors will be used due to the specific needs of the channel; access is challenging through much of the system and all felled material will need to be extracted and disposed of off site.

### **Year 2**

In 2018, Conservation Halton will continue to address EAB on its channel system utilising external contractors. It is anticipated that 2-4km of channel will be addressed. Further, Conservation Halton will engage a total of 9 FTE two to three year contract staff and form two Arborist teams supported by a Forest Technician. These teams will focus on higher risk areas identified above, the key visitor destinations and trail head areas, and around the principle areas of assets and infrastructure. Capital investment will be required to support the purchase of additional equipment to support these teams.

### **Year 3**

The approach taken in 2018 will be continued; additional equipment purchase may be required to support the Arborists teams and external contractors will be engaged to complete EAB treatment of the channels.

Years 1 – 3 constitute Conservation Haltons short term response and budget allocated to reflect a rapid early response addressing the highest priority risk areas, and will result in the following deliverables:

- Removal of approximately 15,000 trees annually in 2018 and 2019
- The complete removal of ash trees/management of EAB along 12km of Urban Flood Alleviation Channels by the end of 2019
- EAB will be considered 'addressed' in the higher risk areas of our main Conservation Areas and around key assets and infrastructure by the end of 2019
- A comprehensive inventory of ash on Conservation Halton property and risk assessment of risks posed will have been completed to inform remaining EAB management measures.

**Years 4 – 10** inclusive will see a decreasing level of external contractor work and an increased reliance on internal staff resources to continue addressing EAB. It is estimated that between 5,000 – 8,000 trees will be removed annually. The decreased rate of removal reflects the fact that work will now be focussing on areas where individual tree removals may become more complex and that tree removals will be more isolated in nature.

**Treatment:** CH has implemented treatment of trees using tree-azin, a chemical treatment that protects the tree from infestation. Around 120 trees are in the treatment program at the end of 2016. Plans are not to extend this significantly; the window to protect trees has now passed as by 2017 most suitable ash will be showing signs of infestation.

Conservation Halton, reflecting the acute and significant threat posed by EAB to ash trees will be 'treating' EAB through removal of all ash trees over a diameter at breast height of 10cm and above. Where possible, smaller trees will also be removed however, given that smaller trees will likely be infected and succumb to the impacts of EAB before they become large enough to pose a significant hazard, the focus for works will be on the larger trees (above 10cm).

## **Background**

Conservation Halton (CH) is tasked with stewarding more than 4,200ha (10,600 acres) of green space within its jurisdiction, the majority of which falls within the Region of Halton. A significant proportion of these lands are forested. These forested lands represent a mixture of plantation origin woodlands; areas planted within the last 50 years with an intention to be managed to succeed to natural forests and secondary, natural forests – lands that have been influenced by man through cutting and clearing for agriculture or other purposes and then allowed to naturally regenerate over the past 100 years or more. A very small amount of the forested lands under CH's care are primary natural woodlands – those that remain untouched by management and these are largely confined to the Escarpment face and slopes. In short, the forests that CH manages are largely forests established and managed by people over the past 100 years.

These forested lands represent a very small proportion of what was once a significant, continuous forested landscape in the area. They are in many cases isolated pockets of forest and while CH and its partners strive to create habitat continuity, these pockets of forest each contain a mix of habitats and species which would once have been common across Halton Region. A larger natural forest sees periods of species thriving and species subsiding as natural influences impact the forest. Fire and disease would have once impacted areas of this larger forest causing species to decline in some areas and thrive in others, achieving over time and space a balance. When managing species in small areas, a period where a species is negatively impacted could result in the loss of that forest component. Further, through managing and controlling natural fire, we prevent the natural cycle of forest decline and recovery.

Given these factors, in order that our forested landscape remains diverse and that it continues to provide the environmental services of clean water, clean air and species and habitat diversity, management to recreate these natural influences is required.

Due to the influence of both provincial policy and budget pressures, CH has focused primarily on hazard tree removal which is reactive to pressure on our forests and less on proactive forest management over the past 20 years. Through proactive forest management, many hazard tree issues can be mitigated and our forests become resilient to changes, such as climate change and disease.

EAB is by no means the only cause of a hazard tree. Indeed, on CH lands, a number of pressures on forest health have been identified including beech bark disease, oak decline and pine decline as well as gypsy moth and Asian long horn beetle. However, EAB is certainly the most acute and significant of these pressures due to the volume of trees and rapid spread and death of trees impacted by EAB. It is hoped that through a refreshed approach to the management of and support of improved forest health, CH can both manage the current pressure of EAB and more proactively, manage its forested lands to be resilient to the other existing and the as yet unknown pressures that these important habitats will face in years to come.

## Municipal Responses to EAB

In 2010, staff brought a report to the CH Board on EAB. Based on the best available knowledge at that time, it was considered likely that EAB could be managed within the scope of the existing resources as a hazard tree. Over the past six years, it has become clear that the spread, mortality level and speed with which trees succumb to infestation is beyond existing resources.

The past three years have seen significant budget allocations to help manage EAB by nearby municipalities;

- Burlington is planning to spend \$10m over the next 10 years (\$1.6m spent to date)
- Hamilton is planning \$36m over 10 years (\$7m spent to date)
- Mississauga is planning \$51m over 10 years (\$2.6m spent to date)

*(Figures from MNRF)*

Oakville has recently increased its EAB budget to more than \$23m over 10 years, of which \$3.2m is committed in 2017 – making this the 9<sup>th</sup> largest single capital project in Oakville in 2017 and the largest capital project within the Parks and Open Space department. The Town of Milton committed more than \$1m of funding to EAB in 2016 and has approved \$1.32m for 2017. Town of Halton Hills has an approved 10 year capital program of almost \$1m to address EAB issues.

In addition, to address the pressures on our forest health, staff have been working on a Strategic Forest Plan for CH lands. This will build on our Park Master Plans and include all CH land and will work to a 20 year horizon, with 5 year management periods within it. The plan is closely aligned with the Region of Halton Forest Plan and discussions and early consultation at a staff level with the Region, MNRF and the NEC have influenced considerations to date. A draft plan is anticipated by mid-2017 and an approved plan by late-2017 with the first five year management period being 2017/18 – 2022/23.